Annexes to the Legal Study on Part II of the Local Loop Sectoral Inquiry

(PUBLIC VERSION)

Annex 1
Questionnaire to Operators

ANNEX 1 – QUESTIONNAIRE TO OPERATORS

LOCAL LOOP SECTOR ENQUIRY
CASE COMP / 37.640
REQUEST FOR INFORMATION
(addressed to new entrants, replies expected before 15.9.2001)

1. BUSINESS STRATEGY

- 1./ Is access to the incumbent's local loop part of your company's business strategy?

If so, please indicate which form of access:
– i./ full unbundled access to the incumbent's copper pair?
– ii./ shared access?
– iii./ both? – please explain–

- 2./ If it has been, but is no longer, a part of your company's strategy, please elaborate on the reasons for the change.

- 3./ If not, ignore the remaining questions, but please briefly summarise the reasons why it is not.

2. SERVICES TO BE PROVIDED OVER THE UNBUNDLED LINES

Please indicate which service(s) your company provides (or intends to provide) by means of unbundled access to the incumbent's local loop:

- 1./ *Narrowband retail access,* including ISDN access services (line connection/rental, call termination*).*

- 2./ *Narrowband retail call services* (e.g. local, long distance calls).

- 3./ *Narrowband retail dial-up Internet access.*

- 4./ *Wholesale broadband telecom services* (e.g. provision of xDSL, parts of leased line circuits or parts of virtual private networks (VPNs), to other operators/ISPs supplying a retail service to end-users).

- 5./ *Retail broadband telecom services* (e.g. provision of ADSL, xDSL, leased line circuits, VPN) with own services without access to Internet content.

- 6./ *Internet broadband access* (combined with ADSL); if so, are you an ISP (Internet services provider)?

- 7./ *Other services* (e.g. Internet portal activity, content) ? – please identify–

- 8./ For each of the above categories of retail services, please indicate whether you target:
  - business customers
  - residential end-users

3. LICENCES/AUTHORISATIONS

If relevant, please indicate under which *licence / authorisation* do you provide the service(s) identified above?

4. POSSIBLE OBSTACLES TO OBTAINING UNBUNDLED ACCESS TO THE INCUMBENT'S LOCAL LOOP - PLEASE INDICATE WHETHER YOU HAVE ENCOUNTERED ANY OF THE FOLLOWING SITUATIONS

- 1./ *Absence of, or provision of an incomplete (incomplete in the sense that it does not meet the set of minimum requirements annexed to the EC Regulation on local loop unbundling) reference offer relating to:*

- i./ full access to the incumbent's local loop (please indicate whether co-located or distant location sought).
- ii./ shared access (i.e. access to the high bandwidth spectrum of the line, while the incumbent remains the provider of traditional lower bandwidth services) and sub-loop unbundling (i.e. shared access interconnecting with the local access network at a point between the incumbent's site and the end user).
- iii./ please provide details of the elements missing, if any.

- 2./ *Refusal(s) to provide:*

- i./ full access; please identify form of access requested.
- ii./ shared access ; please identify form of access requested.
- iii./ date(s) of the refusal(s):
  - prior to January 2001? In this case, please precisely describe the situation at the time;
  - since January 2001? In this case, please indicate whether the refusal(s) took place before or after approval of the incumbent's standard offer by the National Regulatory Authority.
- iv./ reasons provided for such refusal(s): e.g. technical, network integrity, please detail.

- 3./ *Delivery time and delays* (please elaborate)

- i./ please indicate the amount of time involved in sorting out preliminary issues such as information on the network characteristics and finalising the signature of contracts with the incumbent operator;
- ii./ please indicate the average amount of time involved in obtaining the delivery of collocation sites;
- iii./ please indicate the average amount of time involved in obtaining the delivery of an unbundled line (from the date of the initial request for a particular line)?

(For the purpose of this question this average should not include any preliminary delays involved in obtaining information on the network characteristics, negotiating contracts and obtaining collocation already taken account of in the two previous questions)
- iv./ what reasons are provided by the incumbent, if any, for any excessive delays (i.e. in case of national mandatory requirements, delays that result in provisioning times exceeding these requirements)?
- v./ please provide relevant documentation for any delays (including those identified above).

- 4./ *Refusals or unsatisfactory conditions of collocation* (please elaborate)

- i./ generally across the network ;
- ii./ in specific exchanges ;
- iii./ what are the incumbent's reasons for such refusals or conditions?
- iv./ did the incumbent offer an alternative. If so, what?
- v./ please provide relevant documentation on the cases, and indicate whether the instances occurred before or after January 2001.

- 5./ *Insufficient quality of the lines delivered:*

- i./ for the provision of voice and data narrow bandwidth services (analogue, ISDN);
- ii./ for the provision of xDSL services. – please elaborate–

- 6./ Please describe any *other unsatisfactory or unfair contractual requirements that have been imposed / required by the incumbent* (e.g. tying with other network elements such as backhaul links, refusals to provide backhaul links, additional fees, penalties, or difficulties in negotiating maintenance arrangements…). – please elaborate–

- 7./ Please explain any *discrimination* between operators requesting access, if any, of which you are aware. –please elaborate–

5. ECONOMIC CONDITIONS OF UNBUNDLING

- 1./ What are:

- i./ the monthly line rental access fees charged by the incumbent per unbundled line for full and shared access;
- ii./ the one-off connection fees per line for full and shared access
- iii./ according to you the *complete monthly prices* charged to you by the incumbent for full and shared access (please indicate the basis on which one-off fixed price components can be amortised).

- 2./ If you consider that the incumbent's prices are unjustifiable, please clarify:

- i./ which access price(s) (e.g. full access at a distant location, shared access at the sub-loop);
- ii./ in the case of full access services prices, the category of line, if relevant: simple analogue, ISDN, xDSL enabled lines;
- iii./ which service component (connection and one-off fees, line rental,

collocation, other);
- iv./ indicate whether these prices were set by the incumbent, approved by the National Regulatory Authority (NRA) or set by the NRA.

- 3./ *Apparent margin squeeze* situations: if you consider that there is an apparent margin squeeze between the incumbent's own access and retail prices, please clearly identify the incumbent's relevant access and retail services, explain why they are comparable and outline the price components (various one-off fees, monthly rental) involved. If so please outline the apparent margin squeeze involved according to you.

[NB: a *proper margin squeeze assessment would not reflect your company's own costs and margins but only be based on the incumbent's access and retail prices and its estimated downstream costs/margin*s].

6. INCUMBENT'S XDSL WHOLESALE OFFERS

- 1./ Are wholesale ADSL -or other xDSL - services (provided in the form of high bit-stream access, permanent virtual circuit, etc…) available from the incumbent?

- 2./ If so, do such wholesale services (considering their nature and the terms on which they are made available) provide an alternative to local loop unbundling? If they do, do they facilitate the active commercial presence of your company on the market which you address? If so, please indicate for which of the "services" identified in Section 2, above.

- 3./ If they do, do you see such services as providing a short-, medium- or long-term alternative to unbundling?

- 4./ If you do not consider them to provide an alternative, please explain why you do not perceive such wholesale services as providing a viable alternative to unbundling (e.g. price barriers, technical reasons…). (please elaborate)

7. EFFECTS OF ANY PROBLEMS OR LIMITATIONS

- What was/is the effect of such problems or limitations (see questions 4, 5, 6) on your company's competitive position on the market(s) and on its business plan?

8. PROCEEDINGS AT NATIONAL LEVEL

- 1./ Has your company brought any of these matters before national

- i./ courts?
- ii./ regulatory authorities?
- iii./ competition authorities?
- iv/ others?

(please elaborate)

- 2./ If so, what was the outcome of such actions?

Annex 2
Glossary of Terms

ANNEX 2 – GLOSSARY OF TERMS

Adjacent collocation: where physical collocation space is legitimately exhausted in a particular exchange of the incumbent, adjacent collocation allows an operator to place its equipment in an adjacent controlled environmental vault or similar structure located on the incumbent's property but outside of the exchange.

Alternative operator (or 'new entrants'): companies, other than the incumbent, which operate telecommunications systems.

Asymmetric Digital Subscriber Line ('ADSL'): a technology that provides high-speed data on an asymmetric basis. Typically a copper line is used to send a large quantity of data (*e.g.* a television picture) in one direction and a small quantity (*e.g.* a control channel and a telephone call) in the other. Currently used for speeds of up to 2 Mb/s.

Bandwidth: the physical characteristic of a telecommunications system that indicates the speed at which information can be transferred. For ADSL, speeds of up to 2 Mb/s are offered, which are sufficient to transmit a video signal. Technologies such as VDSL offer the possibility of providing data rates of up to 15 Mb/s.

Beneficiary: a term under the *Unbundling Regulation*, means a third party duly authorised in accordance with the provisions of the *Licensing Directive* (Directive 97/13/EC) or entitled to provide communications services under national legislation, and which is eligible for unbundled access to a local loop.

Bitstream access: a form of LLU, where the notified operator installs a high speed circuit between the user and their premises, providing access at a certain rate of transmission to third parties in order that the new entrant can provide broadband services to end users.

Broadband: the capacity to transmit large quantities of electronic signals (including data, video, text and voice) rapidly.

Co-mingling: a form of physical collocation where an operator's equipment is fitted and operated in an area within the incumbent's exchange where the incumbent could or does house its own equipment, without a permanent barrier between them. Sometimes also referred to as **cageless collocation**.

Digital Subscriber Line ('DSL'): a technology that allows the use of a copper line to send higher bandwidth services, such as fast Internet and video to a customer's premises.

Distant collocation: a form of collocation, where an operator houses its equipment away from the incumbent's exchange and uses an external tie cable to connect the exchange with this remote site.

DSLAM: Digital Subscriber Line Access Multiplexer. Located in the collocation space of an operator at an exchange site. It is composed of a multiplex and the DSL modems necessary to operate DSL services over the loops served by the operator from the exchange.

DSL technology: Digital Subscriber Line technology. A family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines (twisted copper pairs) into high speed digital lines, capable of supporting advanced services such as fast internet access and video on demand. ADSL (Asymmetrical Digital Subscriber Line), HDSL (High data rate Digital Subscriber line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of xDSL.

Escorted access: third parties being escorted by the incumbent while on the incumbent's exchange premises.

Full unbundled access to the local loop: means the provision to a beneficiary of access to the local loop or local sub-loop of the notified operator authorising the use of the full frequency spectrum of the twisted metallic pair.

Hand-over Distribution Frame ('HDF'): a distribution frame that connects to the main distribution frame (MDF). An operator connects its DSL equipment to each pair via the HDF.

Local loop: the physical twisted metallic pair circuit connecting the network termination point at the subscriber's premises to the main distribution frame or equivalent facility in the fixed public telephone network.

Local sub-loop: a partial local loop connecting the network termination point at the subscriber's premises to a concentration point or a specified intermediate access point in the fixed public telephone network.

Local loop unbundling ('LLU'): the process where the incumbent operator makes its local network (the connection between the customer's premises and the local exchange) available to other companies. The customer is then able to choose another supplier other than the incumbent to provide service.

Main distribution frame ('MDF'): the apparatus in the local exchange building where the copper cables terminate and cross connection to other apparatus can be made by flexible jumpers.

Notified operator: a term under the *Unbundling Regulation*, means operators of fixed public telephone networks that have been designated by their national regulatory authority as having significant market power in the provision of fixed public telephone networks.

Physical collocation: provision by the incumbent of the physical space and technical facilities necessary to reasonably accommodate and connect the relevant equipment of an operator.

Related facilities: the facilities associated with the provision of unbundled access to the local loop, notably collocation, cable connections and relevant information technology systems, access to which is necessary for a beneficiary to provide services on a competitive and fair basis.

Service Level Agreement ('SLA'): an agreement where the incumbent offers specific time scales and service level commitments for access to its network facilities.

Service provider: provider of telecommunication services, or services with a telecommunication service component, to third parties.

Shared access to the local loop: the provision to a beneficiary of access to the local loop or local sub-loop of the notified operator, authorising the use of the non-voice band frequency spectrum of the twisted metallic pair; the local loop continues to be used by the notified operator to provide the telephone service to the public.

Splitter: a device which separates a local loop into two independent channels, one for voice and one for higher bandwidth, so that different services can be run on the loop without interference.

Sub-loop unbundling: an arrangement that enables operators to interconnect with the local access network at the primary connection point.

Unbundled access to the local loop: full unbundled access to the local loop and shared access to the local loop, it does not entail a change in ownership of the local loop.

Virtual collocation: a collocation arrangement where an operator designates the equipment to be placed at the incumbent's premises but does not have physical access to the incumbent's premises; instead, the equipment is under the physical control of the incumbent and the incumbent is responsible for installing, maintaining and repairing the operator's equipment.

Annex 3
Particular Problems Identified by Access Seekers

ANNEX 3 – PARTICULAR PROBLEMS IDENTIFIED BY ACCESS SEEKERS

Table III (i) – Discriminatory Behaviour

EEA State	Alleged Discriminatory Behaviour
Austria	One operator notes that the waiting time for the provision of a number deployed unbundled line is approx. 3 weeks, while the waiting time for another operator is approx. 4-6 months. The incumbent's bitstream access ADSL product is available to all ISPs, except those offering voice telephony over IP.
Belgium	Responses include several allegations of discriminatory behaviour. For example, operators are required to pay activation and deactivation fees despite such fees not being charged to Belgacom.
France	Operators have identified discriminatory behaviour with respect to the availability and conditions of collocation space, *e.g.*, quality of service commitments.
Germany	Eighteen operators responded that the question on discriminatory practices was either inapplicable or they were unaware of such practices. In addition, three operators noted that discrimination is difficult to identify, due to confidentiality undertakings. Two operators claimed that DTAG has entered into preferential agreements with larger operators. Others claim that it was widely known that DTAG differentiates between local loop transactions.
Greece	Respondents claim that OTE has discriminated in favour of its subsidiary, OTENET, for several years, particularly in respect of collocation. Indeed, OTE has publicly announced that it will provide xDSL services to subscribers of OTENET on a trial basis. Third parties have not been invited to participate in this project.
Iceland	It is claimed that the incumbent's customers receive faster delivery times in the case of shared access (one to three days) than the operator receives (three days, on average).
Ireland	It is claimed that eircom is discriminating in favour of its downsteam service arm, which is expected to launch its own retail services by the end of 2001. Such discrimination can take the form of a more unbundled product, increased functionality and options, and more favourable pricing.
Italy	New entrants have yet to provide commercial services over the local loop. Operators claim that the incumbent is discriminating in favour of itself by not allowing operators to collocate in rooms that have already been occupied by its own facilities. This increases the costs for third parties. Some operators have also outlined two additional cases of alleged discrimination.
The Netherlands	A new entrant alleges that KPN unilaterally makes a limited number of unbundled loops per MDF available to alternative operators per day; anecdotal evidence suggests that KPN's retail MxStream service is not subject to similar restrictions. In addition, anecdotal evidence suggests that KPN's retail service does not experience the delays that are associated with local access delivery to competitors.

EEA State	Alleged Discriminatory Behaviour
Norway	One operator considers that the incumbent has been selectively disseminating information, thereby discriminating between market participants. More specifically, it is aware that one operator had access to the draft standard agreements in April 2001 despite the incumbent strongly denying their existence. Another operator reports that a competitor only paid 4,000 NOK for the installation of cables at a particular site, while it paid approximately 40,000 NOK at the same site.
Portugal	Operators highlight that after the incumbent launched its own ADSL offer in the last quarter of 2000, there have been cases (in Lisbon and Porto) where the incumbent has denied physical collocation due to lack of space, despite the fact that the incumbent was using these exchanges for its own ADSL services. Operators refer to a discriminatory collocation condition which obliges operators to notify the incumbent of maintenance activities, while the incumbent is not obliged to notify alternative operators in advance of any such activities on its part.
Spain	Several operators allege that TESAU is guilty of discriminatory conduct in respect of collocation services.
United Kingdom	One operator states that the terms of the incumbent's Reference Offer are one-sided in its favour and onerous on new entrants. In addition, the incumbent's retail arm is not expected to accept the same terms and conditions. In particular, a number of operators complain about the excessive costs of acquiring physical collocation; one operator reports that the incumbent's retail arm does not incur similar costs.

Table III (ii) – Excessive Pricing

EEA State	General Complaints	Specific Examples of Allenged Anti-competitive Pricing
Austria	Monthly rental and one-time connection fees for new lines are alleged to be too high.	
Belgium	Prices for installation of local lines, back-haul services and collocation are alleged to be too high.	(i) Incumbent is said to artificially increase collocation costs by building collocation rooms that are larger than new entrants require. (ii) Incumbent is said to charge new entrants fees for inquiry, cancellation, activation and deactivation, while not imposing the same fees on its retail customers. (iii) In the case of shared access, incumbent receives two monthly subscriptions for use of the copper loop – one from the retail customer and one from the new entrant.

EEA State	General Complaints	Specific Examples of Allenged Anti-competitive Pricing
		(iv) Incumbent's one-off retail connection fee for its low-end ADSL Internet access services is €24.54, while its connection charge for full or shared access is at least €78.68.
Denmark	High costs for collocation and backhaul link are major impediments, especially for smaller companies.	
France	Certain prices are not fixed in the RUO. Collocation prices are extremely variable, depending on site configuration and geographical location.	(i) Incumbent's retail monthly line rental fee is €10, but incumbent charges new entrants a monthly line rental fee of €14.48. (ii) Incumbent's retail installation fee is €38.11, but incumbent charges new entrants a one-off installation fee of €107.93.
Germany	Generally, unbundled loop and collocation prices are said not to be cost-based, and are excessive. Installation fees are particularly excessive. Pricing scheme does not differentiate between analogue, ISDN and DSL usage patterns.	Installation fees are said to be not justified because incumbent has already charged its retail customer for the installation of the line.
Greece	A dispute is pending over backhaul prices. Distant collocation prices are not yet established.	
Ireland	Prices are interim. Incumbent's wholesale offering is allegedly not properly cost-oriented and retail pricing structure will cause a price squeeze. Fees for security escort visits are particularly high compared to other EEA States.	
Italy	Prices for collocation and access extension connection services (*i.e.,* connection between the MDF in a remote site and the local exchange or the new entrant's adjacent site) have been identified by new entrants as being particularly high. Incumbent is said to unilaterally determine technical solutions and implementation of connection, without discussing alternatives with new entrants.	
Luxembourg	No complaints about prices by those operators that responded to the Commission's Questionnaire. However, in the *Seventh Implementation Report*, the Commission indicates that new entrants were of the view that prices for	

EEA State	General Complaints	Specific Examples of Allenged Anti-competitive Pricing
	unbundling are too high.	
The Netherlands	Unbundled local loop and collocation prices are said to be unverifiable and too high. A broadband service surcharge of €4.54 per month, in addition to the monthly line rental fee, has not been approved by the NRA.	(i) Subscription fee for shared access is already invoiced by the incumbent as the voice subscription fee it imposes on its own retail customers. (ii) New line connection charge is too high because incumbent includes the costs for digging activities, even when not required. (iii) Incumbent charges new entrants €38.57 for testing the loop, even though this procedure is completely automated.
Norway	LLU charges in general are considered too high (comparison to Sweden).	
Portugal	Concern that prices are not cost-oriented, particularly for full unbundling, access to vacant loops, physical collocation, distant collocation, alternative power and internal tie cables. No justification for different prices in case of local loop usage for provision of narrowband versus broadband services.	
Spain	Minimum loop installation costs are allegedly too high and charges for collocation site visits excessive.	Line rental fee for shared access is said to be unreasonable, given that incumbent's retail customer continues to pay a subscription fee for the line.
Sweden	Line rental fees, both point to point and when used in conjunction with collocation, are allegedly too high.	
United Kingdom	Absence of incumbent cost information makes it difficult to ascertain whether prices are above costs. Prices for access to unbundled local loops too high.	Incumbent charges retail customers €99 for connection of a new line, but charges new entrants €265.

Table III (iii) – Price Squeezes and/or Predatory Pricing

EEA State	Alleged Price Squeezes and/or Predatory Pricing
Austria	Telekom Austria's retail prices are said to be artificially low, which significantly hinders new entrant's ability to make a profit using unbundled local loops.
Belgium	One operator emphasized that the incumbent's current retail monthly rate for ADSL Turboline Go™ (without Internet access subscription) is €25.10, while the estimated total monthly costs (as calculated by the operator) that a new entrant will incur if it provides comparable ADSL services via full or shared unbundled local loop access is €36.76 and €28.26, respectively. This estimated total monthly access cost includes the one-off installation fee (depreciated over 24 months), and

EEA State	Alleged Price Squeezes and/or Predatory Pricing
	collocation, backhaul and internal cable costs (all depreciated over 20 years). In addition, the operator has indicated that the incumbent's one-off retail connection charge for its low-end ADSL Internet access service, which includes the provisioning of a splitter, line adaptation, activation of high bandwidth service, and Internet access set up, is €24.54, while its connection charges for full and shared access is at least €78.68. The total discount (typically between 8 and 15%) of the retail price offered by the incumbent for its ADSL "Turboline" service does not allow new entrants to cover their own fees for connections with incumbents own network, their costs for providing Internet access to the end-user, and costs related to reasonable sales and marketing efforts necessary to acquire customers.
France	One operator compares the incumbent's retail price for Wanadoo ""eXtense" service (512-128 Kbit/s retail DSL service with free modem) with the operator's calculation of the costs of shared access and concludes that a margin squeeze exists. Another operator states that the pricing of the incumbent's "Turbo" DSL ADSL bitstream access, when compared to pricing for the incumbent's retail services, leaves very little margin for new entrants. The same operator also identifies a price squeeze caused by the incumbent's "Ma-ligne" line rental services, and notes that a complaint has been referred made to the French Competition Authority. Another operator identifies a margin squeeze between the incumbent's retail "Netissimo 1" services and the wholesale prices for its line share service. The operator estimated the total line cost for shared access to be €30.20, compared to the incumbent's retail price for Netissimo 1 of €25.24.
Germany	Nineteen operators identified the existence of a margin squeeze, indicating that the incumbent's monthly line rental charges to its competitors are generally 14% higher than its monthly charges to its own retail end-user customers. According to some of these operators, this margin squeeze would be even worse if the one-off installation fees were applied over an average contractual duration and added to the monthly rental charge. Two operators focus on the incumbent's T-ISDNXXL services (including TDSL) and point out that the incumbent's retail monthly charge for this service is €38.26, plus a one-off installation charge of €51.57, and note that new entrants are not in a position to offer an equivalent service at competitive prices. In December 2001, the RegTP announced that it had opened proceedings against DTAG for providing retail DSL services at fees lower than cost.
Greece	Respondents identified a price squeeze between downstream Frame Relay over ATM retail services provided by the incumbent and local loop unbundling pricing. It is estimated that the incumbent is not charging its Frame relay clients for the line that connects their premises to the incumbent Frame relay network, regardless of the location of the Frame Relay node.
Iceland	One operator claims that the margin is non-existent or too small in the cases of resale of local loops to residential users and carrier pre-selection.
Ireland	The only operator who responded is concerned that the incumbent's retail pricing will inflict a price squeeze on competitors and that the wholesale offering is not properly cost-oriented.
Italy	Although the incumbent has tried to justify it, there is said to be no margin left for alternative operators, as a result of the incumbent's high wholesale ADSL prices.
The Netherlands	One operator believes that there is a price squeeze based on the fact that the incumbent charges its own retail customers from €22.69 per month for DSL services, but charges €133.87 for the provisioning of the line, €11.93 per month for line rental (plus a broadband service surcharge of €4.54), and a percentage of the high costs of collocation.
Norway	According to two operators, there is a margin squeeze between the prices the incumbent charges competitors for access to its local loops for PSTN and ISDN lines, and the retail prices the incumbent charges its own customers for PSTN and ISDN services.

EEA State	Alleged Price Squeezes and/or Predatory Pricing
Portugal	The price of the local loop monthly fee of €11.96 and €13.78, respectively, are 1% and 16% above the monthly line rental for the fixed telephony service provided by the incumbent (€11.85). Operators also allege a margin squeeze between the incumbent's ADSL wholesale and retail services
Spain	A number of operators state that there is a price squeeze taking place between the incumbent's ADSL retail and wholesale prices currently for its bitstream access service and prospectively for unbundled access. At present, there is a price squeeze caused by the monthly fee for a fixed telephony services, currently set at €10.47, while the monthly rental fee for a fully unbundled loop amounts to €13. In July 2001 Decision, a margin squeeze was identified by the NRA between the incumbent's proposed ADSL retail service and its wholesale bitstream access services ("Gig ADSL"); a retail-minimus price cap was imposed.
Sweden	One operator identifies a margin squeeze with respect to the incumbent's fixed phone subscriptions and its retail ADSL Broadband service. According to the operator, the prices of unbundled lines, both point to point and when used in conjunction with collocation sites, leave little or no margin for small ISPs to earn money when the total investments are taken into account. The operator also appears to identify a margin squeeze with respect to the incumbent's wholesale ADSL offer. On 14 December 2001, the Swedish Competition Authority initiated a proceeding to examine whether the incumbent's retail prices for ADSL violates competition law principles.
United Kingdom	A number of operators state that the absence of complete cost information for the incumbent makes it difficult to ascertain with certainty whether a margin squeeze is occurring. Nevertheless, they believe that a margin squeeze does exist because the use of a conservative proxy of the incumbent's wholesale costs and comparing them to the incumbent's retail prices demonstrates that the margins are too small for operators to make a profit. Another operator notes that the £150 wholesale connection charge for one of the incumbent's broadband access products matches the retail connection charge, making it difficult for new entrants to make a profit. In addition, the fixed incumbent is alleged of strategic predatory behaviour in unilaterally lowering certain charges of the IPStream and videostream families in the complete absence of competitive price pressure on those services; appeals have been lodged with the NRA in this regard.

Table III (iv) – Refusals to Supply Access

EEA State	Alleged Refusals to Supply Access
Austria	One operator has been refused collocation facilities in Vienna and Linz due to a lack of space, while another has been refused collocation where another operator had rented the entire space (despite its lesser space requirement).
Belgium	One operator claims that Belgacom refused it backhaul/transport interconnect facilities and to implement modification requests to co-mingle.
Denmark	It is alleged that Tele Danmark refuses to allow the exchange of traffic between alternative operators at the collocation facilities, thereby forcing these operators to purchase additional backhaul/transit links. It is also claimed that Tele Danmark refuses to deliver unbundled lines without justification.
France	France Telecom is claimed to have refused to offer collocation facilities in a large number of exchanges (i.e., 4 in Paris and 126 throughout France) on the basis of space deficiencies, legal difficulties or security risks. No alternative solutions were proposed. It has been claimed that the refusals in Paris have been associated with areas in which France Telecom has already launched DSL services. It has also been alleged that France Telecom imposes questionable operational restrictions on the use of loops.

EEA State	Alleged Refusals to Supply Access
Germany	Eleven operators confirmed that DTAG had refused to provide unbundled local loops. DTAG has justified its refusals either on the basis of a lack of collocation facilities, a lack of technical expertise, a lack of network capacity, a lack of available local loops, the fact that its appeal on mandated local access has not yet gone to judgment, or on the basis that DTAG requires the local loops for its own purposes. Two operators also report that DTAG refused access requests to cable splitters. Five operators claim that DTAG refused to provide an offer for shared access due to the fact that it was not in a position to do so. A number of respondents noted that DTAG refused them access to collocation facilities.
Greece	OTE was said to have selectively provided raw copper lines to new entrants prior to January 2000. According to a respondent, OTE continued to refuse local access up to the publication of its RUO in June 2001, justifying its refusals on the grounds that requests were not in the interests of the local market.
Iceland	It is claimed by an operator that it has been refused or offered unsatisfactory conditions for collocation at several exchanges, which has been justified by the incumbent on the basis of insufficient space.
Italy	New entrants have yet to provide commercial services over the local loop. The respondents claim that Telecom Italia has refused requests for collocation on several occasions, justifying its decision on the lack of space, a lack of sufficient copper pairs for all operators requesting collocation, and the impossibility of distant collocation at sites that are not owned by it. Many respondents question the impartiality of the incumbent in carrying out its unilateral feasibility studies.
Norway	It is reported that Telenor has refused access requests for SDSL, on the basis that the standardisation of SDSL was incomplete. It is also reported that full access has been refused on available copper connected through smooth out cables, additional cable and available lines following termination. Operators also report that Telenor has refused to provide shared access, for reasons that are strictly commercial. It is also claimed that difficulties have been experienced with full unbundled access because Telenor refused it access to collocation spaces, due to capacity restrictions.
Portugal	It is reported that express refusals of physical collocation by the incumbent in exchanges considered by new entrants to be priority and where Portugal Telecom is already offering ADSL services. The incumbent also restricts access to certain sites for collocation purposes.
Spain	While operators have not explicitly noted a refusal to supply, much of the behaviour of TESAU is said to amount to a constructive refusal to supply (*e.g.*, TESAU's failure to make available an OSS system for on-line management of services, provisioning, incidents).
Sweden	It is alleged that Telia refused to provide physical and distant collocation, claiming a lack of available space and the impossibility of installation.
United Kingdom	One respondent drew attention to BT's refusal to provide physical collocation at one local exchange since January 2001, claiming insufficient collocation space.

Table III (v) – Failures to Provide Sufficient Information

EEA State	Alleged Failures to Provide Sufficient Information
Belgium	It is claimed that the incumbent's RUO contains incomplete technical specifications for collocation and that the technical specifications for co-mingling do not comply with the *Unbundling Regulation*. Operators claim that information provided in respect of collocation is not accurate.
France	The automated information system, foreseen in the current RUO, has yet to be implemented by France Telecom. Access to insufficient information is a key difficulty for new entrants (e.g., the distribution frame coverage maps (which

EEA State	Alleged Failures to Provide Sufficient Information
	were the subject of an ART decision in April 2001) are claimed to be of a poor quality). In addition, the current RUO does not provide information concerning the MTFs, though this information is partially available (following the ART's intervention). However, this information is, again, of poor quality. A lack of information also affects collocation requests (*e.g.*, information concerning the various types of collocation exchanges is unavailable).
Germany	Operators contend that the incumbent does not, free-of-charge, provide information about the availability of unbundled local loops or collocation space, unless the NRA first issues a binding order. Moreover, the new unbundling offer does not require the incumbent to provide information on the status of orders and deliveries.
Ireland	An operator contends that eircom has provided limited information on exchanges despite having been requested to do so a year ago. Information which was provided contained errors (since rectified). In addition, eircom is said to have not provided information on loop characteristics, and has rejected using 60% of the lines chosen by one operator in bitstream service trials.
Italy	Although new entrants have yet to provide commercial services over the local loop, they complain that the incumbent fails continuously to provide sufficient information, including information necessary for the identification of exchanges.
The Netherlands	Responding operators complain about KPN's refusal to disclose information about its network (*e.g.*, it is alleged that KPN has failed to provide information requested and that the information provided was of very poor quality).
Norway	One operator complains that an official version of the RUO agreement is still not available, despite drafting having commenced in March 2001. The operator also notes that the technical specifications for ADSL proposed in the RUO do not comply with the ITU/ETSI specifications. Another operator reports that the RUO is incomplete with respect to full access to both physical and distant collocation.
Portugal	Respondents complain that Portugal Telecom has not provided complete information in its RUO. For example, additional information is necessary for loops joined to remote concentrator units, basic loop characteristics, and intermediate concentrator points. The need for such information was identified in the Advisory Working Group on local access in December 2000.
Spain	Operators complain that there is a lack of information on exchanges and loops. For example, the RUO fails to provide information on exchange or loop topology. Information provided, is alleged to have contained errors. The regulator has taken some (insufficient) action in this regard.
United Kingdom	Operators complain that the RUO for full access does not sufficiently address collocation delays. One operator reports that the RUO fell well short of the minimum requirements annexed to the *Unbundling Regulation* (*e.g.*, it did not include access to OSS), although the issue is apparently being addressed after pressure from the operator, business community and national regulatory authorities. Another operator complains that there are no business-type SLAs in the RUO.

Table III (vi) – Unjustifiable Delays

EEA State	Alleged Unjustifiable Delays
Austria	The provision of a number of deployed unbundled lines to an operator took 4-6 months; such delivery to another operator took approx. 3 weeks. The provision of an unbundled socket and the related copper line takes between 2-3 weeks for most operators. Collocation delays include a two-week waiting period for the installation of technical instruments. It is also claimed that collocation delays, in particular for indoor collocation, can take up to 8 months.

EEA State	Alleged Unjustifiable Delays
Belgium	Some operators have experienced delays in preliminary negotiations. Other operators have experienced delays of 8-12 months for new collocation rooms. It is also claimed that Belgacom does not provide all the information requested by new entrants, which further delays the process.
Denmark	It is claimed that Tele Danmark took six months to finalise preliminary issues in one instance, and that the ordering process is very unreliable (it is noted that operators in practice need to remind the incumbent of an order on several occasions, to ensure delivery). Tele Danmark has also claimed not to have received orders that new entrants have claimed to have submitted. Collocation is said to take, on average, 2-3 months; delivery of a local line is said to take one month. The delay is justified by Tele Danmark on the basis of staffing shortages or standard procedure.
France	A process whereby the provisioning of local loops should be completed within 19-22 days has yet to be tested, although new entrants fear the process could be abused by France Telecom, thereby causing delays. In addition, operators consider that the process for the provision of collocation does not facilitate the mass marketing of DSL services. The provisioning of collocation facilities is completed within 4 months of the operator's acceptance of a specific project.
Germany	Three operators report that DTAG has delayed the confirmation of orders and deliveries either without justification or blaming delays on a high number of requests and a lack of resources. Eleven operators described widely varying lengths of the negotiating process, ranging from 2-3 months to 11 months. Two operators complained that DTAG was frustrating negotiations. Operators report a range of delivery times for collocation, from 2 months to 12 months (in the case of two operators). The delivery time of unbundled lines appears to have been better (*i.e.*, 7 - 15 days). However, two operators claim that the percentage of lines not delivered on schedule was 40% and 90%, respectively. DTAG justified these delays on the basis of a lack of personnel, an unforeseen number of orders, a lack of technical and operational feasibility, administrative errors, theft of tools, delays on the part of suppliers and ongoing construction of collocation sites. Four operators reported major delays in respect of collocation facilities, including outdoor collocation. DTAG put forward a range of justifications, such as a lack of timely planning arrangements, collocation was not possible or virtual collocation was unavailable. Four operators added that DTAG did not offer alternative collocation facilities.
Greece	It was noted that serious delays and service interruptions had been experienced prior to January 2001, but that operators were not yet in a position to report on delays since the publication of the incumbent's RUO in June 2001.
Iceland	It is alleged that delays have been experienced in relation to the delivery of collocation facilities (on average 3–6 months) and unbundled lines (10 days). The incumbent justifies these delays on a lack of human resources.
Ireland	It has been alleged that eircom has frustrated and delayed the negotiation process for local access.
Italy	New entrants have yet to provide commercial services over the local loop. However, responding operators are concerned that the complicated ordering system will automatically lead to serious delays. It is alleged that the failure to define the technical specifications of the interface system for the placement of orders will add to delays. In addition, complaints have been made that the preliminary negotiation process takes too long; on average, five months. It should be noted that a financial partner of Telecom Italia claimed that it only took one week to negotiate and conclude a contract with Telecom Italia. It is evident that there are delays associated with the collocation process. Several operators have complained that many of the sites they have requested have yet to be delivered, despite a regulatory ruling. Some also claim that the requirement to sign a contract prior to taking possession of collocation space has caused further delays,

EEA State	Alleged Unjustifiable Delays
	as the signature process generally takes 5 months. One operator claims that Telecom Italia has met the 90 day deadline for the delivery of collocation sites in a few instances only.
The Netherlands	Responding operators highlight a wide range of delaying tactics on the part of the incumbent as a major area of concern. Such delays relate to unbundled lines and collocation facilities. (The concerns are considerable and are dealt with in detail in of the EEA State Report.)
Norway	Operators generally report delivery times of between 6 weeks and 3 months for collocation sites and 3 to 10 weeks for unbundled lines. One operator reports that the negotiation of preliminary issues took nearly 4 months.
Portugal	Operators have already experienced serious delays in relation to the three exchanges that have been operative since June 2001 as part of a pilot scheme. One operator complains about the delays associated with the supply of E1 backhaul capacity (required to provide connections to collocated facilities). Operators consider the delivery times in the RUO to be excessive. However, operators are already reporting infringements of these delivery times, despite the recent commencement of the local loop unbundling process.
Spain	Operators complain that the negotiation process with TESAU is proving extremely difficult, particularly in light of its unwillingness to negotiate. Operators also complain of considerable delays in delivery of collocation sites.
Sweden	It is claimed that the process suffers from extremely long delivery delays of more than 20 weeks in respect of distant collocation.
United Kingdom	A number of operators complain about long delays in obtaining collocation space: according to one operator, it takes the incumbent on average 12 months to deliver a collocation site. Another operator reports that although it placed an order with the incumbent asking for physical collocation to be built by April 2001, the incumbent has yet to deliver.

Table III (vii) – Provision of Inferior Quality

EEA State	Alleged Provision of Inferior Quality
Denmark	A new entrant claims that there is a 30% risk that a line delivered by Tele Danmark will not function once delivered. Further damage is said to be inflicted on new entrants as Tele Danmark attempts to frustrate the process further by having unreliable and delayed repair facilities.
France	Operators claim that the quality of service offering of France Telecom does not permit them to replicate the incumbent retail offers. For example, they contend that the guaranteed repair time of four hours only applies in business hours (contrary to the ART's Decision of June 2001).
Germany	A number of respondents complained about the quality of the lines delivered to them by DTAG, with the latter alleged not to be meeting the quality parameters previously agreed between the parties. One operator claims that 48% of all unbundled lines delivered were not functioning and required additional visits by DTAG's engineers. Several additional operators reported technical problems with respect to xDSL lines. A number of operators note that collocation sites are in bad condition, *e.g.*, there being insufficient power and air-conditioning.
Greece	The lines provided by OTE are alleged to be of poor quality in the past and respondents fear that this poor quality will continue.
Iceland	It is claimed that conditions of collocation at several specific exchanges have been unsatisfactory.
Italy	New entrants have yet to provide commercial services over the local loop.
The Netherlands	Operators report that KPN refuses to provide quality guarantees that any local loop is technically capable of DSL. In addition, it is also noted that the copper

EEA State	Alleged Provision of Inferior Quality
	lines delivered by KPN were said to have been of an insufficient quality in several instances. KPN ultimately replaced these lines but the process took up to 2 weeks. Respondents claimed to be unable to provide their customers with realistic information on when the service will be ready.
Norway	According to one operator, the incumbent's full ADSL access, offered as a blank copper line, does not guarantee any quality of this product. Thus, the operator is forced to repair the line in many instances. Another operator estimates that approximately 30% of the xDSL lines delivered to it by the incumbent have faults, particularly open circuits.
Portugal	There is no experience in terms of line quality as the LLU process has just commenced. Nevertheless, operators allege important problems with repair times and highlight that Portugal Telecom is not obliged to offer access seekers the same repair schemes as it offers its own customers.

Table III (viii) – Tying

EEA State	Alleged Tying
Belgium	Operators report a tying obligation in the RUO whereby Belgacom requires end-users to fully subscribe to a single PSTN or ISDN line from Belgacom before it will approve shared access.
Denmark	Operators have identified tying in circumstances where operators are prevented from exchanging traffic at the collocation level and are, therefore, forced to purchase expensive backhaul facilities from the incumbent operator.
Germany	Operators have stated that they must purchase bundled services from the incumbent in areas where the incumbent has built out its network using fibre optic cables, because access at the sub-loop level is denied.
Ireland	Operators have identified possible instances of tying of the incumbent's ancillary products with collocation and bitstream access offerings.
Italy	Operators have identified a reciprocity requirement on the access seeker to provide the incumbent with local access to its network.
The Netherlands	Operators have identified terms which prohibit the shared use of backhaul facilities, requiring operators to build out the facilities themselves (which is impractical for smaller operators) or to buy the facilities directly from the incumbent.
Portugal	Operators have identified potential tying abuses relating to the need to purchase backhaul, internal and external cabling and certain collocation-related services from the incumbent.

Annex 4
EEA State Reports
(PUBLIC VERSION)

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AUSTRIA

In total, 10 alternative operators and one individual in Austria responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Unbundled access to the local loop has been mandated in Austria since 1 August 1997, the date the Austrian Telecommunications Act came into force. Article 37 of the Telecommunications Act requires all operators with Significant Market Power (SMP) to allow full unbundled access to their local loops. Meanwhile, Articles 2 and 3 of the Interconnection Ordinance explicitly require SMP operators to provide unbundled network access services. The incumbent, Telekom Austria, is the only operator that has been designated by the NRA[1] as having SMP in the fixed market.

In a March 2001 ruling (Z12/00-80), the NRA mandated sub-loop unbundling, maximum collocation areas of 22 m^2, step-by-step reductions in the prices for local loops and related facilities using an analytical bottom-up cost estimate model based on the FL-LRAIC approach, and penalties where Telekom Austria overruns deadlines. According to the ruling, the reduced prices apply only until 30 September 2002.

As a notified SMP operator, Telekom Austria has been required to provide a Reference Unbundling Offer (RUO) since the beginning of 2001. Its first RUO was not compliant with several NRA rulings (including the March 2001 ruling) and failed to include the minimum components listed in the *Unbundling Regulation*, particularly shared access, details of locations for access and subscriber lines, the incumbent's locations, collocation facilities at these locations, security measures, security requirements, collocation inspections, access to business support and information systems, standard terms, and conditions of contract, including compensation, prices and pricing formulae.

Consequently, by a decision dated 18 June 2001, the NRA ordered Telekom Austria to amend its RUO by 10 July 2001. Telekom Austria published a revised RUO on 10 July 2001, which included shared access. However, only one agreement for shared access has been concluded as of the end of 2001. By decision of the NRA of 17 December 2001, Telekom Austria is obliged to include in its RUO the use of VoIP for telephony services within the scope of shared access, deleting an explicit restriction in the RUO version before 28 December 2001.

The NRA requires collocation at any of Telekom Austria's main distribution sites, but "open collocation" (which might include distant collocation) outside the incumbent's premises is not allowed. Where access to physical collocation is not possible, Telekom Austria is required to agree to an alternative solution. The set up charge for collocation

[1] The Telecom-Control GmbH ceased to exist on 31 March 2001 and became part of a new regulatory authority for telecommunications and broadcasting, Rundfunk & Telekom Regulierungs-GmbH. For simplicity sake, we will refer to the Austrian regulator as the "NRA".

must be cost-based and collocation rentals are governed by current local market rental rates for commercial premises.

A form of bitstream access is also available in Austria. A Reference Offer for bitstream access was published in June 2000 and the Internet Service Provider Association of Austria and Telekom Austria, in March 2001, reached a new agreement which modified the Offer to a limited extent (*i.e.,* the price remained unchanged).

B. Services to be Provided Over the Local Loop

The responding operators identify the following services to be provided over unbundled local loops: narrowband retail access, narrowband retail call services, narrowband retail dial-up Internet access, wholesale broadband telecom services, retail broadband telecom services, Internet broadband access and "other services". Two operators state that they target primarily the business market.

One operator states that its core product is fixed line voice telephony and dial-up Internet access to residential users, SOHOs and SMEs. However, this operator states that it is not currently offering any services using unbundled local loops because for residential customers and SOHOs, local loop unbundling does not offer a positive business case.

C. Licences and/or Authorisations

The operators that responded to this question state that they provide services pursuant to authorisations. One of these operators also states that it provides ISP services pursuant to a notification to the NRA.

D. Obstacles to Obtaining Access

Based on the responses, three significant obstacles have impeded alternative operators from obtaining unbundled access to unbundled local loops. These obstacle, in many instance, have caused the operators to change their business strategies.

Pricing issues

The majority view appears to be that Telekom Austria's retail prices are artificially low, which significantly hinders new entrants' ability to make a profit using unbundled local loops.

Delivery times and delays

One responding operator reports that the provision of a single unbundled line requires between four and six months. Meanwhile, another operator states that the waiting time for the provision of multiple unbundled lines is only about 3 weeks.

With respect to collocations, operators report two week waiting periods for the installation of technical instruments required for collocation by Telekom Austria. One operator claims that collocation, and particularly indoor collocation, has been delayed by up to 8 months as a result of Telekom Austria failing to provide a "permission to use".

Unsatisfactory conditions and delivery time of collocation

Without providing any details, the responding operators report significant delays and other unsatisfactory conditions with respect to collocation. One of the key concerns is Telekom Austria's refusal to provide collocation space. For example, in 2001, one operator reports that its requests for collocation in Vienna and in Linz were refused by Telekom Austria due to a claimed lack of space. However, the operator states that Telekom Austria provided no proof for this claim and did not offer any alternative forms of collocation. Another operator states that there are cases where Telekom Austria has rented the entire available collocation space to one operator, even though the size of the space exceeds the operator's needs, and then refuses collocation to other operators on the grounds of lack of available space.

High prices for collocation are also a significant concern for operators, with one operator claiming that it has been unable to conclude a lease contract with Telekom Austria due to the extremely high per m^2 prices for collocation space.

E. Economic Conditions of Unbundling

Two operators confirm that Telekom Austria charges the prices approved by the NRA in its March 2001 ruling. Moreover, with respect to shared access, Telekom Austria reduced its monthly charges following intervention by the NRA, and these new rates were published by Telekom Austria in its RUO on 10 December 2001. The principal prices are as follows:

- Monthly rental fee for full access: €11.63 (€10.90 as of 1 January 2002).
- Monthly rental fee for shared access: €5.45 (from 1 January 2002).
- One-off connection fee per line for full and shared access (new lines): €109.01.[2]
- One-off connection fee per line for full access (existing lines): €54.50, and €36.34 for an additional connection.
- Information about the local loop boundaries: €54.07.

One of responding operators states that the monthly rental and one-time connection fees for existing lines are reasonable, although fees for new lines are too high.

F. xDSL Wholesale Offers

Telekom Austria's ADSL roll out is widely considered to be one of the fastest in the Europe. Agreement on the incumbent's standard wholesale product was reached in March 2000 and a bitstream access ADSL package is available to all ISPs and other alternative network operators on a non-discriminatory basis, except those ISPs offering voice telephony over IP. One operator states that an xDSL resale offer does not yet exist.

[2] This is the price listed in the NRA's March 2001 ruling. Nevertheless, two operator state in their response that this price is €163.51, with additional connections priced at €145.35.

One of the operators that confirms the existence of an ADSL offering claims that such services do not provide an alternative to LLU. Another operator states that Telekom Austria's wholesale ADSL offering does not present a positive business case because it is not profitable for residential and SOHO (small office/home office) customers at current market prices. Nevertheless, this operator views Telekom Austria's wholesale ADSL offering, in theory, as a reasonable alternative to LLU for residential and SOHO customers, based solely on the fact that there is currently limited competition in the local loop sector and reselling Telekom Austria's wholesale ADSL offering would establish an alternative service for customers.

G. Effects of Any Problems or Limitations

Three responding operators claim that because of the obstacles described above, they do not provide services over Telekom Austria's local loop. Furthermore, one of the operators which does provide services using unbundled local loops claims that, due to the numerous practical problems, it intends to seriously limit its activities in this field. One operator providing services via LLU states that the delays encountered concerning collocation has resulted in a significant reductions in competition.

H. Proceedings at National Level

Responding operators report only a few LLU proceedings at the national level, some of which are ongoing and others which have been completed. The completed proceedings include the following:

- In 1999, a number of telecommunications service providers took part in a proceeding before the NRA which was focused on the conditions upon which Telekom Austria was required to provide full unbundled access to its local loops. According to one operator, the NRA's decision did not establish a satisfactory framework for new entrants, either in terms of technical regulation or in terms of prices.
- In September 2000, three alternative operators filed a proceeding with the NRA aimed at reducing the prices charged by Telekom Austria for monthly rental of a line as well as the one-off fees. After six months of negotiation, the NRA set new prices. However, according to one operator, these new prices are not low enough to grant a return of investment in a reasonable period of time.

I. Summary of Findings

- Both full and shared access to unbundled loops are available in Austria, and final prices have been set by the NRA. Physical collocation is also available to alternative operators, and Telekom Austria must agree to alternative forms of collocations where physical collocation is not available.
- Responding operators that remain committed to utilising unbundled local loops identify a number of services they plan to provide via these loops, including narrowband retail access, narrowband retail call services, narrowband retail dial-

up Internet access, wholesale broadband telecom services, retail broadband telecom services and Internet broadband access.

- The majority of operators provide services pursuant to authorisations. ISP services only require notification.
- The obstacles to obtaining unbundled access to the local loop identified by the responding operators include various pricing issues, long delivery times and delays, and the excessive costs and delays associated with collocation.
- None of the responding operators identify a price squeeze, although the retail prices of Telekom Austria were considered to be artificially low.
- The general consensus is that Telekom Austria's xDSL wholesale services, as currently priced, are not a sufficient alternative to unbundled local loops, particularly for residential and SOHO customers.
- As a result of the obstacles identified above, a number of alternative operators have decided to either abandon or postpone their entry through LLU or, alternatively, to limit their LLU-related activities.
- There have been only a few LLU proceedings at the national level, and only two have been completed.

BELGIUM

In total, four alternative operators in Belgium responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Legislation in support of local loop unbundling was introduced in Belgium on 6 October 2000 by the Belgian Council of Ministers, in expectation of the upcoming EC *Unbundling Regulation*. The new law allows all operators and service providers access to incumbent Belgacom's local network from 1 January 2001.

Even before the Belgian legislation, Belgacom had announced on 24 August 2000 that it would offer access to its local loop beginning in the last quarter of 2000. Belgacom provided a Reference Unbundling Offer (the "RUO") on 27 December 2000.

On 28 February 2001, the National Regulatory Authority (the "BIPT") issued an opinion stating that the RUO did not comply with the *Unbundling Regulation* and amended it on certain points, including requiring shared access and sub-loop unbundling. The 28 February 2001 opinion also required that all forms of collocation be available (including distant collocation), and decreased the delivery time for physical collocation from six months to two months and increased the number of collocation deliveries per month. On 27 July 2001, the BIPT supplemented its February opinion and required Belgacom to provide "co-mingling" (placing of racks by the alternative operator in the same room as Belgacom's racks).

Since the 28 February 2001 opinion, Belgacom has published several RUOs, which responding operators continue to claim contain numerous missing or incomplete elements and are neither compliant with the BIPT's 28 February 2001 opinion or the *Unbundling Regulation*. Under such circumstances, the BIPT has decided to consider the May 2001 RUO as the applicable RUO and has instructed that missing or incomplete elements be found by operators in the BIPT's 28 February 2001 opinion and subsequent opinions.

A reference offer also exists for bitstream access. Following complaints by new entrants that the bitstream access reference offer (BROBA) left no viable margins and included unjustified technical restrictions, the BIPT, on 31 August 2001, issued a binding opinion amending Belgacom's BROBA and reviewed the tariffs to avoid a price squeeze. The BIPT is also currently investigating the conditions applied by Belgacom for backhaul services to its bitstream access services. In the meantime, the prices for backhaul have been approved by the BIPT.

The prices for unbundled copper lines and collocation are contained in the annexes to Belgacom's May 2001 RUO. Legislation introduced in Belgium specifies that unbundled line tariffs must be cost-based and that the BIPT will be in charge of guaranteeing correct pricing. The installation and monthly rental charges depend on whether the loop is actively used to provide telecoms services to specific end users, and what type of service is offered. Some of the prices for full and shared access to copper lines have been adjusted by Belgacom following a request by the BIPT on 31 May 2001. These adjustments were approved by the BIPT on 24 July 2001. Collocation prices have not yet been approved by the BIPT. Proposed prices for bitstream access are included in Belgacom's BROBA and are still awaiting approval by the regulator.

B. Services to be Provided Over the Local Loop

Two responding operators state that access to the incumbent's local loop network is part of their overall business strategy and they plan to pursue both full unbundled access and line sharing. One operator intends to provide a range of services over unbundled local loops, including:

- narrowband retail access (ISDN-2 access, to be used for both voice and dial-up Internet access)
- narrowband retail call services (ISDN-2 services for local, national and international voice services)
- narrowband retail dial-up Internet access (ISDN-2 services for dial-up Internet access)
- wholesale broadband telecom services (wholesale DSL services for ISPs)
- retail broadband telecom services (retail broadband data services Point to Point and VPNs, without Internet access)
- Internet broadband access (broadband Internet access services based on ADSL and SDSL)

This operator's intended customer market for its narrowband and broadband services are businesses, with small/medium enterprises (SMEs) and small office/home office (SOHO) businesses the targeted customers of its narrowband retail services and the overall business market in general the target of its broadband retail services.

The second responding operator describes that it will focus only on broadband services, with plans to offer wholesale broadband telecom services to ISPs and other parties offering ADSL services, leased lines and VPNs, and retail broadband telecom services (based on xDSL and VPNs) to business customers. The operator further states that it intends to develop Internet broadband access services and an Internet portal server.

A third responding operator describes that access to the incumbent's local loop is not yet part of its business strategy because current financial conditions (including pricing) of the unbundling of the local loop in Belgium do not allow it to make a viable business plan regarding the services it could offer by means of unbundled access to the local loop. Nonetheless, the operator states that if more favourable contract conditions are forthcoming, the only services it views as possibly returning a sufficient margin of return are retail broadband telecom services, if offered in combination with other value-added services. The operator would likely sell these services to business customers, particularly corporations. According to this operator, narrowband retail access, narrowband retail calls services and narrowband retail dial-up Internet access would likely be excluded from its business strategy because the difference between the retail costs of the incumbent and the costs of unbundling the local loop would not allow it to obtain a return on its investment. Similarly, wholesale broadband telecom services and Internet broadband access would not be part of the operator's business strategy because the incumbent's existing low retail prices for ADSL services would not allow a potential buyer of the wholesale service to offer services to end users at competitive and attractive prices.

C. Licences and/or Authorisations

One responding operator states that its provides services pursuant to a fixed network licence granted by the BIPT while a second operator states that it provides services under an infrastructure licence.

D. Obstacles to Obtaining Access

Responding operators identify a number of obstacles to obtaining unbundled access to the incumbent's local loop. These include (i) missing or incomplete elements of Belgacom's RUO, (ii) unjustified, unfair and discriminatory terms in the RUO, (iii) Belgacom's refusals and delays in providing access to unbundled lines and collocation, and (iv) specific discrimination by the regulator.

Incomplete RUO

Responding operators identify the missing or incomplete elements in Belgacom's RUO as a serious impediment to obtaining unbundled access to Belgacom's local loop.

According to one operator, following the publication of the BIPT's 28 February 2001 opinion, which amended some parts of Belgacom's RUO and directed Belgacom to make its RUO compliant with the *Unbundling Regulation*, Belgacom published a series of RUOs, none of which were wholly compliant with either the 28 February 2001 opinion or the *Unbundling Regulation*. The operator recites the following examples:

- shared access is currently part of the RUO but ADSL is the only type of xDSL permitted;
- the RUO contains incomplete technical specifications for collocation;
- the service level agreement (SLA), general terms and conditions, and agreements for collocation are unilaterally imposed by Belgacom;
- the SLA, general terms and conditions and technical specifications for co-mingling are unilaterally imposed by Belgacom;
- the SLAs do not provide for penalties where Belgacom fails to meet delivery commitments,
- the SLA and Planning & Operations for raw copper, shared pair and tie cabling are unilaterally imposed by Belgacom and not compliant with the *Unbundling Regulation*;
- there is no price for the leased capacity (also called the "backhaul link") which operators can use to enter Belgacom's local exchange; and

- there are no definitive prices for “co-mingling”.

According to the responding operators, as a result of these missing or incomplete items in the RUO, they have been forced to live with a high degree of uncertainty and have been unable to formulate an overall broadband business strategy.

One responding operator also identifies the absence of a “validated” reference offer for bitstream access as an obstacle to competition in the broadband access market. This operator views bitstream access service at the ATM level as the best short-term ADSL service solution (principally because it allows quasi-nationwide coverage without any collocation concerns), but is concerned that a reference offer has not yet been “validated” by the BIPT and, in the meantime, it claims that Belgacom refuses to offer bitstream access services.

Unjustified and unfair contractual terms

Responding operators also report a number of unjustified and unfair terms in the RUO, some of which discriminate against alternative operators by favouring Belgacom’s own retail customers. These include:

- the continuing restriction that only ADSL can be provided over Belgacom’s loops, despite the BIPT’s 28 February 2001 opinion which prohibits this exact restriction.
- a term which ties the provision of shared access to the end user first fully subscribing to a single line PSTN or ISDN from Belgacom (an operator reports that this provision was adapted by Belgacom in its May 2001 RUO and is now subject to a transition period).
- the requirement that operators pay activation and deactivation fees, despite Belgacom not charging the same for its own retail ADSL services.
- the imposition of inquiry fees, cancellation fees and change data fees during different stages of the provisioning process, even though Belgacom does not charge the same fees to its own retail customers.

Refusals to provide and delays

Responding operators report a number of instances where they have encountered clear refusals from Belgacom to provision unbundled access to the local loop. For example, prior to January 2001, one operator claims that it was refused the provisions of full and shared access because, among other reasons, the services were not part of Belgacom’s portfolio of interconnect services. After January 2001, the same operator claims that Belgacom has refused to abide by collocation delivery timing, has refused to provide backhaul/transport interconnect, and has refused to implement modification requests to co-mingling.

Certain responding operators also report delays in working with Belgacom to sort out preliminary issues and with respect to collocation. Operators claim that despite Belgacom’s commitment to deliver collocation sites within six months, they have experienced delivery delays of between eight and 12 months for new collocation rooms.

One operator describes that after waiting eight months for delivery of a collocation site, Belgacom sent cable tray plans which would allow the operator to complete the final work on the collocation room on its own. Apparently, Belgacom has delayed collocation delivery through such standard delaying methods as not providing all the requested information and imposing high and nontransparent prices. And even where Belgacom has supplied specific information related to collocation, the operators claim that they cannot be certain that the information provided is accurate.

One operator also claims that it has experienced delays of multiple months waiting for delivery of an unbundled line. According to this operator, the reason for the delay is that Belgacom refuses the use of the XML-ordering tool (it uses e-mail instead), which would considerably speed up matters.[3]

Regulator discrimination

In addition to the discriminatory provisions in the RUO described above, two operators also report a form of discrimination imposed by the Belgian regulator, the BIPT. Apparently, the BIPT has unilaterally decided that operators who took the risk and entered the DSL market early on, first requesting physical collocation from Belgacom and later migrating to co-mingling following long delays and the BIPT's authorisation of co-mingling, are entitled to compensation from those new entrants who are now entering the market and requesting co-mingling. According to these operators, the BIPT is penalising those operators who postponed entry until more cost-efficient forms of collocation arose and reimbursing those operators who took the risk and entered the market early.

E. Economic Conditions of Unbundling

Prices for unbundled access are contained in Annexes H1 (full access) and H11 (shared access) of the May 2001 version of Belgacom's RUO. The prices contained in these Annexes were adjusted by Belgacom following a request by the BIPT on 31 May 2001, and the changes were subsequently approved by the BIPT on 24 July 2001. The prices are as follows:

a) Monthly line rental access fee

Charge	Euro
Fully unbundled (active and non-active)	11.33 (Type 1[4]), 13.29 (Type 2[5])

3 The Commission's recently released *Seventh Implementation Report* reports than Belgian new entrants claim that "Belgacom needs 10 working days to provision copper lines to its competitors, while it provides ADSL within 5 working days to its own customers." (p. 126 of Annex 3) These figures were not mentioned by the alternative operators that responded to the Commission's Questionnaire in the LLU Sectoral Inquiry.

4 Raw copper loop of Type 1 is the basic raw copper loop to be used for the transmission of signals within the voice frequency band (*i.e.,* to be used for the transmission of signals for which the binary rate is smaller or equal to 64 kbit/s or for the transmission of signals using ISDN basic access line code.

5 Raw copper loop of Type 2 is the raw copper loop to be used to connect ADSL equipment providing ADSL service capable of co-existing on the same raw copper loop with voice band services or ISDN basic access services.

Line share (active)	3.22

NOTE: Responding operators include in their responses to the Questionnaire monthly prices for Type 2/fully unbundled and line sharing which are different from the above listed prices, which were taken from the annex to Belgacom's RUO. According to these operators, the monthly price for Type2/fully unbundled loops is €13.96 and the monthly price for line sharing is €4.54.

b) One- off costs per line.

Charge	Euro
Full LLU connection (active)	78.68 (Type 1), 79.90 (Type 2)
Full LLU connection (non-active)	82.18 (Type 1), 83.39 (Type 2)
Line share (active)	86.51
Inquiry fee (full access)	19.78 (Types 1 and 2)
Inquiry fee (line share)	25.16 (Types 1 and 2)
Change date fee (full access and line share)	22.61 (Types 1 and 2)
Deactivation fee (full access)	28.28 (Types 1 and 2)
Deactivation fee (line share)	28.73 (Types 1 and 2)
Cancellation fee (full access)	20.97 (Types 1 and 2)
Cancellation fee (line share)	21.42 (Types 1 and 2)

c) Collocation costs

Belgacom's price list for connection to physical and distant collocation areas for both fully unbundled and shared access can be found in Annexes H2 (full access/physical collocation), H3 (full access/distant collocation), H12 (shared access/physical collocation), and H13 (shared access/distant collocation) of the 2 May 2001 version of Belgacom's RUO. These prices have not yet been approved by the BIPT. One operator has calculated that the average one-off collocation cost is around €150,000 for a room with a separate badge access system, and a co-mingling solution averages around €100,000.

Main pricing concerns

One pricing concern highlighted by responding operators is that, in the case of shared access, Belgacom is receiving two monthly subscriptions for the use of its copper loop – a monthly subscription from the end-user to whom it is providing voice services and a monthly subscription from the operator ordering shared access.

Responding operators also indicate that the prices for installation of unbundled local loops, back-haul services and collocation are too high, particularly in comparison to other European countries. One operator complains that Belgacom's collocation costs, which have not been approved by the BIPT, are not transparent, with Belgacom refusing to give coherent break downs of the quotations or of the invoices related to collocation installation fees. According to this operator, it appears that Belgacom is building separate collocation rooms that are too large in comparison to market demand. As a result, Belgacom artificially increases the collocation costs for alternative operators and creates an extra entry barrier. Moreover, Belgacom requires that operators pay 50% of the completed collocation site up front, before work even begins on the sit, with the other 50% due upon delivery. Thus, even if a second operator later comes along during construction to share the collocation site, Belgacom is in possession of a full 50% and the alternative operator that has paid this amount must demand reimbursement from Belgacom.

Lastly, responding operators complain about the fees for inquiry, cancellation, activation and deactivation, which they claim are discriminatory because Belgacom does not demand the same fees from its own retail customers.

Price Squeeze

One responding operator addresses the issue of a price squeeze and states that it considers there to be a price squeeze between, on the one hand, Belgacom's wholesale and retail offers, and the wholesale prices it charges other operators for full and shared access on the other.

Indeed, this operator highlights the fact that Belgacom's one-off retail connection fee for its low-end ADSL Internet access service, which includes the provisioning of a splitter, line adaptation, activation of the high bandwidth service, and Internet access set up, is €24.54. This fee is well below what Belgacom charges alternative operators as a connection charge for full unbundling or shared access – at least €78.68 – even though the work related to the provision of a simple copper line without extra ADSL services is much less.

Moreover, this operator notes that Belgacom's current retail monthly price for ADSL Turboline Go™ (without Internet access subscription) of €25.10 is lower than the total monthly costs (as calculated by the operator) that a new entrant will incur if it provides comparable ADSL services via full or shared ULL access – €36.76 with a full access copper line and €28.26 with a shared access copper line. The costs considered include the monthly line access rental fee, the one-off installation fee depreciated over the average customer life time (24 months), collocation costs, back-haul and internal cable costs depreciated over 20 years. The total cost excludes the operator's marketing costs.

As described in the section that follows, responding operators also identify a price squeeze with respect to Belgacom's ADSL wholesale offer.

F. xDSL Wholesale Offers

Belgacom has provided a wholesale ADSL offer since March 2000. The offer consists of the alternative operators reselling Belgacom's retail Turboline Go™ ADSL services under their own branding. According to one responding operator, alternative operators can buy this service from Belgacom at a discount of between 8 and 15%, while another operator states that the applicable discount is between 12 and 15%.

Responding operators do not generally view Belgacom's wholesale ADSL offer as a viable alternative to local loop unbundling. According to two operators, the discount does not allow operators to cover its own connection fees to the network of Belgacom (*e.g.*, a "price squeeze") and, as the wholesale ADSL offer only consists of reselling Belgacom's own ADSL services, operators cannot innovate or use the wholesale offer as a basis for value added services.

A second responding operator concurs that the margin between the retail and wholesale prices of Belgacom's ADSL Turboline Go™ service results in a price squeeze. The operators explains that the discount does not allow an operator to pay all the costs related to the interconnection of ATM backbones, the provisioning of Internet access for the end user, and the sales and marketing costs necessary to acquire customers. Indeed, this operator states that it originally had intended to resell Belgacom's wholesale ADSL service as a means to sign up customers and later convert them to its own services via unbundled local loops, but soon discovered that Belgacom's wholesale service presented a price squeeze. As a result, the operator abandoned this option.

Finally, a third operator states that bitstream access service at the ATM level, not Belgacom's wholesale ADSL Turboline Go™ offer, provides the best short-term ADSL service solution, particularly on a quasi-nationwide basis. According to the operator, bitstream access service at the ATM level permits quasi-nationwide coverage without any collocation concerns.

G. Effects of Any Problems or Limitations

As a result of the obstacles described above, particularly the incomplete RUO, the high prices for collocation and unbundled lines, and the already low retail prices Belgacom charges its own customers for ADSL services, responding operators claim that they are unable to make a viable financial business strategy based on the services via unbundled access to the local loop. Consequently, some operators have delayed any major strategic decisions regarding broadband access services, while others continue to plan to launch services, but are deeply concerned that Belgacom has gained a huge advantage by being the first operator in the high bandwidth market.

According to these operators, Belgacom's critical mass will provide significant competitive advantages of scale, which will be further exacerbated by the probable price squeeze between Belgacom's retail ADSL offer and the high prices for unbundled lines and collocation contained in the RUO. This will make it even more difficult for alternative operators to acquire a market share and thereby timely recoup their investments.

H. Proceedings at National Level

As noted above, the BIPT has been active in the LLU process. Responding operators indicate a number of proceedings that have taken place, or are taking place, at the national level. These include:

- One operator has filed a complaint against Belgacom with the BIPT for numerous delays and violations of the BIPT's advice of 28 February 2001. This complaint has not resulted in any formal notice or fine imposed upon Belgacom.
- Two operators filed a joint action with the BIPT to oblige Belgacom to respect the two month delivery time for collocation sites, as mandated by the BIPT's

advice of 28 February 2001. This action is held up in a procedural dispute, and the parties are awaiting an interim judgment, after which they will be free to plead on the merits of the case.

I. Summary of Findings

- Both full and shared access to unbundled local loops are including in Belgacom's RUO. Belgacom has published a reference offer for bitstream access, which the Belgian regulator, the BIPT, has reviewed and amended, although one operator claims that this reference offer is still not "validated". All forms of collocation are available in Belgacom, including distant collocation and co-mingling. Pursuant to the instructions of the BIPT, Belgacom has reduced certain LLU prices in its RUO. Collocation prices have yet to be approved by the BIPT.
- Responding operators are interested in using unbundled local loops to provide a variety of narrowband and broadband, wholesale and retail, services, primarily to business customers. According to one operator, retail broadband telecom services, if offered in combination with other value-added services and sold to business customers, are the only services it can foresee providing a sufficient margin of return.
- A fixed network licence and an infrastructure licence are the types of licences through which operators provide services.
- The major obstacles to obtaining access to unbundled local loops are (i) missing or incomplete elements of Belgacom's RUO, (ii) unjustified, unfair and discriminatory terms in the RUO, (iii) Belgacom's refusals and delays in providing access to unbundled lines and collocation, and (iv) specific discrimination by the regulator. In particular, operators identify a tying provision in the RUO whereby Belgacom requires that an end-user first fully subscribe to a single PSTN or ISDN from Belgacom before it will provide shared access. Operators also highlight certain fees that Belgacom charges new entrants which it does not charge its own retail customers as an example of discrimination.
- Responding operators generally complain that prices for unbundled local loops, collocation and back-haul services are too high. Responding operators identify a price squeeze between the prices Belgacom charges operators for full and shared access and the retail prices it charges it own customers.
- Responding operators also identify a price squeeze with respect to Belgacom wholesale ADSL offer, which is simply the resale of Belgacom's ADSL Turboline Go™ product. For this reason, as well as the fact that Belgacom's wholesale ADSL offer does not allow operators to innovate, operators claim that Belgacom's wholesale ADSL offer is not a viable alternative to unbundled local loops.
- As a result of these obstacles, responding operators claim that they are unable to form a viable LLU business strategy and, as a result, some operators have delayed launching broadband access services while others continue to plan to launch new services, but are extremely concerned about Belgacom's first-mover advantage.

- The national regulator has been active in the LLU process and a number of proceedings have taken place, or are still taking place, before the regulator.

DENMARK

In total, four alternative operators in Denmark responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Full local loop unbundling has been available in Denmark as a matter of law since 1 July 1998. The incumbent Tele Danmark published a revised standard offer for full local loop unbundling (raw copper) on 31 January 2001. The National Telecom Agency's (NTA) now considers the standard offer to be conformity with the *Unbundling Regulation*. One outstanding issue, however, is still under discussion – a provision in the standard offer which permits Tele Danmark to take back a subscriber line in the event that it is needed to fulfil Tele Danmark's universal service obligations. The price for full LLU is the lowest in Europe.

Shared access, meanwhile, has only been available since 31 January 2001. The NTA is currently assessing Tele Danmark's shared access standard offer, and has already lowered the annual subscription charge.

Tele Danmark offers its own DSL product by way of bitstream access and is required to offer the same access to third parties under non-discriminatory conditions. A new Executive Order on Standard Offers in the Interconnection Field, which came into force on 6 October 2001, includes a new requirement for Tele Danmark to publish a standard offer for bitstream access by February 2002.

With respect to collocation, a standard offer was first published in April 1999 and was last updated on 1 November 2000. The current standard offer for collocation applies to both full and shared access to unbundled local loops. Co-mingling is also available.

B. Services to be Provided Over the Local Loop

One responding operator states that access to the unbundled local loop, both full and shared, is a part of its business strategy in Denmark and it provides a wide range of services – narrowband retail access, narrowband retail call services, wholesale broadband telecom services, retail broadband telecom services and Internet broadband access. The operators' targeted customers are mostly business and public service customers.

Another operator also indicates that **[CONFIDENTIAL INFORMATION REDACTED]**.

C. Licences and/or Authorisations

Responding operators indicate that licences are only required for mobile operators in Denmark and, therefore, are not needed to provide narrowband or broadband fixed line services.

D. Obstacles to Obtaining Access

Responding operators identify a number of obstacles to obtaining unbundled access to the local loop.

Refusals to provide

One operator reports that it has often faced refusals in **[CONFIDENTIAL INFORMATION REDACTED]**.

Delivery times and delays

Responding operators identify a number of delays on the part of Tele Danmark. For example, according to one operator, Tele Danmark took six months to finalise preliminary issues and the operator theorises that the incumbent "stalled" during this process. The operator also reports that although Tele Danmark's standard offer states that it must acknowledge and confirm and order within 5 working days, the ordering process is very unreliable, with the operator having to remind Tele Danmark about its order two or three times before receiving confirmation and then delivery. Otherwise, there are extremely long delivery delays The operator also states that it often has to resend orders because Tele Danmark claims that the order was never received.

Responding operators generally report that collocation takes on average between two and three months and delivery of a local line takes on average four weeks or a month. According to the operators, various reasons are provided by Tele Danmark for why delivery of collocation and unbundled lines takes so long, including a small work force and, more generally, because "this is the way we work here" or this is "standard procedure". One operator notes that Tele Danmark is allowed to refuse delivery of an unbundled line without providing any documentation for the refusal.

Unsatisfactory conditions of collocation

One operator reports that the set-up price for collocation appears higher than Tele Danmark's actual costs. One reason for this, the operator surmises, is that Tele Danmark requires one security personnel to accompany alternative operators during visits to the collocation site. Tele Danmark is not willing to consider any less expensive alternatives during visits.

Insufficient quality of lines delivered

One operator has found that once a line is delivered by Tele Danmark, there is about a 30% risk that the line will not work. The operator reports that Tele Danmark is very unreliable and disorganised when it comes to correcting nonworking lines, with the incumbent sometimes communicating to the operator that no errors were found on the line and then going ahead and having a repairman fix the line anyway. According to the operator, Tele Danmark also instructs its repairmen not to call competing operators on the phone when correcting lines.

Unsatisfactory or unfair contractual requirements

One operator reports the following unsatisfactory or unfair contractual requirements:

- a specific fee for demultiplexing (no further elaboration provided)
- excessive prices for backhaul links such as ATM 34 Mbit/s or 155 Mbit/s
- no offer for IP-based backhaul links
- refusal to allow the exchange of traffic between alternative operators at the collocation areas; as a result, some operators are forced to purchase the more expensive backhaul links of Tele Danmark

E. Economic Conditions of Unbundling[6]

According to responding operators, prices for unbundled access were set in negotiation between Tele Danmark and an organisation of competing operators, although they claim that the competing operators held no negotiation power. These prices are now included in Tele Danmark's standard offer and include the following:

- annual fee for full access to an unbundled line: DKK 740 (€99.34), or DKK 61.67 (€8.28) per month; this fee does not included collocation costs.
- one-off connection fee for full access: DKK 1330 (€178.55); this amount appears to include various supplements in addition to the actual connection fee for the line (DKK 350 (€46.99)), *i.e.*, multiplexing (DKK 500 (€67.12)); establishing a network termination point (DKK 260 (€34.90)).

Also, the annual subscription charge for shared access was lowered from DKK 555 (€74.51) to DKK 370 (€49.67) as of 1 August 2001, or DKK 30.83 (€4.14) per month

According to one operator, the high collocation costs and the high backhaul link costs are the major impediments for small companies. This operator states that the collocation set-up price, the costs of establishing power supply and trunk cable, and the costs of establishing a backhaul link all appear higher than necessary.

No margin squeezes are identified by the responding operators.

F. xDSL Wholesale Offers

Responding operators state that xDSL wholesale services are available from Tele Danmark, but they do not specify whether these services are bitstream access or resale of the incumbent's xDSL product. As mentioned earlier, Tele Danmark is currently required to offer bitstream access to its competitors, but does not have to publish a standard offer for bitstream access until February 2002.

6 All rates converted to Euro using the European Central Bank exchange rate of 12 December 2001: 1 DKK = .1342462 Euro.

One operator considers that access to Tele Danmark's broadband services **[CONFIDENTIAL INFORMATION REDACTED]** while another operator states that such wholesale services are not likely to be an alternative to local loop unbundling due to price barriers. However, because of the high collocation set-up fee, the operator states that resale of Tele Danmark's xDSL might be a viable alternative to LLU in the long-term.

G. Effects of Any Problems or Limitations

One operator is seriously considering closing down its activities and withdrawing from the LLU market as a result of, among other things, the high collocation costs, the non-existence of alternatives to backhaul links, and obstacles and problems in the ordering process.

H. Proceedings at National Level

Only one operator reports having brought LLU-related matters before the regulatory authority and states that, thus far, there have been no improvements as a result of these actions. The operator does not identify the specific matters.

I. Summary of Findings

- There are standard offers for both full and shared access in Denmark, as well as collocation. A standard offer for bitstream access must be published by Tele Danmark by February 2002. The price for full LLU is the lowest in Europe. Physical and distant collocation, as well as co-mingling, are available.
- Responding operators identify full and shared access as part of their business strategies. One operator plans to offer a range of narrowband and broadband services, while another operator is focusing only on wholesale broadband telecoms services. These operators target primarily business users, with one operator also focusing on public service customers.
- No licence is required to provide fixed line services in Denmark.
- Responding operators identify refusals to provide access to Tele Danmark's local loop network, delays in relation to collocation and line delivery, high collocation prices (particularly the set-up fee), insufficient quality of lines delivered and a few unsatisfactory or unfair contractual conditions, as obstacles to local loop access. In particular, one operator identifies Tele Danmark's refusal to allow the exchange of traffic between alternative operators at the collocation areas, which result in operators having to purchase Tele Danmark's more expensive backhaul links, as an example of discrimination and tying.
- Responding operators focus on the high costs of collocation, particularly the high set-up fees and the high costs of backhaul links.
- An xDSL wholesale offer is available and operators disagree as to whether this is a viable alternative to LLU. One operator views it as a medium-term alternative while another operator states that the price barriers make it not viable. However, the same operator states that the high collocation costs for LLU might make resale of xDSL an alternative in the long-term.
- As a result of, among other things, the high costs of collocation and the non-existence of alternatives to the incumbent's backhaul links, one operator is considering closing down its LLU activities.
- One operators reports initiating LLU-related proceedings before the national authorities, but is not more specific.

FINLAND

In total, eight local operators[7] in Finland submitted responses to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Full unbundling of the local loop has been available in Finland since June 1997 following a ruling by the Finnish government requiring all operators (*i.e.*, not restricted to operators with SMP) to provide unbundled access to their local loop networks. Under Finnish legislation, the right to access an operator's local loops is granted to "anybody" (*i.e.*, including private individuals), as opposed to only competitive operators.

Operators have published reference offers in line with the *Unbundling Regulation*. The price for access and collocation are defined in the reference offers from the various incumbent operators. The Telecommunications Market Act states that prices should be cost-oriented.

In August 2001, the Supreme Administrative Court ruled on Elisa Networks Oy's (the local incumbent fixed network operator in the Helsinki area) appeal against an earlier appeal of the Finnish NRA regarding excessive pricing of the local loop, largely upholding the NRA's decision and confirming the NRAs wide discretionary powers in relation to the enforcement of the principle of cost-orientation. Subsequently, the Finnish NRA decided that Elisa should drop its LLU prices by more than 20 percent at the beginning of 2002.

Amendments to the Telecommunications Market Act in 2001 introduced the regulation of shared access. It provides that the price for shared access should not normally be more than 50% of the price for full local loop unbundling.

There is no specific legislation mandating bitstream access in Finland, and bitstream access is not publicly available.

Current statistics reported in the European Commission's *Seventh Implementation Report* indicate that more than 40,000 lines have been unbundled in Finland, approximately 15,000 of which are used by alternative operators for ADSL.

B. Services to be Provided Over the Local Loop

Responding operators indicate that they provide a wide range of services with unbundled local loops. According to two operators, full and shared unbundled access to the local loop are part of their business strategies and they provide narrowband retail access, narrowband retail call services, narrowband retail dial-up Internet access, wholesale broadband telecom services, retail broadband telecom services, Internet broadband

[7] The majority of responding operators in Finland are local SMP operators that own local access networks. They can be considered alternative operators or new entrants when they try to access each others' markets.

access (though it is not an ISP), and other services such as Internet portals. Both operators selectively provide these services to business and residential customers, with one operator providing all three narrowband services to business and residential customers, wholesale and retail broadband telecom services exclusively to residential customers, Internet broadband access to both business and residential customers, and Internet portals to business customers.

Another operator reports that it uses full and shared access to the local loop to provide narrowband retail access, narrowband retail call services, narrowband retail dial-up Internet access, wholesale broadband telecom services and retail broadband telecom services to residential customers.

Two other operators state that full access to the local loop is part of their business strategy. One operator uses these loops to provide narrowband retail access and narrowband retail call services to the business community, and retail broadband telecom services and Internet broadband access to residential and business customers. The operator also acts as an ISP and provides portal services. The other operator states that it provides narrowband retail access, narrowband call services and broadband Internet services to residential and business customers, while limiting the provision of narrowband retail dial-up Internet access to residential customers.

C. Licences and/or Authorisations

One operator states that no licence is required to provide narrowband and broadband services; a tele-operating declaration (*teletoimintailmoitus*) is sufficient. A licence is only required in Finland for the provision of network services on public mobile networks.

D. Obstacles to Obtaining Access

Responding operators generally appear satisfied with the provision of unbundled local loops and do not describe any obstacles to obtaining access. Indeed, operators indicate that they have experienced no significant difficulties in terms of refusals of access to lines or collocation[8], that the Reference Offers are generally complete and the Offers' terms are satisfactory, they have not experienced significant delays in terms of delivery of lines or collocation and the quality of the lines delivered is satisfactory, and they are unaware of any cases of discriminatory conduct between the incumbent operators and access seekers.

One operator reports that sorting out information on the network characteristics and finalising the signature of contracts takes roughly four weeks, while a third operator reports that it takes two weeks. Meanwhile, three operators report that the delivery of collocation sites takes approximately two weeks, and the average amount of time involved in obtaining the delivery of an unbundled line is approximately two weeks

8 According to the Commission's *Seventh Implementation Report*, some operators have expressed concern that the right under the Telecommunications Market Act for an incumbent to refuse access on the ground that it requires the transmission capacity or collocation room requested for its own use or its reasonably foreseeable future needs may hinder the development of competition. These concerns are not mentioned by operators in their responses in this Sectoral. Inquiry.

(from the time of the request for a particular line). One operator reports that the delivery of an unbundled line took one week.

E. Economic Conditions of Unbundling

Responding operators indicate that they are generally satisfied with the prices levels for unbundling, no prices are unjustifiable, and they are not aware of any margin squeeze situations.[9]

One operator reports that the monthly line rental access (per line) fees charged it by Sonera for full and shared access are €11.10 and €5.55, respectively. The one-off connection fees per line for full and shared access are €159.78 and €42.05, respectively. These prices for full access are consistent with the prices for a subscriber connection 2-wire, in densely populated areas, listed in Sonera's Reference Offer.

One operator provides the following list of prices charged by three incumbent operators (all prices are exclusive of VAT):

Full/Shared Access	Sonera	Telekarelia	Outokummum Puhelin
Monthly rental charge per line	€15.31 – €19.00	€11.77 – €16.48	€11.44 – €15.74
One-off connection charge per line	€176.60 – €218.64	€109.32 – €159.78	€95.02 – €114.03

The same operator estimates that the complete monthly prices charged to them by incumbent operators for full and shared access is approximately €22,705.38. Another operator estimates a total monthly cost of €10,000.

F. xDSL Wholesale Offers

Three operators indicate that Sonera does not provide a wholesale xDSL product. Nevertheless, responding operators state that if Sonera, or any other incumbent operator, did offer such a wholesale product, depending on the price, it might provide a short-term solution to LLU or possibly even a medium- or long-term alternative.

Another operator reports that "the incumbent", without specifying who the incumbent is, offers wholesale ADSL connections and that these wholesale services are a medium-term alternative to LLU.[10]

G. Effects of Any Problems or Limitations

[9] By contrast, in the *Seventh Implementation Report*, the Commission reports that the price of leasing the local loop is one of the main factors impeding the development of competition in the local telecommunications market. Moreover, in May 2001, the Competition Council imposed heavy fines on three operators (Elisa, Turku Telephone Company and the Telephone Company of the Salo Region) for discriminatory and excessive pricing of the local loop and abuse of dominant position.

[10] In the *Seventh Implementation Report*, the Commission reports that available wholesale DSL offers are offered on the same terms to alternative operators as they are to retail customers, resulting in a price squeeze. No operators responding to the Commission's Questionnaire in the Sectoral Inquiry made this point.

As responding operators do not report any obstacles to access to unbundled local loops in Finland, they report no effects.

H. Proceedings at National Level

Responding operators report that they have not initiated any proceedings with respect to LLU at the national level.

I. Summary of Findings

- Full and shared access to unbundled local loops are available. By law, prices must be cost-oriented and the price for shared access cannot normally be more than 50% of the price for full local loop unbundling. Bitstream access is not publicly available.
- Alternative operators provide a wide range of narrowband and broadband services, using both full and shared access to local loops.
- Two responding operators state the they provide services using unbundled local loops on the basis of a telecommunications licence, while another operator states that only a tele-operating declaration (*teletoimintailmoitus*) is required.
- Responding operators report no obstacles to obtaining access to local loops. Delivery of collocation sites is reported to take approximately two weeks. Delivery of unbundled lines also is reported to take two weeks.
- Responding operators generally report that they are satisfied with the price levels for unbundling and that there are no apparent margin squeezes.
- Three operators state that Sonera does not provide a wholesale xDSL product while another operator reports that an unidentified incumbent offers wholesale ADSL connections and that these are a medium-term alternative to local loop unbundling.
- As no obstacles to LLU access are reported by operators, they do not include any effects.
- Responding operators indicate that they have not initiated any proceeding with respect to LLU at the national level.

FRANCE

In total, 11 alternative operators in France responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Decree 2000-881 of 12 September 2000 (in force from 1 January 2001) imposes on the incumbent France Télécom the obligation to issue a Reference Offer for unbundled access to the local loop. According to the alternative operators that responded to the Commission's Questionnaire, this Offer was issued for the first time in November 2000 and has since been modified four times, the last important modification coming in July 2001.

In February 2000, a working group of operators (including France Télécom) was set up to study the technical and economic conditions necessary for unbundling. The work of this group formed the basis for the recommendations published by the French NRA ("ART") in October 2000, which defined the terms and scope of the services and resources required for unbundling and the operational conditions for its implementation. The ART also approved in October 2000 guidelines for the cost orientation of collocation and access prices. Technical trials were carried out in the autumn of 2000.

According to French regulation, France Télécom's Reference Offer does not have to be expressly approved by the ART. Nevertheless, the ART has issued two relevant decisions requesting France Télécom to introduce changes in its offer (February 8 and April 4), and three resolutions stating that France Télécom has failed to introduce the changes in due time (April 4, April 26 and June 6). These resolutions compelled France Télécom to make the prescribed changes. The responding operators generally commented on the version of the Reference Offer issued by France Télécom on 16 July 2001.

The Reference Offer comprehends both full and shared access and other associated services, such as information provision (per main distribution frame and per line), collocation and internal exchange cable connections. Certain types of line are excluded from the LLU offering; for instance, lines connected to a PABX and ISDN lines (in the case of line sharing), as well as lines which do not have full metallic continuity (absence of intermediate electronics or other elements). France Télécom also required previously that lines available for unbundling offer continuity to the NTP (*i.e.,* it excluded vacant loops), but this restriction has been eliminated pursuant to an ART decision dated 8 February 2001.

Collocation is provided on site (in separate rooms). France Télécom also offers transport connections to access seekers' own distant locations, although pricing conditions for this service have not yet been fully established. Collocation in specially constructed shelters and virtual collocation were not originally included in the Reference Offer. They have now been included in the latest version, but are yet to be employed in practice and are subject to a number of prior and limiting conditions which the responding operators contest. Collocation is, in principle, to be provisioned within a period of six months (two months for the feasibility study and four months for preparation).

The ART has established price caps for access prices in its resolution of 8 February 2001. As a result of this decision, the monthly rental charge in the latest Reference Offer is set at €14.48 (fully unbundled) and €6.10 (line share). The connection fee is set at €107.93 or, in the event that the metallic continuity in the line has to be established first, €267.85.

Collocation prices are subject essentially to cost estimates per site. The ART set a cap for annual rack space pricing according to the location of the exchange in question pursuant to a decision of 8 February 2001. Although a number of previously undisclosed prices have now been included in the latest version of the Reference Offer (*e.g.*, energy and air conditioning), responding operators complain that price information is still incomplete (for instance, security, cleaning and general maintenance costs). The ART has required that France Télécom assume the responsibility for managing collocation, including billing and collection, even though the company is subcontracting much of the work of preparing collocation sites.

A number of prices for other associated resources are not known in advance; for instance, certain backhaul transmission connections and line share filters.

B. Services to be Provided Over the Local Loop

Of the operators that responded to the Questionnaire, some operators do not currently include unbundling in their French business strategy, either for pure commercial reasons or due to the unattractive conditions of unbundling. A majority of responding operators intend to offer a variety of DSL services over both fully unbundled lines and shared lines, to both retail and wholesale customers. Of these, some operators propose to offer services to both residential and business customers, while others are focusing on the business sector. At least two operators offer the full range of services – wholesale and retail, narrowband and broadband, Internet access and portal/content services.

Two responding operators would use unbundling as an alternative to low capacity leased lines to provide broadband capacity connections to customers. One operator is essentially a global service provider (voice and Internet access) and looks to resell DSL services provided by alternative operators, while another operator continues to focus on Internet access services. Two further operators concentrate their activities purely on carrier services, one providing a full end-to-end DSL access service to operators and ISPs, and the other focusing on data transport services and infrastructures services to assist service providers to gain access to local exchanges.

C. Licences and/or Authorisations

The alternative operators that responded to this question state that they provide LLU services pursuant to an authorisation to establish and develop a public telecommunications network in accordance with articles D.99-23 and L.33-1 of the

French Telecommunications Act. Public telecommunications services, Internet access and voice are offered pursuant to an L.34-1 licence.

D. Obstacles to Obtaining Access

Responding operators identify the "deny, delay, degrade" attitude of France Télécom as the major obstacle to access. Operators complain strongly of discrimination and a lack of transparency, claiming that the availability and conditions of information, collocation and access are significantly inferior for new entrants than for the incumbent. The lack, or poor provision, of information necessary for business-planning (for instance, loop technical characterisation, distribution frame topology and collocation space availability) is discriminatory, given that France Télécom has access to all the information it needs *ab initio*. According to responding operators, France Télécom has deployed its DSL service in 1,430 exchanges while alternative operators have accessed only around 50 exchanges, and France Télécom had unbundled only a handful of lines as of the time of the responses (September 2001). France Télécom has refused to provide collocation space in certain exchanges where it is itself (and its subsidiaries) collocated (for itself, France Télécom typically uses cageless collocation, which does not entail the delays and cost of having to build a special separate room). According to responding operators, refusals of access and space by France Télécom are neither legal or technically motivated. On this basis, operators contend that France Télécom is benefiting from a first-mover advantage.

The specific and current issues identified in the responding operators' complaints include: the process over the last year of establishing an adequate Reference Offer; significant problems connected with obtaining information on exchanges and loops; restrictions on loop availability; collocation limitations; and procedural inadequacies. These grievances and others are detailed below.

Failings of the Reference Offer

Responding operators complain that the process of revision, clarification and modification of the Reference Offer has been slow and inefficient and that they have had to carry the burden of the work. The Reference Offer was not subject to prior regulator approval. New entrants have led the effort in identifying problems in the Reference Offer and proposing solutions. Once the ensuing ART decisions are adopted, France Télécom is slow and imprecise in adapting its Reference Offer to the new criteria. According to operators, this process has introduced serious delays and uncertainties in the market.

The majority of responding operators contend that the latest version of the Reference Offer (July 2001) is the first version that formally contains (more or less) the minimum information required by the *Unbundling Regulation*. Even then, they argue that the offer (and, above all, its implementation and application by France Télécom) is proving ineffective in ensuring competitive entry in LLU service markets. Four key issues are highlighted in almost all the responses:

- A restrictive collocation offering – only in the latest Reference Offer has France Télécom made alternatives to physical collocation available and, even then, France Télécom favours physical collocation. Operators also complain of unfair, nontransparent and discriminatory conditions and a lack of pricing information.

- Access to information – poor information made available under unfair and discriminatory conditions and without on-line access.
- Pricing generally – in particular, a lack of pricing information; but France Télécom also complains of excessive prices and inappropriate correlation between retail and wholesale prices (see Section E below).
- Loop availability – not until the July 2001 Reference Offer did France Télécom make vacant loops available for unbundling (after a formal request issued by the ART); before, end users were obliged to first subscribe to the telephone service with the incumbent and only then could the loop be unbundled. There are still other significant restrictions on the types of lines made available for unbundling.

Additionally, responding operators identify a number of further limitations in the Reference Offer and in the general access agreement, which France Télécom requires new entrants to sign before they can order LLU services:

- Operational restrictions on the use of loops (*i.e.*, types of equipment, types of technology, authorised services).
- Restrictions on the contractual relationship between new entrants and end users; even in the case of fully unbundled loops, France Télécom requires clients to preserve their service agreement with it and this agreement supersedes any agreement with the alternative operator. The Reference Offer does not include a process for changing the user from a shared line to a fully unbundled line in the event that the user decides to cancel the voice telephony service with the incumbent.
- Lack of adequate and non-discriminatory quality of service commitments.
- Cumbersome methods of order validation, which are prone to errors and abuse owing to France Télécom's interest to win back clients.
- Access to sub-loops or intermediate locations (*e.g.,* concentrators) is not included in the Reference Offer (new entrants have lodged specific complaint in this regard).
- France Télécom does not include a backhaul offer for links above 2 Mbit/s between collocations sites and operator PoPs – higher capacities (34 Mbit/s and 155 Mbit/s) have to be requested and negotiated separately.

Preliminary issues (information, network characteristics, contract negotiations, etc.)

Certain loops continue to be excluded from the LLU offering of France Télécom (*e.g.,* PABX connected lines, external supplementary lines, "*Numeris*" ISDN lines and lines connected to impermanent installations). These limitations allegedly have an important impact on the ability of carriers to enter into the small business market. One operator states that, given that the market penetration of "*Numeris*" lines to small businesses is 80%, it is nearly impossible to enter this market through unbundling.

Although originally requested in October 2000, the location and coverage area of main distribution frames have not been disclosed by France Télécom in a general, transparent and cost-oriented way. Distribution frame coverage maps were disclosed in November 2000 at an initial fee of €426.85, which was later reduced by ART in April 2001 to €91.50 per map and €3.50 per distribution frame address. According to responding operators, the information provided by France Télécom was of a poor quality.

Furthermore, the current offer does not provide necessary information in relation to main distribution frames (number ranges, capacity in numbers of lines). This information became partially available to operators for a fee[11] after intervention by the ART. The information provided by France Télécom was in poor condition (*i.e.*, not in electronic format and containing inaccuracies), which considerably delayed carriers in obtaining necessary business-planning information.

Additionally, with regard to collocation facilities, the list of exchanges open to collocation is not generally available to operators (only after the operator has signed a pre-agreement with France Télécom and made a request for collocation). Information about those exchanges without space for collocation and the different types of exchanges is not provided at all. This situation contrasts with the information made available by France Télécom in the context of interconnection.

Finally, although the July 2001 Reference Offer provides for the implementation of an automated (Web-based) system for operators to obtain information on loop characterisation by the end of 2001, this system has not yet been implemented. In the meantime, France Télécom requires that operators submit specific requests for information.

Regarding contractual requirements, France Télécom proposed a draft pre-contract on 7 February 2001 which is a pre-condition to collocation requests. That pre-contract was too limited in scope and time to be useful. The ART required France Télécom to modify the pre-contract in April 2001. The pre-contract does not cover access to loops, which requires signature of the main agreement operators continue to be dissatisfied with.

Collocation

Initially, France Télécom refused all collocation that was not based in a specially-built "operator's room". The ART analysed this behaviour in a decision adopted on 4 April 2001 and concluded that it was discriminatory. This has led to a France Télécom Reference Offer modification in July which introduced virtual collocation and collocation in specially built shelters or vaults in the grounds of the exchange or in the exchange itself.

Despite this recent amendment to the collocation terms in the Reference Offer, operators continue to be extremely sceptical about the possibilities of utilising these solutions. They argue that under the revised terms of the Reference Offer, alternative forms of collocation are only available where the ordinary collocation in the operator's room is

[11] This information is available at a fee of €3.05 per distribution frame

not available and, even then, at France Télécom's exclusive discretion. In this sense, physical collocation is always the "default" solution. Pricing and other conditions of these alternative forms of collocation are not transparent or non-discriminatory (for instance, virtual collocation is only allowed when the operator uses exactly the same equipment as France Télécom). To date, in the view of responding operators, the new options for collocation are not generally available for operators.

Responding operators also have complained about France Télécom's refusal to offer collocation space in a large number of exchanges. In particular, in at least four exchanges in Paris and 126 exchanges in the rest of the country (out of 500 already requested by operators), collocation has been denied due to the alleged lack of available space, legal difficulties or security reasons, and no alternative solutions have been provided by France Télécom. In contrast, France Télécom has its own equipment collocated in the four excluded Paris exchanges.[12] One operator complains of France Télécom's refusal of collocation in important exchanges situated in certain Paris arrondissements[13] where France Télécom has already launched its own DSL services.

One operator (that is not interested in local loop access rather in providing transport services from the operator's equipment to operator/ISP premises over its own ATM network) complains that France Télécom restricts the possibilities for alternative carriers to offer transport services to collocated DSL competitors. These restrictions include: the requirement that internal exchange connections to DSLAMs be ordered by DSL operators, not by the carrier itself; the requirement that France Télécom furnish the further connection to the carrier's add-drop multiplexer (ADM); and the prohibition on carriers to install ATM equipment in the exchange.

Regarding collocation prices, there are complaints of lack of transparency. In particular, pricing for the preparation of operator rooms (to date, the only alternative in practice available) has varied enormously (between approximately €76,000 and €460,000, and €580,000 in the case of one Lyonnaise exchange, according to one operator[14] and is not known until a specific estimate has been prepared for each site following collocation requests. Further, France Télécom refuses to comment on these estimates, arguing that they are elaborated by a third party and the criteria used will vary from site to site. Finally, pricing for additional elements (for instance, new services – shelters, virtual collocation) are not provided.

Provisioning

According to responding operators, the theoretical period for loop provisioning pursuant to the Reference Offer is 19 to 22 working days. This consists of a preliminary administrative phase (12 to 15 days) covering the submission by the alternative operator of the request together with the customer's signed authorisation and the validation of that request by France Télécom (*i.e.*, checking the orders with client database), and a secondary phase (maximum 7 days) for implementation. Implementation is subject to a limit of 100 orders per site per day and can be excused in the event of *force majeure* or

12 Specifically, these four exchanges are: Bassano, Passy, Pompe and Invalides.

13 Specifically, the 7th, 8th and 16th arrondissements.

14 Operators also quote the per m^2 price range of €3,600-€10,000.

"exceptional difficulties". Operators fear delays because of the vulnerability of these procedures to abuse by France Télécom. It is noted that the process has hardly yet been tested, as few loops have been unbundled to date.

Operators also complain that the process for collocation space provisioning is neither suited to a commercial environment nor a launch of mass market DSL services. Requests are made site-by-site and are subject to lengthy and nontransparent individual processes. The delivery of collocation feasibility studies must be completed (pursuant to an ART requirement) within two months which, although still too timely, is an improvement over France Télécom earlier delays of over eight months from the date of the initial requests.

The revised Reference Offer sets a time limit of four months for collocation provisioning after the firm acceptance by the operator of a specific project. Although few sites seem to have been delivered to date, this time period is being respected.

Responding operators complain that the quality of service (QoS) offering of France Télécom is discriminatory and inadequate. They argue that the QoS level (and lack of penalties) does not permit new entrants to replicate France Télécom retail offers or to be able to compete with it. In particular, they point to the repair time guarantee of 4 hours which, contrary to the requirements of the ART's decision of 6 June 2001, is not applicable 24/7 but only during working hours.

E. Economic Conditions of Unbundling

France Télécom prices

The prices in the France Télécom Reference Offer of 16 July 2001 are as follows (some are the result of price caps established by the ART in its Resolution of 8 February 2001):

a) Monthly line rental access fee

Charge	**Euro**
Fully unbundled	14.48
Line share	6.10

b) One- off costs per line.

Charge	**Euro**
Full LLU connection (where loop continuity exists)	107.93
Full LLU connection (where loop continuity needs to be established)	267.85
Line share (where loop continuity exists)	107.93
Line share (where loop continuity needs to be established)	267.85
Filter installation fee	168.00
Non-compliant connection order	59.46
Information regarding a specific number	5.64
Cancellation fee	40.70

Wrongful intervention	125.77

c) Collocation charges

Non-recurring fees (preparation of operator room) are not published in advance but are determined site-by-site.

Rack space is charged as follows:

Areas	Per Year (€)
1. 5 largest cities	1570.22
2. Suburbs of 5 largest cities	815.60
3. Towns with population greater than 200,000	670.78
4. Towns with population greater than 20,000	420.76
5. Others	393.32

Other recurring charges, *e.g.*, for security, cleaning and general maintenance, are not published in advance.

Operator per line cost estimates

About half of responding operators provide the following estimates for the average monthly cost (without taking into account fees for cancellation, non-compliant orders or wrongful intervention) per line (on the basis of a three year amortization period):

	Euro
Fully unbundled (where continuity needs to be established)	22.07
Fully unbundled (where continuity does not need to be established)	17.63
Line share (where continuity needs to be established)	13.93
Line share (where continuity does not need to be established)	10.31

Another operator provides its own alternative estimation of cost by line, based on a sample of 250 lines (50% shared and 50% full access) in one single distribution frame (considering three carriers in the same distribution frame).

Cost per distribution frame	Euro
Refurbishment (average based on 71 estimates)	171,505
Energy 48 V (average based on 69 estimates)	26,526
Acclimatization (average based on 45 estimates)	40,399
m2 + internal cabling + filters (average based on 71 estimates)	19,056
Total cost of operator room for one distribution frame	257,486
Total cost per operator (/3)	85,829
Derived annual cost per operator (taking into account amortization of 5 years)	32,025

The total allocated monthly cost by line on the same basis, but assuming either 250 shared lines or 250 fully unbundled lines, is:

Monthly cost	Euro
Shared access	20.90
Full access	35.38

On the basis of a 50/50 split, the cost for the 125 fully unbundled lines is estimated to be €28.14.

Another operator estimates the cost per line to be €21.90 for fully unbundled access and €15.10 for line sharing. If other costs that the operator has to assume are included in the equation (*e.g.*, transmission, IP transit and administrative costs, but excluding marketing/sales), these prices are estimated at €25.24 (fully unbundled) and €16.17 (line sharing).

Main pricing concerns

As already noted, responding operators express concern that certain prices are not fixed in the Reference Offer and cannot be known by operators in advance although the most recent version of the Offer does include a higher level of pricing information. Further, they complain that collocation prices are extremely variable (depending on site configuration and geographical location) and not justified.

The responses also identify certain anomalies in the cost-orientation of pricing. For instance:

- Certain LLU prices charged to operators are far higher than those borne by the final user for the same items (for example, for line rental, a final user pays €10 per month and an access seeker pays €14.48; for installation fees, a final user pays €38.11 and an access seeker pays €107.94).
- The cost for a line share rental is disproportionate (noting that France Télécom continues to charge line rental to the end user) and not based on real costs in implementing the service (the company charges operators separately for installation and associated services).

A number of suspicions of price squeeze are raised in the responses:

- Two operators identify a price squeeze between France Télécom retail services ("*Netissimo 1*" and Wanadoo's *"eXtense"*) and the wholesale prices for its line share service.
- Another operator indicates that, in its opinion, the pricing of France Télécom's *Turbo DSL* ADSL bitstream access service as compared to pricing for the group's retail services leaves very little margin for competitors.
- A further comment identifies a price squeeze caused by France Télécom's "*Ma-ligne*" line rental service. This complaint has been referred by the operator in question to the French competition authority.

F. xDSL Wholesale Offers

Operators describe a number of xDSL France Télécom wholesale offers, including:

"ADSL Connect ATM"	Wholesale high bitstream access service offered by France Télécom following a decision of the competition authority (in a case brought by 9 Telecom) on 18 April 2000. The offer is of indirect access to the local loop for ISPs through an ATM network (PVCs) and via 41 access points. The offer is designed for residential or professionals.
"Turbo DSL"	A similar high bitstream access service oriented to business customers (and with guaranteed high speeds) offering national coverage via ATM network for operators and ISPs. Also limited to ADSL services.
"Collect IP/ADSL"	Only for ISPs. It is essentially the resale of France Télécom ADSL services ("*Netissimo*"). It includes connection from the final user to the corresponding DSLAM, and the further connection to the ISPs' IP collection point.

Wholesale offers are not generally considered by operators as "real alternatives" to local loop unbundling (because of the lack of control over the service), but rather as an important "transitory measure" for operators while they roll-out their collocations and unbundled accesses (bearing in mind the considerable number of exchanges (12,000) to be accessed). One operator considers that there will continue to be significant delays in unbundling in France and that a well-regulated incumbent wholesale service is the best means of ensuring interim competitive conditions.

Of the existing France Télécom offers, *Turbo DSL* is identified as the only possible long-term alternative for indirect access. However, operators argue that it must be modified in order to ensure it has the same characteristics as the retail service provided by the incumbent (*i.e.*, same geographic coverage; all types of xDSL services). Operators request that France Télécom's high bitstream access service offering provide the same access PoP configuration and coverage as that offered to ISPs with the *IP/ADSL* resale service. They also request more configuration flexibility in order to be able to increase the number of lines accessible per access and thereby cover costs.

According to some of the answers received, France Télécom only allows ISPs to commercialise certain types of client equipment (modems) that impede ISP differentiation with the retail service provided by the incumbent.

G. Effects of Any Problems or Limitations

The responses of most operators highlight the fact that only seven out of 40 operators initially involved in the unbundling process have finally completed a collocation application. They state that the high tariffs for the various services and resources to be purchased from the incumbent mean that DSL will only be made available in large cities (Paris, Lyon and Marseille), and only for business and professional customers.

[CONFIDENTIAL INFORMATION REDACTED] One operator wishing to offer data transport services (backhaul) states that it is being impacted by the low demand for ATM/IP technologies. Other operators consider unbundling as a vital element in the full liberalisation of the telecommunications market for the provision of all types of broadband services and views the problems encountered as a serious impediment to effective liberalisation.

H. Proceedings at National Level

The operator's association, AFORS, has submitted detailed comments on failings and anti-competitive terms of the Reference Offer (beginning in December 2000). However, the ART has not intervened and appears to doubt that it has the necessary powers to directly modify or approve the Reference Offer. As a consequence, the ART only responded following an operator's request that it set certain LLU conditions which France Télécom has to implement.

The ART has adopted three decisions on local loop unbundling as a result of operator complaints. These relate to: access to prior information; physical collocation; and general issues relating to the Reference Offer (dated 8 February 2001, 4 April 2001 and 6 June 2001). Operators claim that France Télécom has always responded to ART resolutions with delays and in an incomplete manner. Furthermore, they highlight the fact that the ART has not yet imposed any fines on France Télécom for these failures.

One ISP has initiated a complaint before the ART relating to the economic conditions of France Télécom's wholesale service (specifically, *"ADSL Connect"*). The ensuing ART resolution reduced prices by about 45%. France Télécom has appealed this resolution. One month after the decision was adopted, France Télécom had not implemented the new prices and the ISP complainant submitted a second claim to the ART. Following another decision, France Télécom finally changed its tariffs on 19 June 2001. The same ISP has presented a further claim requesting that France Télécom publish the interface technical specifications of another of its wholesale services ("*Collect IP/ADSL*") in accordance with the requirements of Directive 1999/5/CE.

I. Summary of Findings

- Both full and shared access to unbundled loops are included in the incumbent's Reference Offer. Sub-loops are not included. Originally, only physical collocation in a specially-prepared operator room and distant collocation were available. But virtual collocation and collocation in temporary shelters are also now included in the Reference Offer as alternatives, but only under certain limited circumstances. The ART has set price caps for a limited range of prices relating to fully unbundled access and line sharing and for collocation.
- There is broad interest in unbundling ranging from a full offering of DSL services (wholesale/retail, residential business) to resale or pure carrier services. The focus of operators, however, is on the business sector, due to the high acquisition costs of residential customers and the difficulty of establishing viable business

models because of the high costs associated with unbundling. A number of operators (some that replied and many that did not) have apparently decided to reduce the scope of their business plans or to withdraw entirely from the market in light of the difficult conditions of entry.

- Operators will provide LLU services pursuant to a L.33-1 public telecommunications network licence.
- The major obstacle to obtaining access to unbundled local loops is the "deny, delay and degrade" attitude of the incumbent operator which, in the view of responding operators, reflects a strategy of discrimination and non-transparency and which the incumbent is employing to protect a first-mover advantage (already apparent) in the downstream services market. Operators identify a number of potential abuses: discriminatory practices relating to the availability and conditions of collocation space; delays in provisioning space which are tantamount to a refusal to supply; a refusal to provide proper information necessary for business-planning and unfair pricing of the same; restrictions on the loops available for unbundling which seriously limit the potential of competitive service provision; price squeezes (see below) and procedural inadequacies which make competitive provisioning of service impossible. There is also some criticism of the ineffectiveness and tardiness of ART intervention (for instance, the original Reference Offer was not subjected to its prior approval).
- Complaints on pricing focus on excessive pricing and wholesale pricing which does not correlate to costs or equivalent end user services (*e.g.*, retail line rental is cheaper than an unbundled line). There is also a serious criticism of the lack of pricing information (particularly with reference to collocation). A case was brought successfully before the ART earlier this year in relation to a price squeeze between France Télécom's *ADSL Connect ATM* high bitstream access service. The resulting decision required further regulator intervention before it was eventually applied by the incumbent. Responding operators also expressed continuing concerns about margin squeezes between the incumbent's retail ADSL service and its *Turbo DSL* high bitstream access service, as well as between its retail ADSL service and its line sharing costs.
- The view of responding operators is that France Télécom's xDSL wholesale services are not a long-term alternative to unbundled local loops, although the high bitstream access service offers an important short-term alternative given the significant burdens of LLU-based roll-out. They argue, however, that the current offerings are inadequate and discriminatory and require modification.
- As a result of the obstacles to LLU unbundling, there are only a few unbundled loops in France and a large number of operators have decided not to pursue their initial interest in unbundling or to limit the scope of their activities. The consensus is that, where there is eventual competition, it will be restricted to a handful of major cities and to services targeted at business customers.
- A number of LLU proceedings have been completed or are ongoing before the ART on a range of issues related to local loop unbundling (*i.e.*, review of Reference Offer, collocation terms, access to information, pricing, terms of pre-contract and France Télécom is wholesale ADSL service).

GERMANY

In total, 42 alternative operators in Germany submitted responses to the Commission's Questionnaire. These operators are listed in Appendix A hereto.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Although the German Telecommunications Act ("TKG", as per its German initials) contains regulatory remedies for onerous provisions in interconnection and local loop unbundling ("LLU") agreements, the German National Regulatory Authority ("RegTP", as per its German initials) interprets the TKG as stipulating a primacy of contract negotiations between the incumbent operator Deutsche Telekom AG ("DTAG" as per its initials) and its competitors with respect to both interconnection and LLU agreements. The RegTP takes the view that market participants are best placed to assess the extent to which terms and conditions offered by DTAG are burdensome and unacceptable, rather than the RegTP reviewing and approving an agreement up-front as a reference offer. Thus, DTAG is expected to provide a Standard Offer which is freely negotiated between the parties without prior review or approval of the RegTP.

Nevertheless, the TKG's regulatory remedies are available to achieve amendments to the Standard Offer or to terminate abusive conduct. Different procedures and remedies apply to interconnection and other types of network access, such as LLU. Specifically with respect to LLU, the TKG refers the operators to the more general procedures that apply to the abusive conduct of dominant providers of telecommunications services.[15] For both interconnection and LLU proceedings, DTAG has adopted an administrative policy according to which it assumes that terms and conditions included in the Standard Offer are generally acceptable to all market participants to the extent that a number of agreements have been concluded; under such circumstances, the RegTP is reluctant to challenge, change or amend such terms and conditions in response to complaints of late coming entrants.

The obligation to unbundle results directly from the TKG as adopted on 25 July 1996 and has been specified in the Ordinance on Special Network Access adopted on 23 October 1996. The RegTP proceeds on the assumption that alternative operators would operate access lines which they receive from DTAG in a physically unbundled manner and which they connect to their own transmission and/or switching equipment. Such operators therefore require a class 3 license in the areas in which they provide access services on the basis of LLU or on the basis of self-deployed an operated infrastructure.

DTAG offered a new LLU Standard Offer to all operators in June 2001 (last updated in November 2001) and announced that all existing LLU agreements were to terminate as

15 Such procedures are not subject to specific time limitations and usually take several months. Proceedings can be initiated further to a complaint or "ex officio". DTAG reserves the right to exercise its discretion as to whether or not proceedings are opened with regard to a particular conduct or complaint. Currently, the RegTP exercises its discretion to the effect that it only opens proceedings in matters which appear to be of general significance to the market. The RegTP has the powers to mandate specific clauses which would avoid or remedy abusive conduct.

of 30 September 2001. This new Standard Offer, and its updates, have been negotiated in multilateral negotiation rounds, which include representatives of DTAG, a number of DTAG's competitors and representatives of the RegTP. Due to the length of the negotiation process, the former agreements, which were expected to terminate as of 30 September 2001, were extended until 30 November 2001 and subsequently until March 2002. Recently, multilateral negotiation rounds have failed and operators are expected to file abuse proceedings against DTAG with the RegTP. In response to complaints made by DTAG's competitors, it is expected that RegTP will open abuse proceedings challenging DTAG's refusal to incorporate crucial issues into its Standard Offer.

DTAG's existing Standard Offer includes both bundled and unbundled local loops. Residual capacities are only offered as bundled varieties. Unbundled local loops may be equipped with "passive" transmission equipment. The Standard Offer specifies that DTAG is not obliged to offer an unbundled local loop if such an offer is unjustified in the individual case; for example, when the unbundled local loop has existing multiple uses, or when the customer will also receive services over the unbundled local loop from DTAG or other alternative operators, or when, to facilitate the provision of the particular loop, systems will need to be deployed which allow the supply of services to customers other than the alternative operator's customers. DTAG's Standard Offer provides for a procedure in which DTAG must furnish evidence of such reasons, and operators have the right to request a neutral third party expert opinion at its own expense.

DTAG does not provide unbundled local loops to the extent that lines are required as an operational reserve by DTAG and does not provide local loops if a free line is not available or if additional capacity cannot be accomplished on the line. Unbundled local loops cannot be sublet to third parties.

Access to the sub-loop at the level of the cable splitters is not part of DTAG's Standard Offer; however, further to a complaint, the RegTP has opened abuse proceedings which address the issue of access rights at the level of cable splitters. A decision of the RegTP which is expected in the beginning of 2002.

Shared access is not yet part of DTAG's LLU Standard Offer, even though it was mandated by the RegTP in March 2001. Nevertheless, DTAG began offering individual operators shared access at the end of August 2001. Separate access to the in-house wiring can be requested from DTAG on the basis of a separate agreement only.

Operators can request from DTAG (for a separate fee) information as to the technical specifications of an unbundled line, subject to the condition that the operator has a customer contact already. DTAG is obliged to respond within 6 working days; the response does not need to be binding.

In general, DTAG must commission unbundled local loops within 7 working days following the placement of a binding order provided, however, that the operator has complied with the schedules agreed upon with respect to the submission of planning arrangements. The ordering procedure may take several days; DTAG reserves the right to reject orders under specific circumstances.

DTAG offers virtual and physical collocation. According to the administrative practice adopted by the RegTP[16], DTAG is not obliged to tolerate the installation and the use of switching equipment in collocation spaces and therefore does not offer such a possibility. DTAG's Standard Offer provides for a complex, planning, ordering, commissioning and acceptance procedure. The possibility to order depends to a large extent on the timely submission of planning procedures; timely delivery also depends on a number of factors. Operators are requested to make down payments at the moment of placing the order.

With respect to LLU-related prices, the RegTP has confirmed in decisions that charges requested by DTAG in connection with providing LLU services are subject to the RegTP's approval. DTAG has challenged such decisions in the courts. DTAG's main charges are included in its LLU Standard Offer.

B. Services to be Provided Over the Local Loop

Twenty-five responding operators confirm that fully unbundled access to DTAG's twisted copper pair is either part or the main part of their business strategy. Three operators specify that full unbundled access to the copper pair and shared access form part of their business strategy; one operator states that shared access will become part of its business strategy as soon as shared access is available. One other operator specifies that full unbundled access to DTAG copper lines and fibre lines form parts of its business strategy.

While one operator envisages an increased level of investment into its own network, another operator has stopped deploying its own network infrastructure, particularly in rural areas. This operator refers to DTAG's end user service pricing strategy (dumping) and excessive costs for unbundled local loops as the reasons for its decision.

Narrowband access

Twenty-six operators confirm that they offer narrowband access. Out of those twenty-six operators, twelve do not provide a more specific description of their services. Five operators specify that they offer ISDN and analogue narrowband access. Out of the twenty-six operators:

- Three state that they offer ISDN-based and analogue access as well as leased lines;
- Two specify that they offer PMX, ISDN and leased lines;
- One states that, under DTAG's Standard Offer, leased line services are not allowed on the basis of unbundled local loops;
- One states that it offers on-line, Internet and leased line services for data and voice;
- One states that it offers narrowband access of up to 2Mbits; and
- One advises that it offers ISDN dial-up and leased line services.

16 See for example: RegTP, MMR 2000, page 500.

From the responses of four operators, it can be concluded that they do not offer narrowband access services.

Eighteen operators confirm that they offer their services to business customers as well as to private customers. Three operators state that they offer their services exclusively to business customers. Two operators report that they offer their services predominantly or factually only to business customers.

Narrowband voice telephony

Twenty-five operators confirm that they offer narrowband voice telephony services. Out of those twenty-five operators:

- Thirteen do not provide any further specifications;
- Three specify that they offer local, long-distance and international telephony services;
- Four state that they offer local, long-distance and international services, as well as telephony services to mobile networks;
- Three report that they offer ISDN voice telephony services; and
- Two specify that they offer local, long-distance telephony services as well as value-added services.

From the responses submitted by four operators, it can be concluded that they do not offer voice telephony services.

Seventeen operators state that they offer their services to business customers as well as to private customers. Three operators specify that they offer their services to business customers only; two operators report that they offer their services predominantly or factually to business customers. One operator did not provide specifications regarding its customer groups.

Narrowband Internet access

Twenty-four operators confirm that they offer narrowband Internet access services. Out of this group of twenty-four operators:

- Seventeen do not provide further specifications regarding this service;
- Four specify that they offer Internet access against a flat rate or minute-based charges;
- One states that it offers analogue and ISDN Internet access services;
- One specifies that it only offers ISDN-based narrowband Internet access services; and
- One reports that it offered all services between 64Kbit and 2Mbit.

Four operators confirm that they do not offer narrowband Internet access services.

Seventeen operators state that they offer narrowband Internet services to business customers as well as to private customers. Two operators confirm that they offer their narrowband Internet access services to business customers only; another operator reports that it offers its services predominantly to business customers. Other operators do not expand on this question.

Broadband services for resellers

Fifteen operators state that they provided broadband service offers for resellers. Out of this group of fifteen operators:

- Seven do not provide further specifications regarding this service offer;
- Two state that they provide SDSL resale offers;
- One offers ADSL resale offers;
- Two offer xDSL resale offers;
- One reports that it offers xDSL and VPN wholesale services ;
- One specifies that it offers E-1, STM1 and xDSL fixed line wholesale services;
- One states that it offers leased line, ISDN, Internet and DSL wholesale services; and
- Two mention that they plan to provide broadband wholesale services or are interested in doing so.

Eight operators do not appear to offer broadband wholesale services. Ten operators state that they offer wholesale services for business customers and private customers. Two operators offer wholesale services for business customers only. One operator specifies that it offers SDSL wholesale services for business customers and ISDN wholesale services for private customers.

Broadband services for end-user customers

Twenty-five operators confirm that they offer broadband services for end users or state their interest in offering such services. Out of this group of twenty-five operators:

- Nine do not provide any further specifications on their services;
- Four report that they offer xDSL lines, voice over DSL and VPN services;
- Three offer HDSL, EDSL, ADSL and 2Mbit leased line services;
- Two state that they offer SDSL services;
- One confirms that it offers ADSL services, fixed connections and VPN;
- One confirms that it offers ADSL services only;
- One states that it offers SDSL and VPN Services;
- One specifies that it offers leased line services;
- One states that it offers video-on-demand and games-on-demand services; and
- Two state that they are interested in offering such services in the future.

Seventeen operators offer their services to business customers as well as to end user customers. Four operators specify that they offer their services exclusively to business customers. One operator states that it offers SDSL services to business customers, and ADSL services to private customers. Three operators do not expand on this question.

Internet Broadband access

Twenty-two operators confirm that they offer broadband Internet services. Out of this group of twenty-two operators:

- Seven do not provide further specifications regarding their services;
- Seven others specify that they offer ADSL-based services;
- Three report that they offer SDSL-based services;
- Two specify that they offer DSL-based services;
- Two state that they offer xDSL-based services; and
- One specifies that it offers HDSL/SDSL and no ADSL services.

Three operators state that they are interested in offering such services in the future. Sixteen operators offer their services to business customers as well as to private customers. Four operators offer their services to business customers exclusively. One operator states that it offers SDSL services to business customers and ADSL services to private customers. Other operators do not expand on this question.

ISP service providers

Fifteen operators confirm that they act as Internet service providers beside their telecom activity; one operator offers broadband ISP services only.

Thirteen operators do not provide ISP services.

Ten operators specify that they provide their services to business customers as well as to private customers. Four operators state that they offer their services exclusively to business customers.

Additional services

Four operators indicate that they offer Internet portals. Two operators offer e-business services. One operator specifies that it offers streaming, e-mail and news services. Two operators state that they offer hosting and Web server services.

C. Licences and/or Authorisations

Responding operators generally report that they provide services pursuant to class 3 and/or class 4 licences, subject to different geographical scopes of these licences.

Operators who operate telecommunications transmission lines for the purpose of providing telecommunications services for the public require a Class 3 infrastructure licence. Operators who provide voice telecommunications services on the basis of a self-operated network require a Class 4 licence. With regard to either type of licences, the licence applicant is requested to determine the geographic scope of its licence (and thus the geographic scope of its services offerings) in the licence application. Hence, Class 3 and Class 4 licences have been awarded as national, regional or local licences. In addition, class 3 licences are available as line licences.

One responding operator states that it is pursuing its business on national class 3 and class 4 licences. Two operators state that they have obtained both class 3 and class 4 licences on a regional or local level, while two other operators confirm that they have obtained class 3 licences on a regional level, and class 4 licences on a national level.

One operator reports that it has obtained various class 3 line licences and class 3 licences on a regional level, as well as a class 4 licence on a national level. Four operators advise that they have obtained only a class 3 licence without, however, specifying the geographic scope of these licences. Those four operators should not, therefore, provide voice services to the public.

Finally, eighteen operators state that they have obtained both a class 3 and a class 4 licence without, however, specifying the geographic scope of these licences.

D. Obstacles to Obtaining Access

Obstacles related to the Standard Offer

Seven responding operators state in general terms that DTAG's LLU Standard Offer does not comply with EC legislation. In addition, nineteen other operators list individual items which, in their view, are not currently included in DTAG's LLU Standard Offer, but should be. Among the complaints concerning DTAG's Standard Offer are the following:

- The negotiation of DTAG's local loop unbundling offer was time-consuming and frustrating due to a "take-it-or-leave-it" approach taken by DTAG and DTAG's refusal to conduct multilateral negotiations in a commercial manner.
- Although DTAG has provided a new local loop unbundling offer, the terms and conditions are not acceptable and do not contain the necessary improvements.
- DTAG's new LLU Standard Offer is currently only negotiated in multilateral negotiation rounds.
- There are no particular time constraints which require DTAG to provide the Standard Offer within a certain time period, or conclude the contract and delivery.
- LLU is not fully available on a national level. One operator specifies that in so-called OPAL-regions[17], unbundled access is not available at the MDF level; according to estimates of this operator, 7% of DTAG's customer access lines were located in OPAL regions.
- Collocation at the cable splitter level and "remote" collocation/virtual collocation is not included in DTAG's Standard Offer and is not offered by DTAG.

[17] Regions in which DTAG has deployed fibre optical cable and in which access at the MDF level is only possible via a combined copper and fibre optical cable solution.

- A Standard Offer for shared access is not provided by DTAG. One operator specifies that DTAG provided an offer for shared access near the end of August 2001, but that it is unclear whether or not this would be DTAG's Standard Offer.
- DTAG's LLU Standard Offer is lacking the usual contract terms; in particular, contractual penalties for delays in confirming orders or deliveries of collocation space or missing access lines.
- DTAG has substantially delayed the provision of offers to provide collocation space, and has delayed the delivery of collocation sites and unbundled access lines.
- DTAG has taken the view that it is only obligated to deliver access lines if the capacity in its network is sufficient to do so.
- DTAG's Standard Offer does not contain conditions for "support systems" from which alternative operators can obtain system information, access to databases regarding the availability of lines, information on the scope of the roll-out of the OPAL system in DTAG's network, delivery status, or maintenance and invoicing.
- Contractual provisions addressing maintenance and repairs are inadequate.
- Prices for providing collocation space are not transparent and cannot be reviewed by the operators on the basis of any objective criteria.
- The level of installation fees is too high and DTAG does not charge such fees to its own end user customers.
- DTAG refuses to connect newly constructed buildings if the owner of those buildings has selected an access provider other than DTAG.

Only four operators take the opposite view, stating that DTAG's LLU Standard Offer is not an obstacle to competition or is complete and was provided to them in a timely manner.

Refusals to provide

Eleven operators confirm that DTAG has refused to provide unbundled local loops based on a signed agreement on local loop unbundling. According to these operators, DTAG has provided the following reasons for its refusals:

- A lack of collocation facilities or a lack of technical feasibility to implement LLU at the collocation facilities.
- A lack of capacity in its network, the unavailability of local loops, or that DTAG would only provide bundled access solutions in so-called OPAL-ISIS regions.
- DTAG required the local loops for its own purposes.
- DTAG reserved the right to back off from local loop deliveries if it won its appeal in Court against regulatory decisions mandating access to unbundled local loops.

Moreover, three operators report that DTAG delayed the confirmation of orders and deliveries either without stating reasons or blaming the delays on a high number of requests and a lack of resources.

Two operators also report that DTAG has refused their requests for access to DTAG's cable splitters. One of these operators specifies that DTAG turned down its request for high bit-rate parts of access lines in non-OPAL areas due to alleged interference problems.

Four operators confirm that DTAG has refused to provide an offer for shared access after January 2001 based on the fact that it is not in a position to provide shared access. Two operators confirm that during the first half of 2001, DTAG refused to provide an offer for shared access on grounds that a decision by the RegTP mandating the provision of shared access was only applicable to the parties who conducted the complaint proceedings; a general reference offer would only be available further to the determination of ETSI standards, in particular addressing ADSL over ISDN.

One operator advises that its request for shared access was first rejected in September 2000 and that DTAG sought to justify its refusal to provide an offer for shared access on the grounds that shared access was not necessary to provide services to the customer and that the relevant ETSI standards were missing.

Finally, seven operators are of the opinion that DTAG has not denied or refused to provide unbundled access to its local loops. One operator who requested access to DTAG cable splitters also states in general terms that DTAG has not, in general, rejected requests for full unbundling.

Delivery times and delays

a) Time involved sorting out preliminary issues

Eleven operators address in their responses the time spent on negotiating DTAG's LLU Standard Offer and on the negotiation process in general. These operators do not agree on total length of time of the negotiation process.

For example, five of these operators confirm that the negotiation process has taken between two and three months. One operator states that the time spent negotiating has been six months while another operator reports that a period of eight months was spent on this process. Two other operators state that the time spent on negotiating was between four and five months, while another operator gives a figure of eleven months.

Two operators complain about DTAG's "frustrating negotiation procedures" and that DTAG was not willing to accept any changes to its model agreement.

b) Delivery times for collocation

Responding operators report a range of delivery times for collocation, depending on their own experience and their calculation method. The delivery times reported were:

- 2 months
- 16 weeks in less than 50% of collocation spaces ordered
- 4 months
- between 4 and 7 months
- between 4 and 5 months
- 6 months
- between 6 and 12 months
- between 8 and 9 months
- 34 weeks between the time span between the first request for proposal and the commissioning

Meanwhile, two operator report that deliveries of collocation were, in general, on time.

c) Delivery times for unbundled lines

The following delivery times for unbundled lines were reported by responding operators:

- 7 working days
- on average 7.5 days
- on average 8 days
- 10 working days
- between 10 and 15 days
- 4 weeks

Moreover, two operators specify that the percentage of lines not delivered on schedule was 40% and 90%, respectively. According to the second operator, 48% of all lines delivered were not functioning properly and required a second visit by DTAG's field engineers. Data provided by one operator with respect to deliveries within a specified time frame relate to confirmed orders of approximately **[CONFIDENTIAL INFORMATION REDACTED]** lines. One other operator states that the regular delivery time stipulated in the agreement was generally exceeded. For reasons relating to quality of service, one operator only orders lines with delivery times longer than seven days.

d) Reasons for delays

Operators report the following reasons given by DTAG for the delays:

- Lack of personnel resources
- Unexpected high number of orders and portability backlog
- Lack of "technical and operational feasibility"

- Administrative insufficiencies on either side, such as mistakes in order processing, incomplete orders or loss of order form
- Theft of tools necessary to conduct installation work
- Delays by suppliers
- Work force and sub-contractors hired by DTAG are not sufficiently skilled to carry out the necessary maintenance and repair work in an efficient manner
- Ongoing construction at the collocation site

Refusals or unsatisfactory conditions of collocation

A number of responding operators report that DTAG has refused them access to collocation space. For example, four operators specify that access was denied in one area (*i.e.,* Paderborn Mitte, Ratingen 17, Saarbrücken) while another operator reports denials in two access areas. Meanwhile, one operator reports DTAG's denial of their requests for the extension of existing collocation sites (Anhang 1). Another operator reports that DTAG has denied its request for remote collocation. Two operators state that, in a number of instances, only outdoor collocation was available. Finally, two operators state that collocation has not denied across the entire network.

With respect to impediments to collocation, some operators report major delays or long waiting and delivery times as well as insufficient conditions of delivery, in particular, in big cities. One operator reports long waiting times for the provision of outdoor collocation.

Meanwhile, one operator complains that collocation sites are in bad condition, that power supplies are insufficient, and collocation charges are too high. Two operators report that heat has developed in collocation spaces due to insufficient or the absence of air-conditioning.

Reasons for refusals or delays

One operator cites DTAG's claim of lack of timely planning arrangements as the reasons for the collocation delays. Other excuses put forward by DTAG include that collocation was either not available or outdoor collocation/virtual collocation was not possible, that it lacked the manpower to handle the large number of requests, that collocation space at the requested sites was fully occupied, and that collocation was not possible since the collocation site was located on property which was not owned by DTAG.

Four operators report that DTAG did not offer collocation alternatives. According to other operators, DTAG offered alternatives, such as outdoor collocation and, in one case, indoor collocation in the basement of a building was offered.

Insufficient quality of lines delivered

A number of responding operators complain about the quality of lines (analogue, ISDN and xDSL) that DTAG delivers to them. According to two operators, in many cases, DTAG has not complied with the quality parameters agreed upon for analogue and ISDN lines. Indeed, multiple repair works were required in order to achieve compliance with the standards agreed upon. According to one operator, analogue and ISDN lines were not switched correctly by DTAG.

Operators also report technical problems with respect to xDSL lines, particularly the physical length of the lines. According to two operators, DTAG has not complied with the quality parameters agreed upon for xDSL lines in many cases. This non-compliance resulted in technical problems, the severity of which increased in direct proportion to the level of bandwidth requested. One operator reports that in 1% of the cases, the xDSL lines delivered by DTAG were not capable of carrying high bit-rate traffic.

Other complaints by responding operators with respect to xDSL lines include that the lines were not properly installed by DTAG, there have been multiple short interruptions and outages in service, and requests for unbundled local loops have been denied by DTAG because it was found to be impossible to switch the requested lines.

A number of operators submit responses without differentiating between analogue/ISDN lines and xDSL services. One operator reports that only 63% of the repair work undertaken by DTAG was completed within the agreed timeframes. Another operator reports that patches were missing in the distribution frame in most cases where lines were delivered.

Finally, a number of operators report that the quality of lines delivered was sufficient and others state that they have no complaints about the quality of analogue or ISDN narrowband lines delivered. Six operators also state that the quality parameters complied with the standards agreed upon.

Unsatisfactory or unfair contractual conditions

Some operators responding to this question commented on the LLU Standard Offer in place at the time of their submissions, while others commented on the subsequent offer which DTAG was negotiating at the time with its competitors in multilateral negotiation rounds.

With regard to DTAG's new Standard Offer which DTAG was negotiating with competitors, the following concerns were voiced:

- DTAG is not subject to binding delivery times.
- Provisions according to which the delivery of unbundled local loops and operator fixed connections (leased lines) are coordinated are not available under the new Standard Offer.
- As under the previous version of the RUO, contractual penalties for DTAG's failure to meet delivery dates are not provided in the new Standard Offer.
- The new Standard Offer does not require DTAG to continue local loop unbundling service performance if the agreement is terminated and if the renegotiation process exceeds the effective termination date.

- The new Standard Offer includes a clause permitting DTAG to request additional payments with retroactive effect if higher charges are approved by the Courts than those agreed upon in the contract and approved by RegTP.
- The new Standard Offer lacks appropriate quality guarantees.
- DTAG has the right to request information in the case of failures or outages and reserved the right to install NTPs outside of customers' premises.
- DTAG's new Standard Offer requires that alternative operators make advance down-payments of 30% of the commissioning costs for collocation space.
- The new Standard Offer does not differentiate between the provision of new collocation space and the extension of existing collocation space with regard to forecast and planning requirements. In fact, planning requirements were substantially lower in the case of extension of existing collocation space.
- Alternative operators cannot request, free-of-charge, information about the availability of unbundled loops and collocation space unless a binding order is placed. Also, the new local loop unbundling offer does not require DTAG to provide information on the status of order and delivery procedures.
- The new Standard Offer treats an upgrade from low bit-rate to high bit-rate as a new order rather than as a change of user patterns of an existing line.
- Clauses of the new Standard Offer are one-sided in favour of DTAG and are lacking justification on the basis of objective criteria. In addition, the Offer's clauses are open-ended and imprecise.
- The level of installation charges, de-installation charges and monthly rental charges are too high.
- A realistic opportunity to review the accuracy of invoices from Deutsche Telekom does not exist.
- DTAG refuses to install access facilities to new buildings if the end user customers did not choose DTAG as their access provider.
- DTAG imposes conditions in the local loop unbundling offer which it does not impose on itself or on its affiliated entities (*e.g.,* operators are not allowed to install additional equipment, such as trunk-radio equipment, at collocation sites).
- DTAG is not under an obligation to provide a list of areas in which DTAG has deployed access facilities on an "OPAL-ISIS" basis. As a consequence, orders for fully unbundled access are refused by DTAG since the operators do not have the opportunity to verify beforehand whether or not local loops are capable of being unbundled were available.
- Planning procedures are restrictive.
- The new Standard Offer does not provide for penalties for failure to meet delivery and repair times, or for a lack of quality of unbundled loops.
- The upgrade of an existing unbundled line from low bit-rate to high bit-rate services is treated as an order for a new unbundled line and is therefore subject to the regular and burdensome planning procedure, although the level of planning required is much lower than that for a newly unbundled line.

- There exists an imbalance in the contractual relationship – while DTAG is not subject to sanctions for failure to comply with deadlines and delivery lead-times, competitors have no right to claim timely delivery if they have not complied with the tight deadlines and time-frames for submitting planning arrangements.
- Air-conditioning in collocation spaces must be ordered from DTAG under certain conditions and at onerous charges. Also, air-conditioning provided by DTAG does not have to meet the necessary technical standards and the provision of air-conditioning equipment is not subject to an acceptance procedure.
- DTAG does not allow the installation of switching equipment at collocation sites.

Discriminatory practices

Eighteen responding operators state that information regarding this question is either not available, not applicable, or they are not aware of any discriminatory practices. In addition, three operators specify that discriminatory practices are not apparent due to confidentiality undertakings concluded between DTAG and the individual operators. However, one of these operators states that late market entrants benefited from decisions adopted by RegTP prior to the market entry of such late entrants .

Meanwhile, two operators allege that DTAG entered into special arrangements with big operators or that bigger operators enjoyed preferential treatment from DTAG. Such accusations, however, are unsubstantiated. One operator states that it is widely known that different operators receive different services from DTAG.

Finally, according to two operators, DTAG was involved in discriminatory practices involving preferential treatment towards other competitors and entities within the DTAG group.

E. Economic Conditions of Unbundling

Fifteen operators confirmed that the charges approved by the RegTP were lower than those initially requested by DTAG in its request for approval of charges. According to one operator, collocation charges were determined by DTAG.

Current prices

a) Monthly line rental access fee (full unbundled access)

Charge	Euro
2 wire copper pair, and 2 wire copper pair for high bit rates	12.48
4 wire copper pair and 4 wire copper pair for high bit rates	22.50

b) One- off costs per line (full unbundled access)

Charge	Euro
Line transfer, without work at end customer (2 wire copper pair)	92.59
Line transfer with work at end customer (2 wire copper pair)	117.14
New line with work at feeder distribution interface (FDI), without work at end customer (2 wire copper pair)	107.84
New line with work at FDI and end customer (2 wire copper pair)	157.64
New line without work at FDI and end customer (2 wire copper pair)	86.51
New line without work at FDI and with work at end customer (2 wire copper pair)	135.87

c) Collocation

Terms and conditions associated with collocation are included in Annex Two of DTAG's Standard Offer, as approved by the RegTp. Different monthly charges apply to different local exchanges, and such prices are listed in the Standard Offer.

Estimate total monthly costs

Although a number of the operators who respond to this question indicate that they rely on an average churn rate or an average subscription time, or an average amortisation time, for their calculation of the estimated monthly cost per line, they provide little explanation whether their calculations take into account items such as activation and deactivation fees or collocation costs. Consequently, it is not surprising that the total monthly costs offered by the operators vary greatly. For example:

Out of the group of operators which refer to an average churn rate or subscription time as the basis for the calculation of costs:

- Five operators assume an average churn rate of 12 months and indicated an estimated cost of between €22.85 and €30.55.
- Three operators assume an average churn rate of two years and indicate cost levels of between €15.34 and approximately €20.45.
- One operator indicates a level of €14.50 if installation fees charged by the incumbent operator and their own installation costs are disregarded.
- One operator points out an increase of the price cost squeeze due to a 30-month average subscription time.

Out of the group of operators which refer to an average amortization time:

- Two operators assume an average amortisation time of 3 years and indicate costs of between €16.87 and €18.43, the latter based on an operating experience of 2 years.

- One operator assumes an amortisation time of between 3 and 4 years and gives monthly costs of €23.31.

Out of the group of operators which do not specify the basis for calculation, one operator indicates a cost level of €50, while another indicates a cost level of between €27.40 and €31.76.

Regarding the amortisation of costs, one operator points out that the amortisation of fixed costs such as installation fees charged by DTAG cannot be amortised by passing such fees on to the customer since DTAG's end user customer charges are set at a level which is 50% below the minimum charges for "full access".

Two operators express the view that a high level of traffic minutes or high amount of data flow is required in order to be able to amortise the costs.

Four operators state that long-term customer relationships are required in order to amortise the average monthly costs. Out of this group of operators, two operators specify that one-off fees can only be amortised if customer relationships last longer than 3 years. One operator states that due to quality problems caused by DTAG, it is difficult to achieve long-term customer relationships.

Pricing concerns

Twelve operators provide general responses to this question and are generally of the view that the charges requested by DTAG are unjustified because:

- the pricing scheme does not differentiate between analogue, ISDN and DSL usage patterns
- access in "OPAL-ISIS" regions is not available in an unbundled manner; therefore, average costs for local operators are higher
- their own experiences with deploying access infrastructure to new buildings demonstrates that DTAG's charges are unjustified (in addition, one operator states that its own installation costs for providing fibre optical access facilities to buildings was €18.10)
- the independent opinions of academic authorities based on a WIK cost model prove that DTAG's costs are substantially lower
- charges are not cost-based

Two operators refer to the low level of end user customer charges which DTAG has requested in order to prove that wholesale charges are unjustified. Five operators refer to studies conducted by NetCologne and the BREKO Association[18] and claim they prove that 25% of the current level of charges requested by DTAG are justified. According to one operator, those results were confirmed by the experience in the United States. Another operator states that its own costing model establishes that the charges requested by DTAG (and approved by the RegTP) for unbundled local loops and collocation are

[18] An association of operators mainly providing access services.

excessive. Meanwhile, according to this operator, collocations offers of independent players on the market are substantially less expensive than the charges requested by DTAG.

More particularly, five operators are of the view that DTAG's charges for twisted copper pairs are unjustified and eight operators are of the view that charges for unbundling without collocation are unjustified. Three operators take the view that charges for full unbundling without collocation are unjustified.

Meanwhile, four operators are of the view that charges for unbundled local loops, in particular, twisted copper pairs for narrow bandwidth applications, including analogue and ISDN, are unjustified. Three operators find that charges for analogue, ISDN, XDSL applications are unjustified, while another operator stated that none of the charges for access forms are justified.

Four operators are of the opinion that the installation fees and termination fees for unbundled local loops are unjustified and another operator views one-off commissioning fees for collocation space as unjustified. Seven operators state that installation fees for unbundled local loops are unjustified and one operator specifies that such charges are excessive by between 300% and 500%. Finally, two operators state that rental charges for collocation space are twice as high as the usual market price.

Apparent margin squeezes

Nineteen responding operators identify a margin squeeze, indicating that DTAG's monthly rental charges to its competitors are generally 14% higher than the monthly charges DTAG assesses against its own retail end user customers. Nine of these operators indicate that the margin squeeze would be even worse if the one-off installation fees were applied over an average contractual duration and added to the monthly rental charges .

Two of the operators alleging a margin squeeze point out that DTAG's charges to end user customers for an analogue local loop (€10.94) and for a standard ISDN local loop (€19.79), including maintenance and repair services, are out of proportion to the monthly fees borne by alternative operators who rent unbundled local loops from DTAG. According to two operators, installation fees are not justified because DTAG has already charged the end user customer for the installation of the line and one-off fees, such as installation and de-installation fees, are not cost-oriented. For a new line, DTAG charges end user customers a subscription price of €44.08, while charging alternative operators €107.84 for the same line. For an existing line, DTAG charges end user customers €22.04 while charging alternative operators €92.59 for the same line.

Two operators focus on DTAG's T-ISDNXXL service (including TDSL) and point out that DTAG's retail monthly charge for this service is €38.26, plus a one-off installation of €51.57, and competitors are not in a position to offer an equivalent service at a comparable price.

Three operators claim DTAG is price dumping with respect to its retail T-DSL service in order to occupy and saturate the market. One of these operators specifies that such market saturation had adverse effects on competition at a very early stage since, due to technical reasons, a cable trunk can only be used for DSL applications at a 20% rate.

One operator is also of the view that a margin squeeze can be observed with respect to fixed-to-mobile traffic. Meanwhile, one operator states that an obvious pressure on profit margins cannot be observed.

F. xDSL Wholesale Offers

Sixteen operators observe that a resale offer is not available from DTAG, or they are not aware that such an offer exists. One of these operators indicates that proceedings with respect to a resale offer are pending before the RegTP.

Meanwhile, two operators state that DTAG has a "T-DSL ZISP" resale offer available, and five other operators state that DTAG made available a resale offer at the end of August 2001.

Responding operators generally do not view DTAG's resale offers to be a viable alternative to local loop unbundling. Three operators state that DTAG's TDSL ZISP re-sale offer does not constitute an alternative to LLU because DTAG only allows the service to be used for data transmission. Another operator states that it is not possible to assess whether or not resale constitutes an alternative to local loop unbundling since it has not had the opportunity to analyse the terms and conditions of DTAG's resale offer prior to providing its response to the Commission.

Two operators state that they do not expect DTAG's resale offers to be an alternative to LLU because the prices of the offers are likely to be unattractive. Five other operators report that DTAG's xDSL resale offer is not an alternative because it does not allow for the provision of ISP or voice and data services, and margins are not sufficient to generate profit.

G. Effects of Any Problems or Limitations

Responding operators generally report market entry barriers or substantial delays in market entry as a consequence of DTAG's order and delivery delays and DTAG's price dumping policies. As evidence of this fact, a number of operators pointed out that DTAG's market share in the local loop was still at a level of 98.5%.

According to three operators, delivery delays force them to constantly change their plans for infrastructure roll-out, which results in substantial delays in the marketing of their services. Moreover, such delays trigger additional financing issues because the break-even target date keeps being postponed, and business plans have to be constantly adapted to the delays, resulting in an increased need for capital. For one operator, delivery delays as well as other factors forced it to change its business strategy and cease the business of directly offering services on the basis of unbundled local loop entirely. Seven other operators state that competition has been hindered because of DTAG's delivery delays and pricing strategies. Another operator adds that a direct consequence of these obstacles is the absence of infrastructure roll-out in rural areas, resulting in no competition in these areas.

Eight operators address the effects of the margin squeeze and state that it has limited the scope of competitive product offers, in particular the analogue end-user customer market. In addition, DTAG's offer of ISDN services alone is not profitable and profits cannot be generated through the offer of additional services, such as Internet accounts.

A number of operators also take the view that competition in the private customer segment has been prevented as a result of the high monthly rental charges requested by DTAG. Instead, operators have focused on business customers and those private customers that generate high traffic volumes. Two operators specify that customers generating monthly traffic charges of less than €76.69 will not be served in future.

Five operators also comment on the impact of DTAG's end user customer pricing structure on the development of competition. According to one operator, DTAG's price dumping policies limit competitors' abilities to set competitive prices. Another operator states that due to DTAG's pricing structure in the end user customer segment, it has been forced to deploy its own access infrastructure, with 80% of the unbundled local loops rented from DTAG likely to be replaced with the operator's own infrastructure. Meanwhile, one operator observes that the current consolidation on the German telecommunications market in the access segment is due to DTAG's price dumping strategies. One operator envisages that it might need to discontinue its business due to DTAG's pricing structure and another operator states that customers are reluctant to order access lines from DTAG's competitors due to the delivery and quality problems that have been caused by DTAG. One operator states that it cancelled its plans to enter the DSL market after investing millions of Euro in the process because it could not offer competitive prices due to DTAG's price dumping in the end user customer segment.

Two operators point out that the financing of their operations has been put at risk by the fact that investments have been made against the background of the Standard Offer and DTAG is entitled to request advance payments long in advance of the provision of collocation space.[19] As a result of this, as well as the long delays, revenues on investments in collocation could not be generated as planned. Another operator stated these other effects:

- some MDF-locations have not been ordered due to the level of collocation charges requested by DTAG;
- competition in open "OPAL-ISIS" region has not emerged due to an extreme price-cost squeeze;
- a lack of advance information about the status of roll-out of "OPAL-ISIS" technology has resulted in orders of fully unbundled local loops in "OPAL-ISIS regions" which cannot be filled by DTAG;
- internal inefficiencies within the organisation of the competitive operator have been generated due to the absence of an electronic ordering procedure; and

[19] DTAG requests payments for the preparation and the commissioning of collocation space in advance, *i.e.*, prior to delivery.

- internal inefficiencies have been created due to a lack of free-of-charge and advance information about the performance characteristics of individual lines with respect to which an operator intends to place an order. If such lines are ordered, a cancellation can only be made in return for a cancellation fee.

Finally, two operators observe that potential investors are reluctant to commit themselves to investments due to regulatory shortcomings in Germany, in particular, the non-cost-oriented charges included in DTAG's LLU Standard Offer, the monthly rental charges for access lines that are higher than the rental charges which the end user customer has to pay to DTAG (*i.e.,* margin squeeze), and the lack of sufficient regulatory intervention against delays in the delivery of access lines, leased lines, collocation and shared access.

H. Proceedings at National Level

Four operators confirm their participation in national court proceedings:

- Two operators confirm that they have appealed the RegTP's decision regarding the approval of charges for unbundled local loops dated March 2001.
- One operator confirms that it has appealed the RegTP's decision regarding the level of charges for unbundled local loops dated 1999.
- One operator confirms that it has appealed the RegTP's decision regarding the approval of xDSL end user customer charges requested by DTAG.
- One operator confirms that it has appealed the RegTP decision regarding the approval of charges for collocation space.

All of these court proceedings are still spending. Meanwhile, one operator does not identify any specific court proceedings but states generally that DTAG has delayed the implementation of the RegTP's decisions by lengthy court appeals.[20]

Eight operators also confirm that they have actively participated in proceedings before the RegTP. One operator confirms that it has participated in all rate approval proceedings, abuse proceedings and proceedings regarding access to unbundled local loops. Four operators confirm their participation as intervening parties in an unspecified number of proceedings.

One operator states that it has filed a complaint with the RegTP challenging a number of provisions in DTAG's draft local loop unbundling offer of October 2000. The RegTP has refused to open proceedings, stating that it will only open proceedings in matters of "general significance". Another operator has filed a complaint with the RegTP regarding DTAG's refusal to offer shared access in October 2000. The RegTP adopted a decision in this proceeding at the end of March 2001 and DTAG provided an offer for shared

[20] In general, appeals submitted with the courts do not suspend RegTP decisions. However, in many instances, DTAG has tried to suspend the decisions by requesting interim court measures and has succeeded in matters not relating to LLU (*e.g.,* interconnection pricing). Such request for interim measures alone causes insecurity in the market until the courts have ruled upon the request within a timespan of weeks or even months.

access at the end of August 2001. According to this operators, its other complaints on a variety of issues has not lead to an opening of abuse proceedings at the RegTP.

One operator states that it has raised the issue of a pre-selection on the access level with both the RegTP and the Federal Cartel Office, but neither authority decided to intervene.

Finally, five operators confirm their participation in proceedings at RegTP as intervening parties supporting the submissions made by the BREKO association.[21]

I. Summary of Findings

- DTAG offered a new LLU Standard Offer to all operators in June 2001 and terminated all existing LLU agreements as of 30 September 2001, although these agreements have been extended until March 2002 because of the length of negotiations between DTAG and its competitors with respect to the new Standard Offer. Apparently, multilateral negotiations have recently failed and alternative operators are expected to file an abuse proceeding against DTAG in the near future challenging DTAG's refusal to incorporate crucial issues into the Offer.
- DTAG's current Standard Offer does not include shared access and contains a number of restrictions with respect to when alternative operators can have full access to unbundled local loops. DTAG offers both physical and virtual collocation. DTAG's main charges have been set by the RegTP and are included in DTAG's Standard Offer
- Responding operators offer a wide range of services via unbundled local loops, including narrowband access, narrowband voice telephony, narrowband Internet access, broadband services for resellers, broadband services for end-user customers, Internet broadband access, and additional services such Internet portals, e-business services and hosting and Web server services.
- Responding operators generally report that they provide services pursuant to class 3 and/or class 4 licences, subject to different geographical scopes.
- The major obstacles to obtaining access to unbundled local loops identified by the responding operators are the following:

  (i) The absence of shared access and DSL resale offers and terms and conditions

  (ii) DTAG's ordering process and delivery obligations with respect to both collocation and LLU depend, to some extent, on restrictive planning procedures (*i.e.*, orders must be spread out evenly over the time period during which planning arrangements are in place)

  (iii) The absence of an efficient way to request information in advance with respect to the quality and the availability of lines and the

[21] Subsequent to the responses of the alternative operators, the RegTP has opened proceedings against DTAG for providing retail DSL services at fees lower than cost (announced by the RegTP on 18 December 2001), and also an official investigation against DTAG for anti-competitive behaviour related to the terms and conditions of DTAG's local loop access agreements (announced on 12 February 2002).

availability of collocation space, leading to planning insecurity and inefficiencies

(iv) Refusals and delays in delivery of collocation space and unbundled local loops and the absence of efficient practical remedies (*i.e.*, the absence of contractual fines)

(v) Quality issues in delivery of collocation and unbundled local loops

(vi) A margin squeeze, with RegTP-approved monthly rental charges for a twisted copper pair 14% higher than the retail charges which DTAG requests from end user customers for the provision of an analogue line

(vii) High one-off fees, which increase the effects of a margin squeeze when considered in the calculation of the actual monthly costs per line

(viii) DTAG's "price dumping" policy with respect to DSL charges (as approved by the RegTP) at the end user customer level

(ix) Financing and investment issues resulting from delayed service roll-out, caused by delays in deliveries of DTAG's products

- Operators generally indicate that DTAG's unbundled local loop and collocation prices are unjustified and too high, even though they have been approved by the regulator. A large number of operators identify a margin squeeze, indicating that DTAG's monthly rental charges (not included amortised one-off fees) for alternative operators are 14% higher than the monthly prices DTAG charges its own retail customers. Operators identify margin squeezes for analogue local loops, standard ISDN local loops, T-ISDNXXL services and fixed-to-mobile traffic. Some operators also allege that DTAG is price dumping with respect to its retail T-DSL services in order to saturate the market.
- There is no general consensus among operators whether a resale xDSL offer exists, but the majority of operators that state that one does exist concludes that it is not a viable alternative to local loops unbundling.
- As a result of DTAG's order and delivery delays, excessive prices and price dumping policy, a number of operators indicate that they have changed their plans with respect to infrastructure roll-out, which has not only limited the onset of competition, but cause the operators themselves to suffer financial problems.
- Responding operators indicate that a number of important LLU-related proceedings are ongoing, or have been completed, before the courts and national regulatory authority.

APPENDIX A

[CONFIDENTIAL INFORMATION REDACTED]

GREECE

Only one Greek alternative operator responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

The decision to unbundle the local loop in Greece was taken by the Greek regulator ("EETT") on 10 January 2001 and published in the Greek Official Journal on 12 February 2001. On 18 May 2001, the EETT issued a decision (published on 15 June 2001) approving the incumbent third draft of the Reference Unbundling Offer (RUO). The publication of the RUO coincided with full liberalisation of the Greek telecommunications market (Greece's derogation from Directive 96/19 terminating in June 2001).

Prior to January 2001, unbundled access to the local loop was already granted to alternative operators by the incumbent, OTE, on a case-by-case basis, according to technical and economic conditions defined by the incumbent. OTE has also been involved, since January 2001, in organising an unbundling forum. Trials have taken place in five of OTE's exchanges.

OTE's RUO includes only full access to the local loop. Access to loops is offered both at the MDF and street cabinet levels (*i.e.*, sub-loops), and access is available to both active and vacant loops. The one-off cost per line for fully unbundled access is €123.38 and the monthly line rental fee is €11.48.

The RUO does not include shared access, although a public consultation on shared access conditions has been ongoing since 20 September 2001. At the request of the EETT, OTE has submitted a proposed offer for the provision of shared access, which is currently under consideration. In early January 2002, the EETT announced a set of terms which will form the basis of negotiations for shared access agreements between the OTE and interested alternative operators.

Bitstream access is mandated in Greece by the provisions of the Presidential Decree transposing Directive 98/10/EC regarding special networks access. The Decree provides for equal access rights for third parties. Therefore, OTE is required to offer the same service to requesting access operators as it does for its own operations. Nevertheless, OTE only announced during the week of 14 January 2002 that it will begin to offer bitstream access services to new entrants.[22]

Physical, virtual and distant collocation are provided for in the RUO, as well as transmission and backhaul services, internal/external tie-cables and other associated collocation services (*i.e.*, air-conditioning, heating, power and security). Pricing for these services is not established in advance but is set on a case-by-case basis by OTE.

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22 Details of OTE's bitstream access offer are currently being examined by the EETT.

On 20 July 2001, OTE announced that five agreements relating to both interconnection and local loop unbundling have been signed between OTE and competitive operators.

B. Services to be Provided Over the Local Loop

The sole responding operator states that it provides narrowband data and Internet access services, together with portal activity and content. Once full and shared access to the local loop are properly implemented by OTE, the operator proposes to offer these services together with voice services over broadband connections to both professional and business segments. The operator also plans to provide wholesale broadband telecommunication services over such infrastructure.

C. Licences and/or Authorisations

The responding operator indicates that it holds licences to provide the following services: ISP services, closed user groups, company networks, cable network deployment and operation, voice telephony and carrier selection services.

D. Obstacles to Obtaining Access

At the time of the responding operator's response to the Commission's Questionnaire, regulation of the unbundling of OTE's access network was just beginning. According to the responding operator, OTE's conditions of access to its local loop are restrictive, anti-competitive and discriminatory.

Failings of the Reference Offer

The EETT's decision of 18 May 2001 approving the RUO identified a number of existing deficiencies in OTE's RUO and directed OTE to provide the following information within a reasonable time:

- The technical characteristics of interface points to enable connection of access seekers.
- A strict timetable for the implementation of OTE's information system and availability to third-parties, and publication of the standards used.

According to the information provided by the EETT in the hearings prior to the European Commission's *Seventh Implementation Report*, compliance with the second of these requirements is still pending.[23]

Refusals of access

Prior to January 2001, the responding operator reports that OTE was providing naked copper lines (2-wired and 4-wired cables) to alternative operators for full unbundling in a limited way, pursuant to specific requests and according to bilateral commercial terms. Information on loop availability in the distribution frame or local exchange was not available to alternative operators without them first submitting to OTE a specific request on behalf of the end user. OTE decided whether to allow access on a case-by-case basis and often refused access due to unavailability of copper circuits. According to the

[23] We understand that a timetable now has been established but, nevertheless, OTE is not complying with that timetable.

responding operator, in many cases OTE did not express its refusal directly to the access-seeking operator, but rather communicated its refusal through silence, delays, or by refusing to provide information about the characteristics of its network and certain technical problems. According to the responding operator, these refusals continued during the period from January 2001 until OTE's publishing its RUO in June 2001. OTE allegedly justified its refusals on grounds that applications for collocation space were unmethodical and that requests for information were not founded in a real market interest in the local loop.

Of particular concern to the responding operator is the absence of a shared access offer and the limitations in accessible lines. In relation to the latter, the responding operator points to the fact that access to sub-loops connected to remote units (so-called Optical Network Units) via the incumbent's fibre is expressly excluded from the RUO. Additionally, the operator complains that distant collocation is restricted by a shortage of access pipes for installing external tie cables.

Delays

The responding carrier reports that prior to January 2001 it experienced serious delays and, in those few cases where OTE actually provided service, it experienced service interruptions. The responding operator states that it is not yet in a position to report on delays which have occurred after publication of the June 2001 RUO.

Collocation

OTE has not, until recently, provided collocation in its exchanges. Conversely, OTE has been providing collocation to its ISP subsidiary OTENET since 1996. In 1998, some operators requested non-discriminatory collocation and information about the network characteristics relevant to collocation in OTE's exchanges. That information request was refused by OTE on the grounds of confidentiality.

Quality

The responding operator reports that lines provided by OTE prior to the RUO have been of poor quality and, if this poor quality continues, it fears that it will not be able to build a competitive offer once there is effective liberalisation and service requests become massive.

Discrimination

The responding operator reports that, since 1996, OTE has been offering its ISP subsidiary OTENET commercial and technical collocation services while it expressly has refused such access to competitive operators. Additionally, OTE has publicly announced that it will provide xDSL services to subscribers of OTENET on a pilot basis. Alternative operators and ISPs have not been informed or invited to participate in this pilot project.

E. Economic Conditions of Unbundling

The EETT has determined the cost accounting and pricing principles that should be used by OTE when fixing local loop prices (Decision 211/3 16 March 2001). OTE has, meanwhile, set its own interim prices for unbundled access and collocation. Once the incumbent's definitive model for cost-orientation and tariff rebalancing have been finalised, these interim prices may be subject to modification. The responding operator argues that these circumstances have resulted in uncertainty in evaluating the total cost of access.

OTE's interim prices are as follows:

a) Monthly line rental fee

Charge	Euro
Fully unbundled access	11.48

b) One-off costs per line

Charge	Euro
Fully unbundled access	123.38

c) Other fees

Charge	Euro
Disconnection	42.55
Backhaul	Leased lines fees/other types of connection fees
Preparation of collocation space (study, configuration, removal of unwanted material, etc.)	The relevant cost is estimated and charged case-by-case in accordance with principles set by the EETT.
Monthly rental collocation space	Estimated on a case-by-case basis
Power supply	Consumption is charged in accordance with power supplier's price list. Any extra charges have to be justified as necessary and must be cost-oriented.
Intermediate distribution frame	Prices are set by the incumbent, who must justify them according to cost-orientation rules set by the regulator

There is currently a dispute over backhaul prices for connection to physical collocation spaces; OTE is claiming the application of retail prices and EETT is requesting cost-oriented prices.

Distant collocation prices are not established at this time.[24] The RUO only establishes that the incumbent will be able to charge for the installation and maintenance of external

[24] Nevertheless, OTE has reportedly submitted proposed prices to the EETT in the last few days.

cabling connecting the MDF to an operator's equipment, but without defining this particular cost.

The responding operator identifies a price squeeze between downstream Frame Relay over ATM retail services provided by OTE (which are not cost oriented) and local loop unbundling pricing. The operator estimates that OTE is not charging its Frame Relay clients for the line that connects their premises to the OTE Frame Relay network, regardless of the location of the Frame Relay node. The operator seeks to be able to connect the customer to its own data network using local loops, but in this case it has to pay the price of the unbundled line.

F. xDSL Wholesale Offers

Although high-speed bitstream access is mandated in Greece pursuant to the provisions of the Presidential Decree transposing Directive 98/10/EC regarding special networks access, OTE only announced during the week of 14 January 2002 that it will offer bitstream access services. The details of this offer are currently being examined by the EETT. In the meantime, it is reported that OTE, through its ISP subsidiary, has been offering retail xDSL services on a pilot basis since December 2000 and intends to establish and put into operation a pilot ADSL technology network.[25]

G. Effects of Any Problems or Limitations

As a result of the obstacles described above, the responding operator reports a loss of clients and income, and compares these effects with the strengthening of OTE's market position over the same period. Overall, the operator fears the viability of unbundling in Greece.

According to the operator, because OTE's RUO does not include shared access and expressly excludes access to sub-loops connected to remote units via the incumbent's fibre, new entrants have been forced to look to bitstream access for access to a sufficient number of potential lines to sustain their xDSL business. However, the terms of bitstream access are unknown and undefined at this time.

The responding operator also reports that it has detected an unwillingness on the part of end-users to terminate their voice services with the incumbent and change to a competitive operator. Consequently, the omission of shared access from OTE's RUO has serious implications for operators seeking to provide broadband data services.

Finally, the responding operator states that the absence of a comprehensive and adequate RUO has required the majority of operators to evaluate alternative solutions for local loop services, such as wireless local loop access. Nevertheless, the operators does not consider WLL to constitute a viable alternative solution.

H. Proceedings at National Level

[25] According to the EETT's contribution to the *Seventh Implementation Report*, OTE has reported that this trial was initiated on December 2000 in four of its switching centres in Athens and Thessalonica, with a rather limited scope and with operations conducted primarily by OTE and, to a limited extent, by its ISP subsidiary. A total of 202 friendly users took part in this field trial.

In February 1998, EETT required OTE to provide access to specific local loops requested by alternative operators. According to the responding operator, delays and problems in the provisioning of these requests have caused it to suffer significant losses, for which it has claimed damages before the national courts.

In June 1999, alternative operators submitted certain cases to the EETT alleging that OTE has refused them access to the local loop. The EETT found the requests justified on the grounds that OTE was required to provide alternative operators the same access it provides to itself and its subsidiaries.

In June 2001, an extra-judicial protest was submitted relating to OTE's provision of xDSL pilot services without having invited competitors to participate in the project. The responding operator states that there has not yet been a decision in this protest.

I. Summary of Findings

- OTE's RUO, published on 15 June 2001, only covers fully unbundled access to the local loop and does not include shared access. It also does not include sub-loops connected to OTE's fibre-to-the-curb network. The one-off set-up cost for an unbundled line is €123.38 and the monthly line rental fee is €11.48. Physical, virtual and distant collocation are offered but their terms, including pricing, are undefined. Prior to January 2001, OTE offered access to the local loop on a case-by-case basis and in a very limited manner.
- Only one Greek operator responded to the Commission's Questionnaire and this operators states that the services it proposes to offer over fully unbundled lines (or shared access lines, when available) are broadband data and Internet access (both to professional and business segments). The operator is also considering providing wholesale broadband services.
- The responding operator reports that it holds licences for establishing a network and providing telecommunications services.
- The publication of OTE's RUO in June 2001 has clarified some important elements of LLU access, but conditions remain incomplete. A number of potential abuses on the part of OTE are reported: a) prior to publication of the RUO, refusals to supply access to information and the loops themselves; b) discrimination by OTE by limiting the supply of collocation space and access to xDSL services to its own downstream operations; c) limitations of production by excluding from its RUO access to sub-loops connected to remote units via its fibre; d) charging retail prices for backhaul; e) providing poor quality lines; and f) an alleged price squeeze. According to the responding operator, OTE is exploiting its dominant position through these actions and benefiting from a first-mover advantage in the provision of xDSL services.
- OTE has set provisional prices for limited aspects of LLU access. The incumbent is currently in a process of revising its cost accounting and pricing models and of rebalancing its tariffs – its interim prices may need to be modified following the completion of this process. A number of essential

prices still need to be defined, for instance, collocation and connections for distant collocation. A specific case of price squeeze is identified relating to OTE's Frame Relay service, for which OTE offers free connection to its own retail customers but charges alternative operators for such connection.

- OTE announced during the week of 14 January 2002 that it will begin to offer bitstream access services to its competitors. In a possible case of discrimination against third parties, OTE (through its own ISP subsidiary) is said to be trialing xDSL service for its own customers without permitting the involvement of competitive operators or ISPs in the trial.

- The absence of a comprehensive, adequate and transparent LLU offering has, in the view of the responding operator, required most alternative operators to evaluate alternative solutions for local loop services, such as wireless local loop. However, it does not consider WLL a viable alternative solution.

- The responding operator reports that it has claimed damages before the national courts for the losses it has suffered as a result of OTE's delays and problems in the provision of unbundled local loops prior to 1 January 2001. It also reports that the EETT adopted a decision requiring non-discriminatory treatment of operators seeking access. The operator also makes reference to a complaint in June 2001 relating to OTE's alleged discrimination in its launch of a pilot program for retail and wholesale xDSL services.

ICELAND

The EFTA Surveillance Authority sent Questionnaires to eight Icelandic alternative operators; six of these operators returned responses, only two of which contained substantial information. The others responses provided various explanations for having no information to supply: one operator indicated that it had merged with another and therefore would rely on that other operator's response; another operator stated that it does not use local loops and therefore has nothing to contribute; a third operator stated that local loops are no longer part of its business strategy; and the final operator reported that it has just begun the local loop unbundling process and has nothing to report at this time.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

The Icelandic authorities have not yet implemented the *Unbundling Regulation*,[26] despite having been obliged to do so by 1 October 2001. The incumbent, Iceland Telecom, is therefore not presently legally obliged to publish a Reference Unbundling Offer and has thus far not done so. However, Iceland Telecom has published a Standard Offer for unbundled access to the local loop, which came into force on 1 October 2000. The Standard Offer contains a price list and rules on the rental of unbundled local loops. The Standard Offer is publicly available.

The Icelandic Parliament is in the process of amending the Telecommunications Act, No. 107.1999 to include the *Unbundling Regulation*, and the proposed amendment contains a clause requiring Iceland Telecom to publish a Reference Unbundling Offer. The amendment was supposed to be approved by the Parliament by the end of 2001.

Nevertheless, Article 20 of the Telecommunications Act in its current form enables the Icelandic Post & Telecommunications Authority (IPTA) to decide whether to unbundle the local loop. Accordingly, a working group comprised of the IPTA, Iceland Telecom and new entrants published guidelines on 20 December 2000 concerning unbundled access to the local loop. These guidelines are not legally binding and are less detailed than those of the *Unbundling Regulation*.

As of September 2000, Iceland Telecom had 17 exchanges equipped with ADSL facilities. Iceland Telecom launched a trial service in one exchange area during December 1999. These 17 exchanges serve 60% of the Icelandic population, with 59% of all lines connected to these exchanges. Iceland Telecom expected to equip several additional exchanges in the past few months. It had 910 ADSL subscribers by 1 September 2000.

Several media are used to access the local loop in Iceland, including fibre optics, ATM, Frame Relay, wireless local loop, xDSL solutions, ISDN and modem connections.

[26] Regulation (EC) No. 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop, as incorporated into the EEA legal framework.

B. Services to be Provided Over the Local Loop

Only one of the responding operators answers this question and reports that it provides a wide range of services using the unbundled local loop. For example, it provides narrowband retail call services, narrowband retail dial-up Internet access and retail broadband telecom services to both residential and business end-users. As both an operator and ISP, it also provides Internet broadband access to both business and residential customers. With respect to wholesale broadband telecom services, the operator states that it provides wholesale Internet access, leased lines and xDSL to business users. Finally, the operator reports that it provides Web hosting, mail hosting, firewall services, managed router services, VPN services for both business customers and residential users.

C. Licences and/or Authorisations

One responding operator reports that it holds a general licence from the Icelandic regulator.

D. Obstacles to Obtaining Access

Only one operator reports any obstacles to obtaining access. According to this operator, it obtains delivery of collocation sites on average within three to six months, and delivery of unbundled lines (from the date of the initial request for a particular line) in ten days. The operator states that Iceland Telecom blames any delays with respect to these deliveries on a lack of manpower.

The operator indicates that it has experienced refusals or unsatisfactory conditions of collocation at several specific exchanges. According to the operator, Iceland Telecom's reason for such refusals or conditions were a lack of space at the collocation exchanges, and the only alternative temporary solution it offered was in the form of mobile collocation (*i.e.*, a container).

Finally, with respect to discrimination, the operator claims that Iceland Telecom's customers receive faster delivery times in the case of shared access (one to three days) than the operator receives (three days on average).

E. Economic Conditions of Unbundling[27]

The following prices for local loop unbundling are set forth in Iceland Telecom's Standard Offer, which came into force on 1 October 2000. These prices were set by Iceland Telecom and, so far, IPTA has not indicated any objections.

[27] All rates converted to Euro using the European Central Bank exchange rate of 12 December 2001: 1 IKR = .0107158 Euro.

Monthly line rental access fees (includes 24.5% VAT)

Line	Monthly Rental Charge (IKR)	Monthly Rental Charge (Euro)
Shared access only (<=2 Mb/s)	311	3.33
Shared access only (>2 Mb/s, up to 8 Mb/s)	573	6.14
Full unbundled line (<= 64 Kb/s)	942	10.09
Full unbundled line (<= 2 Mb/s)	1253	13.43
Full unbundled line (> 2Mb/s, up to 8 Mb/s)	1515	16.23

One-off connection fees (includes 24.5% VAT)

The one-off connection fee for the first full unbundled line is IKR 3673 (€39.36), with any additional line to the same customer costing IKR 2540 (€27.22).[28] The one-off charges for shared access are the same, and alternative operators must provide the central office splitters.

Collocation-related charges

a) Monthly rental fee per unit (excludes VAT)

Monthly rental fees for collocation are sub-divided based on the size of the cabin:

- 60 cm x 60 cm cabin: IKR 16,000 (€171.45)
- 80 cm x 80 cm cabin: IKR 23,000 (€246.46)

Iceland Telecom provides a discount based on the number of cabins ordered per location (x) and the number of locations (y):

- if $x \geq 2$ 10% discount on both units
- if $x \geq 6$ 20% discount on all units
- if $x \geq 10$ 30% discount on all units
- if $x \geq 25$ and $y \geq 10$ 20% discount on all units
- if $x \geq 50$ and $y \geq 25$ 30% discount on all units

b) Escort rates

A special tri-lateral agreement for escort services has been reached between Iceland Telecom, Íslandssími and Securatas (a company specialising in surveillance and safeguarding for business and homes). The day rate per hour is IKR 3,740 (€40.08) and the night rate per hour is IKR 4,675 (€50.10). Apparently, the same rates are available to other operators seeking to enter into a local loop unbundling agreement with Iceland Telecom.

[28] One responding operator listed Iceland Telecom's prices in its response, without VAT added.

Unjustifiable prices

One operator claims that reselling the local loop to residential customers does not make commercial sense in light of Iceland Telecom's charges. In particular, Iceland Telecom's retail charges for residential users is lower than its retail charges for business users, but its unbundled local line charges are somewhere in the middle for both. Alternative operators, therefore, claim that they cannot make a profit reselling local lines to residential users. The operator also claims that the margin is too small in the case of carrier pre-selection.

F. xDSL Wholesale Offers

Wholesale xDSL services are not available from Iceland Telecom.

G. Effects of Any Problems or Limitations

One operator claims that the difficulties associated with accessing Iceland Telecom's local loop have led it to invest in its own DSLAM infrastructure.

H. Proceedings at National Level

Operators do not report having initiated any proceedings at the national level with respect of local loop access.

I. Summary of Findings

- The *Unbundling Regulation* has not yet been implemented in Iceland and the incumbent, Iceland Telecom, has not published a Reference Unbundling Offer. However, Iceland Telecom has published a Standard Offer for unbundled access to the local loop, which came into force on 1 October 2000. Moreover, guidelines concerning LLU were published by a working group comprising the Icelandic regulator (IPTA), Iceland Telecom and new entrants in December 2000. These guidelines are not binding and are less detailed than the *Unbundling Regulation*.
- One operator reports that it provides a wide range of narrowband and broadband services over local loops, often to both residential and business customers.
- The same operator states that it provides these services pursuant to a general licence.
- Only one operator reports any obstacles to obtaining access, including refusals, delays and unsatisfactory conditions of collocation at several specific exchanges. According to the operator, Iceland Telecom's reason for the delays is lack of manpower and its reasons for its refusals to provide collocation is lack of space. With respect to shared access, the operator states that Iceland Telecom discriminates in favour of its own retail services by providing service in a shorter period of time to itself than it does for alternative operators.

- According to one operator, it cannot make a profit reselling local lines to residential users because Iceland Telecom's retail charges are lower than it what it charge alternative operators for local lines.
- Wholesale xDSL services are not available from Iceland Telecom.
- One operator states that it has decided to invest in its own DSLAM infrastructure as a result of the obstacles it has faced accessing the local loop.
- Operators do not report having initiated any proceedings at the national level with respect to local loop access.

IRELAND

Only one alternative operator in Ireland submitted a response to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

Pursuant to the *Unbundling Regulation* and its corresponding obligation to offer unbundled access to its local loops on 1 January 2001, the incumbent, eircom, published an initial Reference Offer for unbundled access to the local loop on 31 December 2000. This Reference Offer was based on a text provided by eircom in December 2000, which the Irish regulator ("ODTR") did not have time to review properly. Through Notices and Decisions published in December 2000 and in January, March and April 2001 (a revised version was published by eircom in September 2001), the ODTR identified a number of failings in the Reference Offer and, as a result, eircom has issued a number of modifications to the offer (the latest version of the Reference Offer is dated 13 July 2001).

Initial work of the ODTR in connection with eircom's Reference Offer has focused on collocation, provision of information, processes and pricing. The ODTR has described eircom's pricing for unbundled network elements as high in comparison with international levels and has intervened to set interim prices which apply retroactively from 1 January 2001 (Decision of April 2001). The ODTR intends that prices for LLU services be set on a geographically averaged basis and, although initially calculated on a historical cost accounting basis, considers that LRIC is generally an appropriate basis for the calculation of prices. Legal proceedings have been initiated by eircom which are challenging the ODTR's April 2001 pricing decision.

Full unbundling and shared access are included in the Reference Offer. Bitstream access was originally supposed to have been made available by eircom in April 2001 pursuant to the ODTR's Decision of April 2000, but has been delayed. Work on implementation of the service has since resumed and the ODTR recently adopted a decision on pricing which requires eircom to modify its prices in line with cost-orientation principles.

The ODTR's Decision of April 2001 adopted a number of directions for eircom, which include:

- the removal of the use of collocation being tied to certain LLU products (*e.g.*, fully unbundled lines);
- clarification that, although not included in eircom's list of services in the Reference Offer, access seekers could request access to lines subject to carrier pre-selection or bitstream access services; and
- a requirement to introduce an interim service level agreement (SLA).

It is not clear whether eircom has complied with these limited modifications. Moreover, it is not clear why the ODTR republished its Decision in September 2001, other than to effect very limited modifications.

Currently, Working Groups are reviewing, among other things, the spectrum management plan and technical and process manuals.

The pricing for fully unbundled lines and shared lines has been set by the ODTR (subject to appeal by eircom). The monthly rental charge is €13.53 (fully unbundled) and €6.77 (line share). The connection fee is €118.73 for full unbundling and €184.75 for shared access. The ODTR does not appear to have set prices for internal cables connecting collocated equipment to eircom's MDFs.

Certain prices for collocation have been specifically regulated by ODTR (and are subject to challenge by eircom). For others, the ODTR has simply established specific principles (*e.g.*, the occupancy charge "shall be based on the market rental for functionally similar land or buildings in the locality"). The Reference Offer sets prices for pre-ordering charges (*e.g.*, the charge for a site survey request), site preparation, occupancy and escorted visits.

B. Services to be Provided Over the Local Loop

According to the sole responding operator, it is seeking to employ unbundling as a key part of its strategy as a global telecom provider and intends to offer a full range of DSL services based on full unbundling, line sharing and bitstream access. The operator's focus is currently on offering symmetric services over fully unbundled lines to business customers, but it is also interested in line sharing for lower-cost offerings to small SMEs and residential customers. According to this operator, another DSL provider is pursuing the use of eircom's bitstream access service.

C. Licences and/or Authorisations

The responding operator states that it provides its services under a General Telecommunications Service Licence pursuant to the Postal and Telecommunications Services Act 1983.

D. Obstacles to Obtaining Access

The responding operator identifies a number of significant obstacles to obtaining access to unbundled local loops. The combined effect of these obstacles is that no loops in Ireland are as of yet unbundled, and Ireland is, in the words of the respondent, "no closer to unbundling now than in January 2001". The operator identifies the following obstacles in particular:

- The failings of the Reference Offer (on which the operator has commented in great detail to the ODTR) and the consequent need to negotiate bilateral solutions with eircom.
- The abusive behaviour of eircom which makes such bilateral solutions extremely difficult and slow. The operator, in fact, equates the behaviour of eircom to a

refusal to supply access since, although there has been no formal refusal, the delays and unreasonable manner of eircom's responses constitute an effective refusal to supply.

- The failure of the ODTR to intervene effectively and to sufficiently involve the Irish competition authority in the LLU process.

These broad issues are reflected in more detailed grievances concerning, in particular, the contents of the Reference Offer, collocation and the existing wholesale bitstream access service.

Failings of the current Reference Offer

The responding operator has submitted detailed comments to the ODTR on the eircom Reference Offer (in all its versions). It highlights the following key issues which, in its view, still require attention in the latest version of the Reference Offer (July 2001):

- the definition of exchange facility limits collocation space to transmission and switching areas;
- the requirement of escorted access to exchange facilities;
- eircom's creation of a list of industry-approved equipment for collocation, and the corresponding requirement for prior notification and approval for the inclusion of additional equipment;
- the prohibition on the sub-licensing of collocation space;
- unbundling is not available for lines subject to carrier pre-selection;
- the exclusion of ISDN lines from product descriptions;
- the lack of clarity on pricing;
- the billing information provisions;
- pre-ordering terminology; and
- the exclusion of sub-loops.

Preliminary issues (information, network characteristics, contract negotiations, etc.)

According to the responding operator, eircom has provided limited information on exchanges one year after requests were initially submitted. The information supplied by eircom contained errors, although these have since been rectified.

eircom has provided no information on loop characteristics and has rejected the use of 60% of lines chosen by the responding operator in trials of bitstream services.

Contract negotiations are reportedly extremely slow and eircom has delayed responding to comments. No access agreement has apparently been signed by the parties, nor does one seem close to being signed. There are also complaints that the confidentiality agreement (which eircom requires alternative operators to sign before it enters negotiations) contains abusive clauses.

Collocation

The responding operator complains that eircom's initial offer was limited to very restrictive "full physical co-location". It has been trying to negotiate more flexible solutions (*e.g.*, so-called "cabin co-location" – a shelter/hut belonging to the alternative operator located next to the eircom exchange building) and procedures (*e.g.*, a "fast-track" procedure for five initial sites). The operator states that the ensuing site offer which eircom produced for three initial sites (Mervue, Churchfield, Roches Street) in August following lengthy bilateral negotiations between the companies is commercially unacceptable. The operator has annexed to its response a list of detailed grievances relating to contractual, procedural and technical terms of the offer (*e.g.*, restrictions on the use of co-location space, excessive and ill-defined time periods for delivery of space, and the imposition of unnecessary ancillary conditions and services at a cost) which it considers to be unacceptable and which it has presented to the ODTR together with a request for intervention in regard to this process.

The operator also complains that eircom has adopted a restrictive approach with respect to the definition of available collocation space by interpreting available collocation space as limited to the switching and transmission spaces within its exchanges. Thus, according to the operator, this definition would exclude sizeable locations within the exchange, including empty rooms, which are not presently used for switching or transmission. In support of its position, the operator refers to an ODTR report of October 2000 which allegedly demonstrates the availability of "considerable space" following a survey that was carried out by the ODTR on 29 eircom exchanges. Additionally, it points to the discretion that eircom holds over the refusal to provide space to alternative operators, stating that this discretion is liable to abuse, and calls for regulator control of this power.

Line sharing

eircom excludes line sharing for lines already subscribed to the bitstream access service. The responding operator complains that this is precisely the target market for which operators like itself propose to use line sharing (*i.e.*, the conversion of an ADSL bitstream-based service to an ADSL line sharing-based service). The operator accuses eircom of attempting to reserve for itself the downstream service market.[29]

Wholesale bitstream access service and eircom retail service

The responding operator presents a number of complaints with respect to eircom's wholesale bitstream access service, which is in the process of being launched. These relate primarily to the offer being:

- insufficiently unbundled (eircom requires alternative operator to purchase DSLAM access and data transport backhaul);

[29] The responding operator reports that eircom was due to launch its own retail ADSL services towards the end of September, 2001; however, according to information we have obtained from eircom's Web site, the launch of these services (so-called "*i*-stream") has been delayed until the ODTR approves prices for eircom's wholesale service which avoid the imposition of a price squeeze on competitors.

- limited to one product at one capacity (1 Mbit/s);
- inflexible possibilities of connection to the service (private circuit connection to 3 PoPs through STM-1s);
- high cost of these connections (being priced at retail level) and lack of scalability; and
- inability to exploit existing infrastructures (in particular, voice interconnection circuits).

Furthermore, the operator complains of not having been given sufficient notice of the full terms of that offer in order to be able to make its own business case.

The operator also expresses concern that eircom will self-provide a discriminatory product to its own retail services, services which were originally programmed for launch at the end of September 2001. Such discrimination could take the form of a more unbundled product, increased functionality and options, exploitation of the existing backbone of the incumbent, and/or more favourable pricing. In addition, eircom has advanced information on the terms of the wholesale service to be offered to third parties.

The operator further is concerned that eircom's retail pricing will inflict a price squeeze on competitors and that the wholesale offering is not properly cost-oriented. Finally, it points to the potential lack of regulation of these retail data services (as in the case of other data services, *e.g.*, ATM and Frame Relay) and the severe consequences this will have on competition because of the inevitable discriminatory behaviour of eircom. The operator has submitted a complaint and comments to the ODTR in relation to these issues, requesting the provision of a non-discriminatory wholesale offer before eircom is allowed to move into the retail market (a non-confidential copy is annexed to the operator's response).

E. Economic Conditions of Unbundling

Prices for unbundled access were regulated in the ODTR's Decision 8/01 of April 2001:

a) Monthly line rental access fee

Charge	Euro
Fully unbundled	13.53
Line share	6.77

b) One-off costs per line.

Charge	Euro
Successful full LLU connection order	119.73
Unsuccessful full LLU connection order	50.66
Successful line share connection order	184.75[30]

[30] In the original Decision Notice, this price was given as €178.93 (and this is the price quoted by the respondent operator). This was, however, an error which was rectified by the ODTR in September 2001 (after the Questionnaire replies were submitted).

Unsuccessful line share connection order	50.66
Disconnection charge (only in case of line share)	51.68
Line testing	27.36
Fault clearance	59.61

c) Collocation charges

Charges	Euro
Pre-Ordering Charges	
Site Specific Survey Request	64.60 per site
Combined Full Survey and Collocation Site Offer Request	*Full Survey Report:* 6539.15 (large MDF) 5362.10 (medium MDF) 4507.57 (small MDF) *Site Offer:* 11,609.21
Site Preparation	
Installation Services	Will vary according to particular form of collocation and the exchange.
Process Charges	15% of Installation Services charge
Occupancy Charges	(vary according to site offers)
Process Charge	15% of occupancy charges and 15% of external service provision charges, *e.g.,* standard AC power, water
Usage/Attendance Service	
Escorted Visit (planned – 10 days notice)	Office hours: 94.19 (1st hour) 55.87 (subsequent hours) Outside hours: 137.36 (1st hour) 81.26 (subsequent hours)
Escorted Visit (unplanned – less than 10 days notice, but at least 3 hours notice during standard hours, and at least 4 hours notice during outside hours)	Office hours: 284.42 (first 30 minutes) 77.45 (subsequent 15 minutes) Outside hours: 380.92 (first 30 minutes) 83.30 (subsequent 15 minutes)

These charges have been set by the ODTR as interim prices and are subject to an appeal by eircom. In addition to these prices, the responding operator refers to the additional charges for unnecessary ancillary services included in eircom's initial collocation site offer (August 2001).

Apparently, both the site preparation and occupancy charges are covered by a non-disclosure agreement. The responding operator claims that these charges are extremely high and out of proportion with the economic reality in the areas concerned.

F. xDSL Wholesale Offers

There exists one eircom wholesale bitstream access product – ADSL Wholesale Bitstream Access Service – which, following regulatory intervention in April 2000, was due for launch in April 2001. The responding operator indicates that launch of the service has been delayed. Indeed, the ODTR has been investigating the prices of the wholesale service (*i.e.*, the ODTR is concerned with the existence of a price squeeze with eircom's own retail service and with non-cost-oriented prices) and, following a request for cost information and justifications from eircom, has required (by virtue of a direction addressed to eircom on 13 September 2001 and published on the ODTR Web site) that there be modifications to the service pricing before it is launched.

The wholesale offer is not considered by the responding operator to be an alternative to unbundling. This is the case both because the offer, at present, does not provide an inadequate basis for effective competition, and because technological innovation and competition is not possible in the future to the same extent as it is for a wholesale service provided by the eircom on an unbundled basis (*i.e.*, operators need the maximum control possible over the type, quality and speed of their services).

G. Effects of Any Problems or Limitations

The responding operator is concerned that eircom will attain a first-mover advantage in the provision of DSL services and that it will create a *de facto* monopoly. It observes that, given the current situation of financial markets, the possibility for competition will be effectively eliminated if eircom is allowed to establish such a position.

It is also telling that the responding operator is apparently the only operator that is currently pursuing unbundling in Ireland currently. In the respondent's view, this is because of the lack of progress that has been made on the key regulatory issues to date.

H. Proceedings at National Level

There have been a number of LLU proceedings at the national level. All of the complaints referred to above (relating to the failings of the Reference Offer, collocation, and the eircom wholesale bitstream access service) have been brought to the attention of the ODTR either in the form of comments, complaints or requests for intervention. The ODTR has required a number of changes to the Reference Offer as a result, but the responding operator continues to complain that the major issues remain unresolved.

In relation to the wholesale bitstream access service, the ODTR required eircom to justify, prior to 5 September 2001, that its prices were cost-oriented and non-discriminatory. On 13 September 2001, the ODTR adopted a direction requiring eircom to submit a revised, comprehensive and compliant cost proposal for the wholesale bitstream product utilizing factors for the weighted average cost of capital and asset lives as determined by the ODTR. eircom has responded by initiating legal proceedings against the regulator in relation to the process by which the interim pricing decision has been adopted and to the substantive decision itself.

In 1998, a complaint was brought before the Irish competition authority for eircom's refusal to provide local loop access. This gave rise, in turn, to the competition authority launching a High Court case against eircom in July 1999 on the grounds that this refusal constituted an abuse of the operator's dominant position. The case is still pending. The competition authority has not been involved in recent proceedings in relation to the local loop, with the ODTR having taken the lead over the past year.

The responding operator is critical of what it deems a failure of the ODTR to take local access seriously, to deal with it in a quick and effective manner, and the ODTR's failure to involve the competition authority in its work.

I. Summary of Findings

- Both full and shared access to unbundled loops are included in the eircom Reference Offer. Sub-loops are not included. Physical, but not distant and virtual, collocation are available to alternative operators. Interim prices have been set by the ODTR for certain prices relating to fully unbundled access, line sharing and collocation.
- The only Irish operator apparently interested in unbundling currently (and the only operator to respond to the Commission's Questionnaire) intends to offer a full range of DSL services but, given the problems and delays with unbundling, proposes to focus its resources initially on symmetric broadband services for business customers over fully unbundled lines.
- This operator will provide LLU services pursuant to a General Telecommunications Service License.
- The major obstacles to obtaining access to unbundled local loops are the incompleteness of eircom's Reference Offer, the "deny, delay and degrade" tactics of eircom (which is seen to be seeking to protect its first-mover advantage in the downstream services market), and the ineffectiveness of the ODTR regulatory process. Alleged abuses relate to an effective refusal by eircom to provide LLU access through its delay tactics in provisioning and contractual negotiations, its refusals to provide necessary information, its refusals to offer collocation space in a high number of exchanges where space is allegedly available, its restrictions on production (for instance, by limiting the types of space available for collocation and imposing a large number of restrictive terms on its provision of bitstream access service), and possible instances of tying (ancillary eircom products bundled together with its collocation and bitstream access offerings) and discrimination (relating to its self-provided equivalent to the wholesale bitstream access service).
- The ODTR believes that the prices set by eircom were too high and has initially set prices on an interim basis. This decision has been challenged by eircom. Complaints by the responding operator refer not so much to these prices but to the unfair additional charging for unnecessary ancillary services by eircom (*e.g.*, in the context of collocation) and to a lack of cost-orientation and the probable price squeeze in relation to the wholesale bitstream access service and eircom's proposed retail service.
- The view of the responding operator is that eircom's xDSL wholesale service is not, and will never be, a sufficient alternative to unbundled local loops.

- As a result of the obstacles to LLU unbundling, there are, as of yet, no unbundled loops in Ireland. Only one operator is interested in unbundling and more interest is unlikely if conditions do not improve. Most significantly, if eircom is permitted to gain an unassailable first-mover advantage, even this one operator states that it would reconsider its current business strategy.
- There is an action pending before the Irish High Court as a result of a complaint brought in 1998 before the competition authority for alleged abuse of a dominant position in relation to eircom's refusal to provide local loop access. A number of LLU proceedings have been completed or are ongoing before the ODTR on a range of issues related to local loop unbundling (*i.e.*, review of the Reference Offer, collocation terms and wholesale bitstream service).

ITALY

In total, 12 alternative operators in Italy responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/ Shared Access to the Local Loop

The requirement that the incumbent operator, Telecom Italia, should provide access to its local loop was enshrined in an Italian Ministerial Decree dated 23 April 1998. Subsequently, a decision of the Network and Infrastructure Committee of the Autorità per le Garanzie nelle Comunicazioni ("AGCOM") of 25 November 1998 established a process for defining the specifications for the implementation of access to the local loop. The conclusions reached by the implementation committee created pursuant to that decision were included in a further AGCOM decision of 16 March 2000, which set out the guidelines for the implementation of full unbundled access to the local loop.

Telecom Italia finally published a new Reference Interconnection Offer incorporating the unbundling provisions on 12 May 2000. This Offer contained five relevant parts: (i) an offer of fully unbundled services; (ii) an offer of collocation services; (iii) a procedure manual for fully unbundled services; (iv) a procedure manual for collocation services; and (v) a Service Level Agreement.

Following trials carried out by Telecom Italia and certain alternative operators in a number of sites, AGCOM adopted a further decision on 6 December 2000 mandating a number of amendments to the Reference Offer, namely: (i) the provision of information on exchanges and collocation space; (ii) the inclusion of procedures for managing collocation, extension services and activation of loop requests; (iii) the technical conditions for the provision of full access and collocations services; and (iv) the inclusion of a specific process for the allocation of space.

Upon completion of the first phase of implementation, AGCOM issued a further decision on 19 July 2001 which introduced a number of amendments relating to procedures for collocation and full LLU access requests as well as to the standard Telecom Italia LLU agreement. Following the July decision of AGCOM, Telecom Italia published a new Reference Offer on 7 September 2001. This is the version of the Reference Offer currently in force, although the document is now undergoing a further review process initiated by the AGCOM on 26 September 2001.

Two modalities of fully unbundled access are defined: access to either the copper pair or to dark fibre of Telecom Italia. While shared access is not currently available, AGCOM adopted a decision on 29 November 2001, following a public consultation, mandating Telecom Italia to include the provision of shared access in its Reference Offer.

Where it is objectively impossible for Telecom Italia to provide fully unbundled physical access, Telecom Italia offers a bitstream substitute service called numerical channel service. Telecom Italia is also obliged to offer wholesale xDSL services (the so-called "virtual permanent channel" service) entailing the provision of virtual service permanent connection at varying access speeds.

AGCOM's March 2000 decision also required the provision by Telecom Italia of collocation services as ancillary access services and, during a three-year term, of distant connection services. Virtual collocation may also, in certain circumstances, be considered. If neither physical nor virtual collocation is possible, Telecom Italia is entitled to refuse access unless the alternative operator can demonstrate that adjacent collocation is feasible and can provide a site nearby where its equipment may be located.

Prices for fully unbundled access vary according to the intended use of the copper pair: the provision of ISDN BRA, POTS, ADSL, HSDL, ISDN PRA or DECT services over each loop will result in different fees being charged. By way of example, the monthly rental fee for a line to be used for ADSL is: €14.15.

The prices for access to dark fibre depend on whether operators require two or four fibres (one-off costs of €195.73 and €231.37, respectively) and on the availability of dark fibre at the client's location. The Reference Offer establishes a monthly rental fee of €675.52 for two fibre cables and of €891.92 for four fibre cables. Additional prices of €171.67 and €110.52 are set in the event that provision or maintenance respectively cannot be performed within 30 days of scheduled date for reasons which are not attributable to Telecom Italia.

B. Services to be Provided Over the Local Loop

[CONFIDENTIAL INFORMATION REDACTED]

C. Licenses and/ or Authorisations

To date, only those operators holding an individual license for the establishment and operation of a public telecommunications network and/or the provision of publicly available telephony services pursuant to the President of the Republic's Decree of 19 September 1997, as implemented by of the Ministry of Communications' Decree of 25 November 1997, can request physical access to the unbundled local loop. Operators holding general authorisations for the provision of other communications services are only entitled to benefit from Telecom Italia's wholesale xDSL services offer (as well as from the wholesale xDSL services offered by new entrants).

Pursuant to AGCOM's decision of 29 November 2001, operators entitled to shared access only will be those holding an individual license for the provision of public voice telephony services and deployment/provision of telecommunications networks, and those holding a general authorisation for the provision of other communication services, such as ISPs.

D. Obstacles to Obtaining Access

As a general comment, operators state that because they are not yet providing services over unbundled local loops on a commercial basis, their answers are limited to the obstacles encountered during the site allocation process.[31]

The obstacles[32] identified by responding operators relate mainly to a lack of transparency, the difficulties encountered in negotiating an agreement with Telecom Italia, and to constant delays allegedly caused by Telecom Italia (*i.e.*, in contravention of the timing established by AGCOM). Operators argue that these delays have significantly benefited Telecom Italia by delaying competitive market entry by its competitors (initially foreseen for the end of 2001) and have forced a number of alternative operators to limit their business plans or even abandon plans to provide LLU-based services to their clients.

Failures of the current offer of Telecom Italia

Operators unanimously highlight that shared access is not currently being offered in Italy.[33] One operator has also pointed to the fact that sub-loop unbundling is also not currently offered.[34]

Further principal complaints refer to the lack of clear and effective rules regarding distant and virtual collocation, access to the incumbent's ducts, and the possibility of conducting site inspections. Operators highlight their view that there is not enough information regarding distant collocation or virtual collocation and, certainly, there is no practical experience with these collocation options to date. Decision 2/00/CIR of AGCOM proposed certain modalities of distant and virtual collocation and mandated that Telecom Italia evaluate, through a feasibility study, the possibility of granting virtual collocation and establishing the conditions for the same. Telecom Italia now offers through its Reference Offer collocation in the local exchange and in remote sites. Where neither physical nor virtual collocation can be offered, the LLU service can be refused by Telecom Italia unless the alternative operator has a site adjacent to Telecom Italia's remote site, in which case the service is provided at the alternative operator's site. Moreover, despite Decision 2/00/CIR proposing the possibility of accessing the incumbent operator's ducts, neither this possibility, nor the right to inspect sites where collocation has been denied, has been included by Telecom Italia in its Reference Offer.

Failures of the ordering system

31 As reported in the European Commission's *Seventh Implementation Report*, there were 1,000 lines unbundled in Italy as of 31 October 2001.

32 Telecom Italia also provided comments specific to Italy.

33 As a consequence of AGCOM's decision of 29 November 2001, Telecom Italia has, however, now been required to include shared access in its Reference Offer.

34 In this respect, it should be noted, however, that unbundling services are provided in Italy at the level of remote units. While this level is considered "loop level" in Italy, it would qualify as "sub-loop level" in other countries. Sub-loops, in the Italian sense of the term, have also been required to be included in the incumbent's Reference Offer by AGCOM's decision of 29 November 2001.

Alternative operators highlight certain alleged failures of the unbundling process, namely the complexity and rigidity of ordering procedures and the fact that a number of technical specifications of the interface system for the placement of orders has not yet been developed by Telecom Italia.

Operators argue that the system imposed by Telecom Italia for ordering unbundled lines is rigid and ineffective. They complain that this system requires the provision of a large amount of information – some of it already in possession of Telecom Italia – regarding the subscriber or the line (the filling out of 58 different information sections for each line, normally redundant, is requested). Furthermore, they explain that the system rejects the whole file as soon as it discovers the first mistake, without taking account of other mistakes which will then result in subsequent file rejections.

With regard to the technical specifications of the interface system to be used for the placement of orders, operators complain that the failure to define these specifications (and to ensure the involvement of competitive operators in the process of definition) will seriously impede unbundling in Italy.

Preliminary issues (information, network characteristics, contract negotiations)

Failure to provide information or the provision of incomplete information by Telecom Italia has been a constant problem throughout the unbundling process to date and is one of the main grievances identified by the responding operators. According to these operators, long after the operator's initial requests, Telecom Italia makes available limited information necessary for the identification of exchanges. Telecom Italia has not yet furnished operators with all the information necessary for an accurate economic and operational valuation of the investments to be made in unbundling. As a result, alternative operators have been forced to enter into corresponding access contracts with the incumbent operator without, they claim, having all the information necessary to make accurate judgments and business planning.

In addition, operators state that they have been obliged to accept a number of very restrictive contractual clauses imposed by Telecom Italia (see list below). They state that the incumbent does not permit any negotiation of such clauses. Furthermore, they claim that the need to comply with the time frames set forth in the applicable regulations prevents operators from initiating administrative or judicial proceedings aimed at resolving discrepancies. Access seekers are forced, as a result, to accept the impositions of Telecom Italia in order to have contracts signed and to proceed with unbundling.

Following the execution of these contracts, operators complained to AGCOM about a number of clauses (some of which involve alleged regulatory infringements and others alleged abuses) and requested the regulator to issue a decision on their validity. The specific allegations are as follows:

- Reciprocity: Telecom Italia has imposed reciprocity on operators as regards unbundling, *i.e.*, operators are obliged to provide access to their local loops to Telecom Italia should the latter need it. Certain operators managed to limit this provision to those cases where Telecom Italia could not establish its own access.

- Connection of collocated sites: Telecom Italia reserves the right to decide how connection of collocated sites with the operator's premises is accomplished, *i.e.*, whether connection is carried out through the use of leased lines or using dark fibre.
- Cost variations: Telecom Italia may introduce variations of up to 30% in the initial estimates for preparation works.
- Penalties for delay: Telecom Italia has independently established a penalty system pursuant to which its liability is limited to 0.2% of the costs incurred for preparation of the collocation space per working day of delay, with a total limit of 10% of such costs. AGCOM has been asked to prepare a new penalty system, which is proportional to delays incurred and with no maximum limitation.
- Service activation: the activation procedure established in the contract does not respect AGCOM's guidelines; in particular, the obligation to notify the operator at least five days in advance of the date and time of activation of unbundled lines (and, if applicable, of number portability).
- Penalties for termination: the payment terms for each unbundled line need to mirror the corresponding agreement entered into between the alternative operator and its client; thus, pursuant to directions of AGCOM, as soon as the client terminates its DSL services contract with the relevant alternative operator, that operator cannot be required to pay further monies for such line to the incumbent. Nevertheless, Telecom Italia requires payment of all fees for the use of each line during a minimum term of one year, regardless of whether the agreement entered into with the client remains in force or not.
- Capacity limitations: while AGCOM has established a minimum working capacity for local loop unbundling requests (which could also be combined with number portability requests) of 10,000 per day, the contract does not define the daily working capacity for local loop unbundling orders and limits the total daily capacity for number portability applications to only 1,000.

As regards the time it has taken to resolve the above-mentioned preliminary issues, responding operators quote an average time of five months. Only one operator claims a significantly shorter period to resolve all preliminary issues. According to this operator, it took just one week to gather all the information it needed, and then negotiate and execute the contract with the incumbent operator.

Collocation

According to the results of a number of feasibility studies carried out unilaterally by Telecom Italia on its sites at the request of alternative operators, there are certain sites (approximately 11% according to the *Seventh Implementation Report*) where it claims that physical collocation is impossible. Consequently, Telecom Italia has, since January 2001, issued collocation refusals for specific exchanges alleging lack of space, lack of sufficient copper pairs for all operators requesting collocation, and impossibility of distant collocation in sites that are not owned by the incumbent operator. In the opinion of the responding operators, Telecom Italia has not provided sufficient or proper reasoning for these refusals in any cases.

In terms of the identity of the exchanges where collocation has been refused, one of the operators responding to the Questionnaire specifically refers to collocation refusals in the exchanges of Rome-Marconi and Rome-Belle Arti. Another operator refers to some 60 exchanges being excluded from collocation since January 2001.

One operator also complains that they should have had the opportunity to participate in, or at least have some control over, feasibility studies, and that the results obtained have at times not seemed objective. According to this operator, data obtained from these studies is not broken down and does not allow for a proper evaluation. The operator suspects that Telecom Italia is duplicating costs by charging certain expenses both as one-off costs and as monthly rental fees for collocation. Also, it complains that alternative operators have been afforded absolutely no control of the work carried out to prepare collocation space.

Operators also complain of discrimination in collocation. They claim that Telecom Italia does not allow collocation in rooms where the incumbent has installed its own equipment, regardless of how many operators are requesting collocation in a given exchange. This increases the costs of collocation, which are already very high according to responding operators.

The responses received also indicate certain delays in the collocation process. According to the framework by AGCOM (Decision 13/00/CR), the first round of collocation (process of initial requests for collocation space, feasibility studies and confirmations in relation to the first 550 sites) should have terminated on 14 March 2001 and the second phase (a further 550 sites) should have started on 15 April 2001. But the initiation of the second phase was postponed until 15 May 2001 due to a number of mistakes and inaccuracies in the information provided by Telecom Italia, as well as certain errors in the feasibility studies. Operators complain that only a small proportion of the sites they requested in the first round had been delivered (5-10) at the time of submitting their responses.[35]

Responding operators also state that Telecom Italia's requirement that alternative operators sign a contract prior to taking possession of collocation space has caused delays. The signing of contracts takes an average 5 months. Meanwhile, one operator states that Telecom Italia has only complied with the 90 day deadline in the case of the first few sites delivered.

According to responding operators, because they had not yet taken possession of sites at the time of their responses, and they have not yet been able to carry out an evaluation of the consistency of preparation of collocation space or the delivery or the quality of lines.

[35] According to the industry report issued by the Federcomin (the Italian Federation of companies belonging to the telecommunications, broadcasting and IT sectors) on 2 September 2001, the first round of the process should have resulted in effective collocation in 432 sites. On 1 August 2001, 150 sites reportedly had been made available by Telecom Italia, while the delivery of the rest of sites included within this first round was foreseen to take place in September or October, depending on the technical and administrative obstacles encountered. Only 30 operators participated in this first phase. The *Seventh Implementation Report* notes that 367 out of 466 sites planned for delivery in the first round were delivered in August 2001.

Discrimination

In addition to the complaints of discrimination with regard to collocation already referred to above, two discrete cases of discrimination are pointed out by operators.

- Telecom Italia has, in one instance, used one single day's delay in an operator's submission of its request for collocation to justify delays in the preparation of collocation space for all operators who had requested capacity.

- On 10 April 2001, a niche operator requested AGCOM's intervention because it suspected that Telecom Italia had been acting in a discriminatory way by allowing large global operators to use their interconnection infrastructure for the provision of full unbundled access services. It claims that unbundled lines would have been activated for these operators just one month after they had confirmed sites included in the first collocation round (such confirmation having taken place on 26 March 2001). This would have given these operators a time advantage of at least 4 months over smaller niche operators who do not benefit from such infrastructure and who, according to the schedule for unbundling, would have to wait until July 2001 for the delivery of sites[36] and a further period of time for completion of collocation and activation of lines (approximately until December 2001).[37]

E. Economic Conditions of Unbundling

Prices for fully unbundled access set forth in the Reference Order for year 2001, as amended on 7 September 2001,[38] are set out below. These prices represent an increase over the prices in force previously (we have indicated the corresponding percentage increases in the tables below):

a) Monthly line rental access fee

Charge	Euro	% increase
Symmetric copper pair at the client's premises for ISDN BRA, POTS	11.62	1.3
Symmetric copper pair at the client's premises for ADSL	14.15	12.74
Two symmetric copper pairs at the client's premises for HDSL, ISDN PRA	24.27	9.27
Two symmetric copper pairs for DECT systems	17.92	4.48

36 As already stated, the first sites were in fact delivered in August 2001.

37 As already stated, according to the *Seventh Implementation Report*, 1,000 lines were in fact unbundled as of 31 October 2001.

38 It is worth noting that certain operators refer in their responses to the prices in force prior to the amendment of 7 September 2001. Likewise, it should be highlighted that on 11 October 2001, AGCOM initiated a public consultation regarding this amended Offer, the results of which have not yet been made public.

b) One-off costs per line for full access.

Charge	Euro		% increase	
	Active pair	**Inactive pair**	**Active pair**	**Inactive pair**
Symmetric copper pair at the client's premises for ISDN BRA, POTS, ADSL	92.03	110.99	2.17	4.41
Two symmetric copper pair at the client's premises for HDSL, ISDN PRA	103.8595	146.47	3.82	10.22
Two symmetric copper pair for DECT systems		122.81		5.87

c) Additional fees charged per line

Charge	Euro	% increase
Copper pair qualification for ADSL use	47.35	22.57
Works in the distribution network for preparation of symmetric individual copper pairs	23.65	22.41
Works in the distribution network for preparation two symmetric copper pairs	35.53	22.64
Fees to be paid where, for reasons not attributable to Telecom Italia, it has not been possible to provide the requested service within 30 days after the scheduled delivery date	91.92	*Not included in previous Offer*
Fees to be paid in the event that, for reasons not attributable to Telecom Italia, it has not been possible to perform maintenance within 30 days of the scheduled date	94.71	1.88

d) Deactivation fees

Charge	Euro	% increase
Deactivation fee for symmetric copper pair	44.98	8.91
Deactivation fee of pairs connected to the exchanges with GNR and PBX technologies	56.81	37.55

e) Fees for malfunctioning or interferences in the pairs attributable to the Operator

Charge	Euro	% increase
Pair identification	228.89	22.59
Interference elimination	23.65	22.41

All responding operators refer to the excessive prices charged by Telecom Italia for all phases of unbundling. The prices for collocation and connection services (access extension) are identified as being particularly high. The access extension services consist of the provision of either a numeric channel or a physical transmission line connecting Telecom Italia's remote site to either a Telecom Italia local exchange or to the OLO's network interface point located adjacent to Telecom Italia's local exchange. The activation fee for the provision of this service (numeric channel option) is €276.30. A one-off fee of €175.80/€110.52 is charged in the event that the provision of the service/maintenance has been delayed, for reasons that are independent from Telecom Italia, more than 30 days with respect to the scheduled date. The monthly rental fee depends on the connection speed and varies from €743.69 (2 Mbit/s) to €17,588.97 (155 Mbit/s). Deactivation fees also apply. Where the service is provided through a physical connection line, the activation fee amounts to €607.86. A one-off fee of €453.86/€110.52 applies in the event that the provision/maintenance of the service has not been possible for more than 30 days after the scheduled date for reasons independent from Telecom Italia. The monthly rental fee amounts to €3,229.92. Deactivation fees also apply.

Additionally, the lack of control over prices by operators has been identified. Responding operators state that Telecom Italia unilaterally determines the works that are to be carried out for site refurbishment and the type of connection which should be used for linking the MDF with the operator's premises. Operators are not given the opportunity to discuss costs and alternative housing solutions with the incumbent. Moreover, the estimates for site preparation costs can be increased in the final instance by up to 30% and operators do not have any possibility of renegotiating should this be the case. The incumbent also unilaterally determines the modalities of payment.

In particular, responding operators highlight the following pricing issues:

- Access extension services: connection between the MDF in a remote site and the local exchange (or to the access seeker's adjacent site) is provided as an ancillary service at a very high price. In particular, extension access services are 40% higher than the market price for equivalent leased lines. It has also been noted by one of the respondents that circuits which connect two incumbent sites are simpler to implement than normal leased lines, insofar as such circuits do not have two local loop segments which make up for almost the total cost of normal leased lines.

- According to one responding operator, AGCOM concluded following its investigation into collocation costs (procedure which ended in Decision in 15/01/CIR of 19 July 2001) that: (i) Telecom Italia had acted in a discretional manner as regards the technical solutions and implementation of collocation, without granting operators the possibility of proposing alternative techniques or contractual prices; and (ii) it is likely that certain costs for the implementation of power rooms have been duplicated. To date, however, AGCOM has not taken any action.

- In 2000, AGCOM justified the existence of an initial margin squeeze on the basis that the tariff rebalancing process was ongoing. Although the retail line rental fee was increased in 2001, also increased were all the fees to be paid for obtaining LLU access (as a consequence of the amendments introduced in the Reference Offer on 7 September 2001). Operators complain that, as a result, no margin is left for alternative operators. The rebalancing process is foreseen to conclude by July 2002, leaving the retail line rental fee, according to alternative operators' calculations, at approximately €11.83.[39] The current wholesale monthly line rental fee for POTS and ISDN amounts to €11.62.

F. xDSL Wholesale Offers

Wholesale xDSL services are available from Telecom Italia. Telecom Italia currently offers a permanent virtual channel connection service ("*canale virtuale permanente*"), which is a high speed bitstream service based on ADSL, HDSL and SDH transmission technologies, and the use of an ATM interface by the alternative operator. The speeds offered are the following: up to 2Mbit/s asymmetric (with ADSL); up to 2Mbit/s or 8Mbit/s symmetric (with HDSL); and up to 155Mbit/s symmetric (with SDH). Telecom Italia also offers wholesale DSL services. Under this offer, alternative operators and ISPs can resell Telecom Italia's connectivity services to end-users.

The offering of wholesale DSL services was mandated by AGCOM pursuant to a decision in December 2000 which obliged Telecom Italia to offer its xDSL services on a wholesale basis to alternative operators on transparent, non-discriminatory and reasonable conditions. This included the adoption of a retail minus criterion for determining the economic conditions related to the provision of the service (leading to a discount of at least 30% with respect to the retail price for the incumbent's DSL services). Telecom Italia was previously ordered to stop providing its retail xDSL services by both the Court of Appeals of Rome (on 16 August 2000) and by AGCOM (22 November 2000) on the basis of its anti-competitive behaviour and, on 27 April 2001 (having been re-authorised by AGCOM subject to a number of conditions to offer its own DSL services), was found by the Italian Competition Authority to have abused its dominant position on the market for local connectivity, data transmission and PSTN Internet access services employing ADSL and DSL/SDH broadband technologies, and was imposed a fine amounting to a total of 115 billion lire (nearly €60 millions).

[39] This is related to residential, not business, lines (Decision 101/99 of AGCOM).

The majority of responding operators do not consider the incumbent's wholesale DSL services to be a sufficient alternative to local loop unbundling. Only one operator considers that wholesale DSL services facilitate an active commercial presence in the market and regards them as a short-to-medium term alternative to unbundling. The rest of the operators view the wholesale DSL offer as a residual alternative for the provision of broadband access, offering an inferior quality to that which is provided through unbundling.

According to two operators, the main limitations of the Telecom Italia's wholesale xDSL offer are its high prices, the use of consumption-based fees (Mbits transmitted) which impede its commercialisation on a retail basis, poor service quality, limited bandwidth availability and geographical scope of the offer and, finally, the high costs involved in the roll-out of support infrastructure.

[CONFIDENTIAL INFORMATION REDACTED]

G. Effects of Any Problems or Limitations

According to responding operators, the problems and limitations encountered have: (i) caused a delay in their market positioning and prevented their positioning as wholesalers; (ii) resulted in a reduction of operative margins and a delay in the commercialisation of broadband services; (iii) prevented the definition of convergent offers; and (iv) prevented coverage of highly strategic areas, such as the area of Milan which, according to one of the operators, jeopardises the success of its DSL offer.

All of this, according to responding operators, has taken place in a market which is still undergoing a liberalisation process and where the incumbent is still profiting from commercial, economic and regulatory barriers to entry by competitive carriers. It is pointed out that although Telecom Italia has not issued any formal rejection, in practice, it has not implemented full unbundling. This has been achieved by Telecom Italia through the use of what operators refer to as "difficult operation management".

Operators describe the decision of certain operators to withdraw from the LLU process following the first round of collocation, stating that more than 30% of operators withdrew from the process at this point. They cite the main reason for these withdrawals as the excessive investments required, as compared with the potential target market, particularly in the case of small business customers.

H. Proceedings at National Level

No clear responses have been provided by responding operators regarding this question. According to the information provided, it seems that most of the respondents have participated in the public consultations initiated by AGCOM in connection with local loop unbundling.

Complaints filed by operators regarding contractual restrictions imposed by Telecom Italia (see above) were addressed by an AGCOM decision on 19 July 2001.

Responding operators describe three additional proceedings initiated at the request of two operators:

- A request for intervention by AGCOM regarding the authorisation to resell fully unbundled loop access services.[40]
- A request for intervention by AGCOM for the provision to end-users of clear and transparent information regarding service interruptions.
- A request for intervention by AGCOM, filed on 10 April 2001, regarding a possible discriminatory practice by Telecom Italia consisting of enabling large operators to use their interconnection infrastructure to provide fully unbundled access services four months in advance of the date scheduled for the launching of the services. At present, no formal notice has been received by the complainant from AGCOM.
- A request for intervention by AGCOM filed in November 2001 with regard to a potential price squeeze between Telecom Italia's wholesale ADSL tariff and its Teleconomy 24 ADSL tariff.

In addition to the above, it is worth reiterating that Telecom Italia was prohibited by AGCOM from offering xDSL retail services for a certain period of time while it is also required to offer a non-discriminatory wholesale service for competitive DSL provision. In April 2001, Telecom Italia was sanctioned with a substantial fine by the Italian Competition Authority for violating this prohibition and, therefore, abusing its dominant position.

I. Summary of Main Findings

- Only fully unbundled access to local loops is currently available in Italy. A public consultation has been carried out to ascertain whether shared access should also be offered and AGCOM adopted in November 2001 a decision mandating its inclusion in the Reference Offer. Access to the loop is interpreted in Italy as being access to remote sites as opposed to local exchanges. With regard to collocation, while physical collocation is the preferred option, distant and virtual collocation are also foreseen in the applicable regulations. Nevertheless, the practicability of these last two modalities has been questioned by responding operators.
- Italian alternative operators intend to provide a comprehensive range of services. All responding operators have stated their intention of providing narrowband retail dial-up Internet access and ISP services. The majority of them also plan to provide retail broadband and Internet broadband services. Some operators also plan to offer wholesale services.
- LLU services can be provided to operators holding individual licences for the establishment and operation of public telecommunications networks or the provision of public voice telephony services, pursuant to the President of the

[40] An AGCOM decision of 19 July 2001 foresees the possibility for operators who have obtained fully unbundled access to loops from Telecom Italia to resell on a wholesale basis fully unbundled access services.

Republic's Decree of 19 September 1997, as implemented by the Ministry of Communications' Decree of 25 November 1997. Operators holding general authorisations for the provision of other telecommunications services are entitled to obtain Telecom Italia's wholesale xDSL services and, when available, shared access.

- Responding operators refer to a number of alleged abusive practices on the part of Telecom Italia in the implementation of LLU. These practices relate to: a) unfair conditions: Telecom Italia is not prepared to negotiate the terms of its access contract and impose unilateral unfair terms (such as those relating to penalties for delays in site delivery and forms of connection to collocation sites); b) limiting products and technical development: Telecom Italia does not currently offer shared access, its ordering process is cumbersome and ineffective, and there have been delays and denials in the provisioning of collocation space; c) tying: a requirement of reciprocity in terms of access to an access seeker's local access network; d) unfair pricing: excessive, unilaterally set, and uncontrolled prices for collocation and backhaul; e) refusal to supply: with respect to collocation sites, refusals to supply without proper reasons and possibility of inspection by access seekers; and f) discrimination: discrimination with respect to collocation between Telecom Italia equipment and that of third parties (which require a separate room) and, in one case, between different access seekers.

- Unbundling and collocation prices have been found by responding operators to be excessively high and they complain that these costs are unilaterally set by the incumbent. A "margin squeeze" between the retail line rental fee charged by Telecom Italia and the wholesale monthly rental fee for fully unbundled loops is also identified.

- All responding operators but one agree that the xDSL wholesale offers of Telecom Italia do not provide an alternative to unbundling, mainly due to their high (consumption-based) prices, their low quality and their limited bandwidth and geographical scope.

- The obstacles encountered have allegedly caused the withdrawal of a large number of operators from the unbundling process. The operators which remain in the process see their competitive positioning jeopardised as a consequence of the constant delays, which have also forced them continuously to redefine their commercial offers.

LIECHTENSTEIN

The EFTA Surveillance Authority sent Questionnaires to five alternative operators in Liechtenstein and all five operators submitted responses.

The responding operators generally reported that Liechtenstein Telenet ("LTN") does not offer unbundled access to the local loop, despite the automatic incorporation of the *Unbundling Regulation* (as incorporated into the EEA legal framework) into Liechtenstein's legal order as of 1 October 2001. Currently, LTN is a pure network operator, wholly-owned by the Liechtenstein State, and prohibited under its licence from competing with other operators for subscribers of telecoms services. LTN outsources its maintenance to the utility companies and only sells network capacity to Telecom FL (until 2003, when Telecom FL's licence expires) and other service providers which maintain customer relationships with end-users.

No Reference Unbundling Offer currently exists in Liechtenstein and there are no published prices. According to LTN, the prices for local loop unbundling are not established because the regulator has yet to accept its cost accounting model. LTN has indicated that it is currently attempting to formulate a Reference Unbundling Offer, but without the prices. Nevertheless, LTN has argued in the past that physical unbundling of the local loop will not be feasible in Liechtenstein because of the small number of subscribers (approximately 25,000), which will make local loop access extremely expensive for competitive operators.

Despite this current environment, extensive bandwidth is available for basic services in Liechtenstein and a couple of operators have begun to offer various forms of network access. Kyberna Informatik, for example, has a licence to operate a fixed network and the national grid Liechtenstein Kraftwerk has acquired the local cable TV networks and begun its own telecoms company, LieComTel, through which it intends to offer broadband telecoms services.

Liechtenstein's telecoms policy is now under review by the Liechtenstein Government. **[CONFIDENTIAL INFORMATION REDACTED]**

LUXEMBOURG

Only one operator submitted a response to the Commission's Questionnaire with respect to Luxembourg, and it merely stated that as a result of its recent merger with another telecommunications company, it was reviewing its worldwide business strategy and therefore was presently not in a position to comment on unbundled access to the local loop in Luxembourg.

The absence of responses in Luxembourg is not remarkable given that the incumbent operator, EPT, is still fully dominant in the local market and new entrants' business strategies predominantly involve offering wireless local loop access to business users. EPT has published a Reference Unbundling Offer (RUO) (dated October 2001) with respect to full and shared access to unbundled local loops, which has been approved by the national regulatory authority, ILR. The RUO also makes reference to sub-loop unbundling. The RUO includes physical, adjacent and distant collocation, and permits virtual collocation in cases where technically feasible and where physical collocation is not possible.

The RUO contains two different tariffs for the monthly rental of fully unbundled local loops; one in relation to use of the local loop for voice telephony (€13.26) and the other for use of the local loop for broadband (€15.79). The one-time connection charge for full access to active loops is €91.13 while the one-time connection charge for full access to non-active loops is €135.03. Shared access fees includes a monthly rental fee of €7.54 and a one-time connection charge of €169.78, although these prices have not yet been validated by the ILR.

Monthly and one-time connection charges for internal tie cables for voice-band usage (per 100 pairs) are €3.00 and €1,254.90, respectively. The monthly charge for tie cables for broadband usage (per 100 pairs) is €3.00 while the one-time interconnection charge is yet to be determined. The charges for external tie cables are predominantly on a "bespoken" basis.

Finally, the monthly charges for rental of the floor space for physical collocation per footprint (including the accessibility of equipment and air-conditioning) is €62.00 in metropolitan areas, €49.60 in urban areas and €44.70 in rural areas.

According to the European Commission in the *Seventh Implementation Report*, new entrants are of the view that these prices for unbundling are set too high.

EPT does not offer alternative operators bitstream access or other wholesale xDSL service. The ILR is currently examining the technical conditions of a possible wholesale offer submitted by ILR which would allow alternative operators to market their own DSL service by having access to ATM traffic at the DSLAM level.

THE NETHERLANDS

In total, seven alternative operators in The Netherlands responded to the Commission's Questionnaire.

A. Incumbent's Offer of Full/Shared Access to the Local Loop

The Dutch regulator, OPTA, decided at the end of 1997 to make full local loop unbundling mandatory. In the course of 1999 and 2000, new entrants and the incumbent KPN agreed on a timetable for the introduction of the services and fully unbundled access became available in June 2000.

OPTA was not empowered by national law to execute the *Unbundling Regulation* until September 2001. Until that time, although OPTA was competent to rule on disputes related to local loop unbundling, its decisions were not enforceable in practice and OPTA did not have the power to assess penalties.

KPN published its second Reference Unbundling Offer (RUO) in May 2001, which OPTA reviewed and rejected in June 2001 for not meeting the minimum requirements of the *Unbundling Regulation*. OPTA gave KPN a grace period, which elapsed on 15 September 2001, to resubmit and publish a new RUO. KPN published a new RUO in mid-September 2001, claiming that it had taken most of OPTA's comments into account. This new RUO contains an offer for shared access.

In the beginning of October 2001, OPTA began a consultation process with market participants regarding KPN's RUO, rather than considering it unilaterally. At the start of November, OPTA invited market participants to present a list of major items that, in the participants' views, should be considered for inclusion in the RUO. On 27 November 2001, OPTA issued a list of items that needed to be addressed before it could consider approving KPN's RUO.

With respect to collocation, OPTA published collocation guidelines, including tariffs, at the end of 2000. In August 2001 OPTA ruled on the collocation prices in some detail in a dispute resolution procedure, holding that KPN must provide evidence of the cost of collocation elements, for example on the basis of the invoices it has paid. Physical and distant collocation are available in The Netherlands, while virtual collocation is not.

B. Services to be Provided Over the Local Loop

Responding operators state that they use, or plan to use, unbundled local loops (both fully unbundled and shared) to provide a range of wholesale and retail services. Predominantly, the operators indicate that their target customers are businesses, ranging from small office/home office (SOHOs) to small and medium-sized enterprises (SMEs) to large companies. Only one operator states that it will target residential consumers, offering broadband Internet access through line sharing arrangements.

One operator states that it pursues both full unbundled access and shared access. It uses fully unbundled loops to offer SDSL-based telecom services to SMEs and uses line sharing to offer broadband Internet to consumers, SOHOs and small companies. More specifically, it provides the following services over unbundled lines:

- narrowband retail access – ISDN-2 access to be used for both voice and dial-up Internet access (SME business market, SOHOs);
- ISDN-2 services for local, national and international voice services (SME business market, SOHOs);
- ISDN-2 services for dial-up Internet access (SME business market, SOHOs);
- wholesale DSL services (for ISPs and carriers);
- retail broadband data services – Point to Point and VPNs (without Internet access) (business markets); and
- broadband Internet access services based on ADSL and SDSL (business markets and SOHOs).

Another operator states that it uses fully unbundled local loops to offer DSL services and hopes to also use shared access in the future. This operator reports that it offers the following services: wholesale broadband telecom services; retail broadband telecom services; and Internet broadband access. For all of these services, the operator targets business customers. The operator also offers managed e-mail services, website hosting and related supporting services through its own ISP.

[CONFIDENTIAL INFORMATION REDACTED]

Yet another operator states that it focuses on providing the following retail LLU services to high-end SMEs: narrowband retail access and call services; narrowband retail dial-up Internet access; retail broadband telecom services; Internet broadband access; and web-hosting services.

Finally, one ISP operator states that it uses full unbundled access to local loops to provide Internet broad access to business customers.

C. Licences and/or Authorisations

The majority of operators that responded to this question state that they are registered with OPTA as a provider of public telecoms networks and services and have been authorised to establish and operate a public telecoms network. One operator states it operates under a licence/notification from OPTA.

D. Obstacles to Obtaining Access

Responding operators report seven major obstacles to obtaining access to unbundled local loops in The Netherlands:

(1) The Dutch legislature’s failure to grant OPTA full powers of intervention over KPN’s RUO;

(2) KPN's delays and anti-competitive tactics, particularly those related to the delivery of collocation sites and unbundled lines;

(3) Anti-competitive conduct related to collocation;

(4) Unfair or incomplete contractual terms and conditions in KPN's RUO;

(5) KPN's refusal to disclose information about its network (*i.e.,* to give access to its relevant database);

(6) Insufficient quality of the lines delivered; and

(7) KPN's discriminatory treatment of new entrants as compared to its own retail operations

Regulatory and legislature failures and shortcomings

A number of operators state that a significant obstacle to LLU access is the fact that OPTA was not, until September 2001, officially designated to enforce the *Unbundling Regulation*. In the meantime, OPTA could assess the RUO and intervene in disputes, but could not impose transactions. According to responding operators, the result has been that KPN has had little incentive to comply with the *Unbundling Regulation* and has taken advantage of the situation by automatically refusing to provide certain services, particularly when the service requested would be competing with an existing KPN service. For example, alternative operators have requested that KPN, offer line sharing, but KPN has until now not acted on this request.[41] OPTA was asked to intervene by an operator and OPTA requested KPN, by decision of 12 November 2001, to make a complete offer to the relevant company within 6 weeks. Moreover, during current testing of shared access, KPN has insisted that the splitter be located in the domain of the alternative operators rather than in its own facilities, which is not the type of access requested by operators.

One operator specifically cites OPTA's failure to introduce appropriate regulation which would force KPN to offer shared access (including specific types of shared access) as the reason for KPN's intransigence and lack of responsiveness. As noted, KPN's RUO included shared access as of mid-September 2001.

Delays

Responding operators identify delays on the part of KPN as a major obstacle to LLU access. For example, one operator reports that it took KPN 10 months (from the first request to commercial offer) to create a full unbundled service offer for new lines, even though it already offered its MxStream ADSL service to its own retail customers. With respect to collocation, the same operator reports that KPN received the first requests for collocation in September 1999 but did not take any actions until June 2001.

For shared access, the first formal request from an alternative operator was made in March 2000 and it was not until February 2001 that KPN responded, offering a splitter-less service (*i.e.*, the splitter must be housed by the alternative operator), even though alternative operators had requested a splitter-based service (*i.e.*, KPN would house the

[41] Line sharing is part of KPN's RUO published in mid-September 2001.

splitter). According to one operator, KPN initially insisted that this arrangement was the only option because the distance of the tie-cable between the DSLAM (which is owned by the alternative operator) and the splitter must be no greater than 10 metres in order to preserve the quality of KPN's voice signal. Later, KPN revised this figure to 245 metres, but announced that it would take more than a year to implement the splitter in the KPN domain because locating the splitter there would have a huge impact on KPN's systems and procedures (which KPN refused to discuss or explain). In the meantime, KPN was already selling its MxStream ADSL service to retail customers and alternative operators were forced to accept the splitter-less option in order not to lose the time-to-market. In addition, KPN imposed all sorts of technical restrictions as a result of the alternative operator's housing the splitter and handing back the voice service to KPN.

One responding operator also reports that KPN has used legal and regulatory proceedings to slow progress. Specifically, in March 2001, after OPTA ruled in the Versapoint case (which involved LLU issues), KPN raised objections and refused to follow OPTA's ruling, claiming that OPTA was not empowered to regulate LLU issues pending the formalisation of their designation to apply the *Unbundling Regulation*. Thus, KPN avoided cooperation in the "walk-through" procedure which allowed operators to verify that KPN's refusal to deliver physical collocation was justified, and KPN refused to comply with the OPTA ruling that it had to deliver collocation within 3 months from the date an operator places an order, unless it could show that the central office is lacking in space.

In the meantime, two operators report that it generally takes KPN between six and nine months to deliver collocation sites from the time the order is placed. Another operator reports typical lead times for new collocation sites of 3 to 4 months. Finally, according to another operator, collocation issues have delayed customer rollout on average 40 working days.

Delays in provisioning collocation were the result of KPN's claims of lack of space, humidity problems, KPN issuing to operators incorrect or late information, and KPN's rejection of collocation orders on the basis that the information provided by the alternative operator on the order form was incorrect, despite the fact that the information could only be known by KPN and KPN failed to supply the correct information when requested by the operator.

Responding operators also report that KPN's delivery times for unbundled lines are inadequate. One operator states that delivery times for unbundled lines are difficult to calculate because of the high number of orders (approximately 66%) that are rejected by KPN' systems for not complying with data in KPN's data base (to which alternative operators do not have access).

Nevertheless, another operator reports that it takes KPN on average 20 days to deliver existing lines (full and shared access) and on average 40 days to deliver new lines. Another operator reports that the KPN's processes for delivery of analog/ISDN lines is unreliable and it takes between 25 and 49 working days for KPN to provision voice lines, both single and multiple lines. A third operator states that the timescale for new line deliveries was 1 to 4 weeks, and that KPN met this timescale approximately 80% of the time.

Finally, one operator states that 30% of full unbundled access orders are ultimately rejected because of wrong or incomplete data with relation to NAD (Name Address Domicile) information. This "incorrectness" is not verifiable. During the first year of new line ordering, the operator states that all order (100%) were refused by KPN before they eventually were carried out and provisioned.

Collocation

Collocation is a particular concern for the responding operators. The following obstacles related to collocation are reported:

- Collocation sites have never been delivered on time, with deliveries between two days and two months late;
- In more than 50% of the late deliveries, the deliveries were also incomplete, to the extent that the operator could not begin providing service using the location;
- KPN does not timely provide important information about the collocation site;
- KPN changes its personnel responsible for collocation every six months;
- Operators first began discussions with KPN regarding the cheaper option of "street cabinets" in the spring 1999 and formally requested them from KPN in December 2000, but it took until July 2001 for KPN to agree to "trial" it;
- KPN is increasingly rejecting collocation orders on the grounds of limited space (no details provided);
- KPN only offers three or five rack configurations, even if operators requires less; and
- In some cases, the distance between the adjacent collocation site offered by KPN and the MDF is more than 300/400 metres, which is the maximum cable length necessary to avoid service degradation.

One operator further reports the following three delaying tactics employed by KPN –

- KPN initially declared that there was little or no space in most of their central offices for collocation, but a survey organised by OPTA revealed that in all eight surveyed locations there was plenty of space for operators to collocate.
- On 14 February 2000, KPN published an offer for collocation on 120 central offices. The operator ordered 91 collocations based on this offer, but three months later KPN sent a letter indicating that it could realise only 8% of all Telco orders. After the operator brought a case before OPTA, KPN announced that it could realise 18% of the Telco orders and a month later stated in a letter that it will realise 85% of Telco collocation orders.
- It took four months of negotiations for KPN to agree to "walk-throughs" in 11 central offices which KPN claimed were not suitable for collocation. One day before the first walk-through, KPN announced that that it had found collocation space in seven of the 11 central offices. After the walk-throughs, eight of the 11 were found to have plenty of space for collocation.

Lack of space in central exchanges has meant that one operator has had to accept "adjacent" collocation, while the hardware of KPN's retail MxStream service is located in the central exchange. However, independent "walk-throughs" have shown that KPN does not always lack the space for physical collocation as it claims. The operator states that adjacent collocation is not an alternative to physical collocation because it requires a longer copper wire from the end user. Street cabinets near the exchange are preferred, but these will not be deployed by KPN immediately.

Unfair or incomplete contractual terms and conditions in the RUO

With respect to KPN's May 2001 RUO, one responding operator states that it contained the minimum envisaged by the *Unbundling Regulation*, and did not include any terms and conditions for provisioning and assurance. Moreover, the May 2001 RUO was concluded "unilaterally" by KPN, and KPN has been unwilling to deal or negotiate. The result is that the contract is poor, lacking clarity, with numerous contradictory items and clauses. Another operator states that KPN's offer is characterised by unsatisfactory tariffs, lack of freedom to negotiate, and an unfair distribution of rights and obligations, whereby KPN has most of the rights and alternative operators have most of the obligations. Apparently, KPN also presented a LLU contract that lacked any SLAs and, therefore, did not guarantee the quality of lines and maintenance/repairs. Nevertheless, one operator reports that no lack of quality of lines has been noticed so far.

Other complaints of KPN's May 2001 RUO include that:

- KPN requires that operators sign the RUO or otherwise not receive LLU services.
- KPN only makes available a full unbundled access service to the local loop if the infrastructure to the specific end-user in question is already present and in use (*i.e.*, the end user must have an existing contract with KPN for an ISDN or analogue lines). For new lines, KPN requires that alternative operators first pay for the costs of connecting the line to the end user, which includes not only the costs of connecting the line to KPN's voice switch, but also the fictional costs of disconnecting the line from the switch and connecting it the operator's DSL port on the main distribution frame (MDF). Operators are also charged a fine for quitting a voice subscription with KPN within one year. Apparently, these extra costs used to be €204.21 per line, but after KPN introduced a New Line Service in August 2001, which purposefully eliminated all of these unnecessary and fictional steps, the price somehow doubled to €408.42.
- KPN limits the use of the line rather than offering generic LLU service, and if the operator wants to change the type of service (*i.e.,* ADSL to SDSL), the operator has to pay an additional fee of €133.87.
- KPN does not allow shared use of backhaul facilities by operators that use collocation space. As a result, an operator either has to build the backhaul itself (which is impractical for many smaller new entrants) or purchase the backhaul from KPN.
- KPN forces operators to order separate collocation facilities for full unbundling and for line sharing, despite no technical or operational need to do so.

Information regarding KPN's network

One operator reports that gathering information about the characteristics of KPN's network remains difficult. According to this operator, KPN has failed to provide some information requested and, where it has responded, the information has been of very bad quality or incomplete. KPN has also refused to provide quality guarantees that any given unbundled local loop is technically capable of DSL.

Insufficient quality of lines delivered

One responding operator also reports that, in some cases, the copper lines delivered by KPN were found to be of insufficient quality. According to the operator, KPN eventually replaced all of these lines at no charge, but the timescales experiences for the replacement were unreasonable, with a duration of up to 2 weeks. These delays, combined with KPN's refusal to provide information on the quality of the line prior to delivery, had the effect of this operator being unable to provide its customers with realistic information on when their service would be ready. Moreover, this operator did not learn that the lines were insufficient until it was able to test them, which was very soon before the customers were expecting to receive them.

Discrimination

One operator reports that KPN unilaterally makes a limited number of unbundled loops (50) per MDF available to alternative operators per day. According to this operator, anecdotal evidence reveals that KPN's retail MxStream ADSL service does not encounter similar restrictions. This operator adds that KPN processes retail MxStream ADSL orders immediately, while the processing times for LLU orders tend to be much longer. Apparently, this results from the fact that KPN dedicates substantial human resources to their retail ADSL order processing, but understaffs the department in charge of processing unbundling orders from new entrants.

Moreover, a three-day period typically elapses between the time an order is made by an alternative operator and the order is entered by KPN. Even more time is consumed before the order is accepted by KPN, and another delay is likely before LLU delivery can commence. Again, according to the same operator, anecdotal evidence reveals that KPN's MxStream service does not experience the same delays.

E. Economic Conditions of Unbundling

a) Monthly line rental access fee

Based on KPN's Tariff Schedule for MDF Access Services (4 January 2001 preliminary version), KPN's monthly line rental access fees (excluding VAT) for full and shared access are as follows:

Charge	(€)
Fully unbundled	16.47*
Shared access	10.84*

* Both monthly line rental access fees include a broadband service surcharge of €4.54, which has not been authorised by OPTA and which KPN claims is required to monitor network integrity .

b) One-off costs per line

Based on KPN's Tariff Schedule for MDF Access Services (4 January 2001 preliminary version), KPN's one-off costs per unbundled line (excluding VAT) are as follows:

Charge	**(€)**
Access Line Connection - Existing line	134
Access Line Disconnection – Existing line	134
New Line Service Type 1	238
New Line Service Type 2	579
Access Line Test	39
Migration	134

c) Collocation

Based on KPN's Tariff Schedule for Collocation (27 July 2001 ver. 1), KPN's collocation charges (excluding VAT) are as follows:

Charge	One-Off Charge (€)	Yearly Recurring Charge (€)	Yearly Recurring Charge per Ampere (€)
a) Physical Collocation			
Physical collocation cabinet set (charge per cabinet footprint)		4,288.22	
b) Adjacent Collocation			
Rental charge for facility K1200		1,406.72	
Rental charge for facility K2400		1,474.79	
c) Optional Facility Charges			
48v DC no break installation	13,885.67		
48v DC no break usage			136.13
230v monitored supply installation	7,941.50		
230v monitored supply usage			281.34

d) Tie cables

Based on KPN's Tariff Schedule for MDF Access Services (4 January 2001 preliminary version), KPN's charges for tie cables (excluding VAT) are as follows:

Charge	One-Off Charge (€)
Additional Tie Cable Provision for Physical Collocation (200")	7,714
Initial and additional Tie Cable Provision for Physical Collocation (400")	10,436
Additional Tie Cable Provision for Physical Collocation (600")	13,159
Discount per 100" cable in case of partially fulfilled order for physical collocation	1,361
Additional Tie Cable Provision for Adjacent Collocation (200")	18,605
Initial and additional Tie Cable Provision for Adjacent Collocation (400")	23,142
Adjacent Tie Cable Provision for Adjacent Collocation (600")	27,907
Discount per 100" cable in case of Adjacent Fulfilled Order for Physical Collocation	2,382

Pricing Concerns

Responding operators generally view KPN's charges for unbundled local loops and collocation as unverifiable because KPN will not disclose its cost information. Nonetheless, operators state that the following charges are not justifiable:

- The subscription fee for shared access is already invoiced through the voice subscription charge that KPN assesses against its own retail customers. Therefore, KPN is collecting two subscription fees for the one line.
- Alternative operators must pay for all shared access equipment, including the tie cable which carries the voice back to KPN.

- The service charge of €4.54 per month which KPN says it requires to monitor network integrity and which OPTA has not approved.
- The connection fee of €134 per connection and disconnection is twice as much as KNP should be allowed to ask.
- The migration costs should be zero rather than €134 because KPN doesn't allow freedom in the allocation of SIP-sift numbers.
- The charges for new line delivery are extremely high because KPN accounts for potential digging activities, whether they are undertaken or not.
- The €39 for access line test, which operator claims is completely automated procedure
- KPN's prices for tie cables are excessive.

Price squeeze

One operator believes there is a price squeeze based on the fact that KPN charges its own retail customers from €22.69 per month for DSL services, but charges €133.87 for the provisioning of the line, €11.93 per month (plus a broadband service surcharge of €4.54 per month) for line rental, and a percentage of the high costs of collocation.

Another operator does not consider KPN's prices unjustifiable and does not consider there to be a margin squeeze.

F. xDSL Wholesale Offers

Responding operators acknowledge that a wholesale xDSL offer (apparently a resale offer) has been available in The Netherlands since early 2000, but disagree as to whether it is a viable alternative to unbundled local loops. One operator states that KPN's xDSL wholesale offer is a viable alternative to LLU, while two others are of the opinion that it is not for the following reasons:

- operators are forced to accept KPN's xDSL services;
- KPN's xDSL wholesale offer does not offer full customer service ownership end-to-end; and
- pricing barriers (operators do not elaborate).

G. Effects of Any Problems or Limitations

As a consequence of the obstacles described above, the responding operators report they have been delayed in getting into the broadband access services market and KPN has gained first mover advantages. According to one operator, KPN's discriminatory provisioning of line sharing has allowed KPN to become the dominant provider of DSL in The Netherlands. Indeed, one operator states that, at present, KPN's MxStream retail service has an estimated 120,000 customers while alternative operators have no more than 5,000 customers.

Generally, responding operators report that provisioning by KPN reveals a pattern suggesting a tactic of denials and delays that have had the effect of prolonging competitors' lead times to market, of forcing them to incur additional costs and putting at risk their ability to compete effectively. Moreover, KPN's protracted delays in provisioning have adversely affected new entrants' operational performances and hampered their ability to meet service commitments made to customers, which is crucial to new operators who want to build up their customer base and establish customer confidence and loyalty. Also, operators have had to incur indirect costs related to allocation of time and personnel in order to solve the problems caused by KPN. The quantifiable effects, according to one responding operator, are loss of revenues and "pre-installation churn". Other effects are that operators have had to revise their entire economic model and adjust revenue plans, which strain investor relations.

H. Proceedings at National Level

Responding operators report the following proceedings before the national regulator:

- The Versapoint case, which resulted in a decision on collocation tariffs for the time prior to 1 January 2001. OPTA ruled that, among other things, Versatel must have access to the same collocation space at the same costs and at the same time as KPN MxStream and that a "walk through" procedure should be established. Of significance, the Versapoint decision also elevated certain principles related to LLU to legal enforceability and underscored the direct regulatory linkage with the EC Regulation on unbundled access to the local loop.
- One operator filed a Petition for Ruling on Unbundled Loop Ordering and Provisioning with OPTA in July 2001 in order to achieve legally binding clarity with respect to the KPN's LLU obligations under the *Unbundling Regulation*.

I. Summary of Findings

- Fully unbundled access has been available in The Netherlands since June 2000, but KPN only began offering shared access with the publication of its latest (and third) RUO in September 2001. The national regulator, OPTA, only was designated as the agency with the authority to execute (and enforce) local loop unbundling (pursuant to the *Unbundling Regulation*) in September 2001.
- Responding operators are offering, or plan to offer, a wide range of wholesale and retail services through full and shared access to unbundled local loops. These operators are primarily targeting business customers.
- The majority of operators offer services pursuant to their registration with OPTA as providers of public telecommunications networks and services.
- Responding operators report seven principal obstacles to obtaining access to unbundled local loops in The Netherlands:
    (1) The Dutch legislature's failure, until recently, to grant OPTA full powers of intervention over KPN's RUO for local loop unbundling.

(2) KPN's delays and anti-competitive tactics, particularly those related to the delivery of collocation sites and unbundled lines.

(3) Anti-competitive conduct related to collocation, including refusals of collocation by KPN on grounds of lack of space. Many of these claims were later disproved following independent "walk throughs".

(4) Unfair or incomplete contractual terms and conditions in KPN's RUO, including a requirement that an end user must already be a subscriber of a local loop (*i.e.,* an existing contract exists) before full unbundled access is made available. Otherwise, the end user must either first subscribe to KPN's voice services, or the alternative operator must pay for connecting and then disconnecting that end user. Another contract term does not allow shared use of backhaul facilities, thereby requiring operator to either build the facilities themselves (which is impractical for many smaller operators) or buy the facilities directly from KPN.

(5) KPN's refusal to disclose information about its network.

(6) Insufficient quality of the lines delivered.

(7) KPN's discriminatory treatment of new entrants as compared to its own retail operations, including the limitation that only 50 unbundled loops per MDF are available to alternative operators per day.

- Responding operators view many of KPN's prices for unbundled local loops and collocation as excessive and unjustifiable. In particular, operators claim that KPN's subscription fee for shared access amount to double recovery, as KPN already invoices its own retail customers for the line. Moreover, for full unbundled access to new lines, KPN charges alternative operators the costs of connecting and then disconnecting the line, plus other activities (*i.e.,* digging), even when these activities are often not undertaken. One operator believes there is a price squeeze for retail and wholesale broadband services.
- Responding operators are divided as to whether KPN's wholesale xDSL offer is a viable alternative to unbundled local loops.
- As a consequence of the obstacles described above, alternative operators have been delayed in getting to market and KPN has achieved first-mover advantages. Moreover, KPN's delays and denials have hampered new entrants' abilities to meet service commitments to customers, which have damaged their credibility in the nascent market.
- A number of proceedings related to local loop unbundling have taken place at the national level.

NORWAY

The EFTA Surveillance Authority sent Questionnaires to 14 alternative operators in Norway and 11 of those operators submitted responses.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

The question of local loop unbundling was first discussed in Norway in October 1998 when the Ministry of Transport and Communications arranged a public inquiry on the question of local loop unbundling. However, by the end of 1999, no definite LLU proposals had emerged. The Ministry published a white paper in 1999 which concluded that local loop unbundling was not essential in the short term, rationalising that further developments of existing access products and alternative infrastructure would satisfactorily stimulate competition in the market.

In April 2000, the incumbent Telenor unilaterally decided to open its local loop, despite the absence of regulation at the time. This decision followed Telenor's failed merger with Telia, during which Telenor was told by the European Commission that a precondition for EC approval of the merger was that Telenor open up its local network. However, shared access to the local loop only became available as of 1 October 2001[42], which coincides with the date the *Unbundling Regulation* came into force.[43]

A Reference Unbundling Offer (RUO) for unbundled access to the local loop has been available since December 2000. The RUO covers a standard agreement on unbundled access, including technical specifications to the local loop.

The Norwegian NRA (NPTA) is currently reviewing Telenor's RUO and released a market report concerning unbundled access to the local loop on 20 December 2001.[44] In this report the NPTA states that Telenor's RUO has been considerably improved since Telenor's first RUO of April 2000. However, the NPTA still considered Telenor's RUO of March 2001 to be fairly one-sided because alternative operators were imposed heavier obligations than Telenor. In this connection, the NPTA has required, among other things, that:

- Telenor implement SDSL and G.SDSL in its RUO; and

[42] According to a market report issued by the Norwegian NRA on 20 December 2001 concerning unbundled access to the local loop, Telenor had, as of October 2001, entered into a LLU agreement with 19 different private operators. It is reported that Telenor provided full unbundled access to all of these operators, and shared unbundled access to two operators. The same market report indicates that none of the operators have unbundled access at the sub-loop level. Telenor apparently offers experimental sub-loop unbundling, but no operators have so far reported any interest.

[43] The EC Regulation on unbundled access to the local loop (Regulation No 2887/2000) was incorporated into Annex XI (Telecommunications services) of the EEA Agreement by the EEA Joint Committee by Decision 47/2001 of 30 March 2001, which entered into force on 1 October 2001.

[44] This report was prepared on an instruction of the Ministry of Transport and Communications. NPTA expect to finish its investigation of Telenor's RUO by the end of the first quarter of 2002.

- Telenor change the arrangement for certification of operators' equipment, which Telenor itself has not tested, because this arrangement is unreasonable and it should be sufficient for the alternative operator to provide a declaration stating that the equipment is in accordance with current ETSI standards or a possible specification from Telenor.

The NPTA also has warned that it considers Telenor's rental prices on shared access to be excessive compared to the relevant costs.[45] Finally, the NPTA mentions in the report that it has received several complaints from operators saying that they have been denied collocation space in Telenor's sites and that they have experienced long delays in obtaining replies from Telenor whether or not there is enough space for collocation

B. Services to be Provided Over the Local Loop

A number of responding operators identify full unbundled access to the copper pairs of Telenor as a part of their business strategy. Indeed, five operators state that they concentrate on business customers exclusively, and provide a combination of the following services:

- Retail narrowband access
- Retail narrowband dial-up Internet access
- Internet broadband access
- Retail broadband telecom services
- Wholesale broadband telecom services
- Internet broadband services (as an ISP)
- Web hosting

Meanwhile, full unbundled access is also part of the business strategy of two other operators. One operator does not identify its intended market but states that as an ISP it offers broadband Internet access. **[CONFIDENTIAL INFORMATION REDACTED]** The other operator states that full unbundled access to Telenor's local loop is part of its business plan, in particular access to the copper pairs between the subscriber and Telenor's main connection (HK). This operator provides dial-up connections for B2B and B2C (ISP), VPN services to the B2B marketplace, Internet connections via ADSL to the B2B and B2C (ISP), and portal services.

Both full and shared unbundled access to the local loop are part of the business strategy of one operator. This operator targets SMEs, home offices for large multi-national corporations, and residential end-users. It also currently provides Internet broadband access by provisioning ADSL through local loop unbundling, VPN, leased lines and ISP services, and provides walled garden content activity through its Internet portal. **[CONFIDENTIAL INFORMATION REDACTED]**

[45] The NPTA is currently investigating whether Telenor's prices for different services meet the requirements of the *Unbundling Regulation*.

C. Licences and/or Authorisations

None of the operators report that they require any special authorisation or registration to be a unbundled local loop operator. General registration duties are only required to the extent the operators provide public telecoms networks or services.

D. Obstacles to Obtaining Access

Incomplete Reference Unbundling Offer

A number of responding operators complain about Telenor's incomplete RUO. One operator complains that an official version of the LLUB agreement is still unavailable, despite drafting having commenced in March 2001. The operator also notes that the technical specifications for ADSL proposed by Telenor in the RUO do not comply with the ITU/ETSI specifications. According to this operator, Telenor does not offer ITU.SHDSL and ETSI SDSL, nor does it provide shared access and sub-loop unbundling on a commercial basis.

According to another operator, the RUO is incomplete with respect to full access to both physical and distant collocation, most likely because Telenor lacks accurate network data about its own network architecture.

Unjustified and unfair contractual terms

One operator highlights three unsatisfactory and unfair contractual requirements – (1) the requirements for equipment and technology; (2) the requirement concerning guarantees; and (3) the arbitration requirement.

With the respect to the first requirements (equipment and technology), the operator fails to understand why it should be left to Telenor to choose the type of technology to be used in the access network, why Telenor should seek greater equipment and technology requirements than those outlined in international standards, and why Telenor should require certifications for this equipment. The operator finds it difficult to understand Telenor's reason for not using more general requirements regarding, for example, the equipment's use of spectrum, maximum power, interference, etc. The operator favours the more market-friendly and open approach adopted by the incumbent in Sweden in relation to a competitor's equipment. Indeed, according to the operator, rollout of its services has been delayed for six months primarily due to Telenor's insistence on a separate certification process, which is time-consuming and expensive.

With respect to guarantees, the same operator notes that Telenor requires alternative operators to offer a guarantee of NOK 5 million, and that this amount is excessive and represents an unnecessary cost related to working expenses. Moreover, the degree of liability is very limited (though the agreements are confusing in this regard). Thus, according to the operator, the guarantee amount does not appear to be proportional to the degree of liability.

Finally, with respect to the arbitration requirement, the operator states that arbitration is an expensive form of dispute resolution which thereby favours the larger incumbent operator (although Telenor has agreed to use one judge instead of three for disputes involving issues of minor importance).

Another operator highlights that Telenor requires cost-sharing at many collocation facilities for room, power or air-conditioning, which adds significant costs to new entrants. According to this operator, Telenor has no clear policy on cost-sharing at collocation facilities, and implementation varies from case handler to case handler and city to city.

Refusals to provide

Responding operators report refusals to provide in the following circumstances:

One operator was allegedly refused access to SDSL by Telenor in April/May 2000. It stated that Telenor justified its refusal on the basis that the standardisation of SDSL technology was incomplete and that its implementation might cause interference in the local loop, thereby affecting its integrity. According to the operator, Telenor's reasoning is questionable because there is greater harmonisation between SDSL/G.SHDSL and other telecoms infrastructure than there is with HDSL.

Another operator states that Telenor refused it full access on available copper that is connected through smooth out cable ("utjevningskabel"), additional cable ("tverrrkabel") and lines available following termination ("linje etter oppsigelse"). The operator also reports that shared access is not currently available and Telenor has refused to provide it so far. In particular, Telenor has refused to provide shared access to any exchange until 1 October 2001. According to the operator, Telenor's reason for this refusal was strictly commercial.

A third operator states that it has experienced difficulties with full unbundled access, with Telenor refusing it access to collocation spaces due to capacity restrictions. Telenor has not proposed any alternatives in these cases. Moreover, upon further enquiries, according to the operator, Telenor's claims of lack of capacity has been found to be untrue. Apparently, Telenor has also refused local loop access on the mistaken belief that the operator does not have any collocation facilities at the central office. In addition, the operator complains that Telenor has refused full access on the basis of a lack of availability of leased lines, despite ISDN lines being subsequently available. According to this operator, Telenor has offered no explanation for its refusals on several of these occasions.

Delivery times and delays

Responding operators generally report delivery times of between six weeks and three months for collocation sites and three to ten weeks for unbundled lines.

For example, according to one operator, following the cumbersome conclusion of preliminary issues with Telenor, which required nearly four months of negotiation, the operator has experienced considerable difficulty gaining access to the construction specifications of the local loop (which has prevented it from optimally constructing its infrastructure). Further, the operator states that it takes on average six to eight weeks to obtain delivery of collocation sites, and three to four weeks on average to obtain the delivery of an unbundled line from the date of the initial request. Telenor typically excuses these delays due to the "new" nature of the product and their lack of experience. The operator attributes these delays to poor management on the part of Telenor.

Another operator reports that the average amount of time involved in obtaining delivery of an unbundled line (from the date of the initial request for a particular line) is approximately four to ten weeks. The reason for the delay is generally based on installation difficulties.

One operator reports that it spent approximately one month on preliminary issues related to full access and that the delay between a request for collocation space and the actual installation of the facilities is approximately three months. Meanwhile, the average time for obtaining an unbundled line is 21 working days, which is beyond the contractually agreed 10 days. According to the operator, Telenor justifies this delay on its lack of resources and lack of adequate systems to provide unbundled copper.

According to another operator, the delivery of a collocation site takes on average three months, with the average amount of time involved in obtaining delivery of an unbundled line taking 30 working days (*i.e.*, six weeks). Meanwhile, another operator reports that the average amount of time involved in obtaining permission to install equipment in Telenor's collocation site from the date of the initial request is approximately one month, and it takes approximately two to three weeks to obtain delivery of an unbundled line (from the date of the initial request). According to this operator, Telenor has blamed these delays on an excessive workload and a shortage of capacity.

Collocation

One operator is critical of the lack of collocation capacity in Telenor's network, although it admits that it is operating in a relatively small geographical area where there may be justifiable capacity constraints. To Telenor's credit, the operator adds that Telenor has improved in recent months and capacity is now offered in alternative geographical areas.

Another operator claims that Telenor does not wish to share rooms in collocation facilities and is hesitant to offer collocation in local exchanges where it is difficult to provide separate rooms. **[CONFIDENTIAL INFORMATION REDACTED]** The operator included the following list of the following sites where it has been experiencing difficulties:

[CONFIDENTIAL CHART REDACTED]

Insufficient quality of lines

Two operators report instances where the quality of lines was insufficient. According to one operator, Telenor offers full ADSL access as a blank copper line and does not guarantee any quality of this product. Thus, the operator is forced to repair the line in many instances. Telenor has refused to offer service level agreements with respect to this product.

Meanwhile, another operator estimates that approximately 30% of the xDSL lines delivered to it by Telenor have faults, particularly open circuits. According to the operator, this is partly due to the absence of a quality control system within Telenor.

Discrimination

One operator considers that Telenor has been selectively disseminating information, thereby discriminating between market participants. More specifically, it is aware that one operator had access to the draft standard agreements in April 2001 despite Telenor denying their existence.

Another operator reports that a competitor only paid 4,000 NOK (€499.59)[46] for the installation of cables at a site, while it was forced to pay approximately 40,000 NOK (€4995.94) at the same site.

E. Economic Conditions of Unbundling

Responding operators list different prices purportedly charged by Telenor for unbundled access to local loops. Nevertheless, the prices listed below are published in Telenor's RUO (in force from 1 January 2001). These prices have not been subject to approval by the NPTA, but the NPTA is currently looking into whether the prices are cost-oriented.

a) Yearly line rental access fees (excluding VAT)

Product variants				**Area of application**	**Frequency spectrum (approximately)**	**Price (NOK)**
Loop		**Sub-loop**				
Full Access	**Shared Access**	**Full Access**	**Shared Access**			
A		A_S		Transmission of services up to 20 kHz; PSTN; telemetry etc. on one pair	0-20 kHz	1200 (€149.88)
B		B_S		Transmission of ISDN basic connection or up to 160 kbit/s on one pair	0-50 kHz	1490 (€186.10)
C		C_S		Transmission of ISDN extended connection or 2048 kbit/s on two pairs	0-300 kHz	4030 (€503.34) (for two pairs)
D		D_S		Transmission of 2048 kbit/s or Nx64 kbit/s on one pair D1: ≤ 784 kbit/s D2: ≤ 1168 kbit/s D3: ≤ 2320 kbit/s	0-200 kHz 0-300 kHz 0-600 kHz	2015 (€251.67) 2015 (€251.67) 2015 (€251.67)

[46] All rates converted to Euros using the European Central Bank exchange rate of 12 December 2001: 1 NOK = .1248985 Euro.

Product variants				Area of application	Frequency spectrum (approximately)	Price (NOK)
Loop		Sub-loop				
Full Access	Shared Access	Full Access	Shared Access			
E		E_S		Transmission on one pair of ADSL together with ISDN basic connection or PSTN on the same pair	0-50 kHz and 0,14 – 1,1 mHz	2015 (€251.67)
	E_D***		E_{SD}***	Transmission on one pair of ADSL in addition to ISDN basic connection or PSTN on the same pair	0-50 kHz and 0,14 – 1,1 mHz	1500 (€187.34)
G		G_S		Transmission on one pair of Nx64 kbit/s (SHDSL) G1: ≤ 520 kbit/s G2: ≤ 1032 kbit/s G3: ≤ 2312 kbit/s	 0-200 kHz 0-300 kHz 0-600 kHz	 2015 (€251.67) 2015 (€251.67) 2015 (€251.67)
H				Transmission on one pair of narrowband data	30-80 kHz	1200 (€149.88)
	H_D***			Transmission on one pair of narrowband data in addition to PSTN basic connection	0-20 /30-80 kHz	208 (€25.98)

*** Telenor provides the ISDN basic connection or PSTN on the same pair for shared access to the local loop.

b) One-off connection fees (excluding VAT)

Product type	Price (NOK)
A, A_s	1210 (€151.13)
B, B_s	1210 (€151.13)
C, C_s	2235 (€279.15)
D, D_s	1210 (€151.13)
E, E_s	1210 (€151.13)
E_D, E_{SD}	685 (€85.56)
G, G_S	1210 (€151.13)
H	1210 (€151.13)
H_D	685 (€85.56)

According to the RUO, these one-off connection fees are to be adjusted if the number of orders from an operator is less than 70% of the volume prognosticated by the operator in its six month prognosis report. The adjustments are as follows:

- If the order volume is below 70% but above 50% of the prognosticated volume, the fee is adjusted upwards by 20%.
- If the order volume is below 50% of the prognosticated volume, the fee is adjusted upwards by 50%.

c) Collocation charges

There is no public price list for collocation. The collocation site rental charges are set by the incumbent on a case-by-case basis, presumably because collocation rental and preparation charges vary from location to location.

d) Prices on information products

Inquiry, *i.e.*, information concerning whether unbundled access to the local loop can be delivered to a particular subscriber, is 150 NOK (€18.73).

Cable data, *i.e.*, information concerning relevant cable properties (*e.g.*, the cable length for a specific local loop or sub-loop in Telenor's network), is available for 300 NOK (€37.47).

"Kapaksinfo" allows an operator, after having been assigned a username and a password from Telenor to check through a Web-based programme the length of a copper pair as well as the main connection point where the copper pair is terminated. Access to this programme is free of charge. However, the programme is only suitable for smaller inquires, and Telenor offers a supplementary service product for larger inquires which costs 9740 NOK (€1216.51) per inquiry.

Unjustifiable prices

A number of operators consider Telenor's prices to be unjustifiable and excessive. For example, one operator claims that Telenor's rental prices for shared access (NOK 125 (€15.61) per month) and full access (NOK 168 (€20.98) per month) are much higher than the fees charged by incumbents in other Scandinavian countries – on average, NOK 25 (€3.12) per month and NOK 84 (€10.49) per month, respectively. Another operator concurs and states that the prices for full access are much higher than similar costs in Sweden (the two countries being directly comparable because Swedish and Norwegian copper networks are of the same architecture and age).

Another operator is also of the opinion that Telenor's unbundling charges are unreasonable, and notes that NPTA is investigating these charges.

One operator considers that Telenor's prices for full access are unjustifiable, in particular those relating to categories D and E concerning HDSL and ADSL, respectively. According to the operator, it is difficult to understand how Telenor can charge a higher price for these services than for copper pairs used for the provision of PSTN and ISDN. Further, the operator states that the prices for collocation appear excessive, as rental space for one 600x600x2000 mm cabinet costs approximately NOK 25000 (€3122.46) per year, exclusive of VAT.

Finally, one operator considers the costs of leasing dark fibre or capacity to, and/or from, exchanges (*i.e.*, Central Offices) to be excessive. This is a result of Telenor's monopoly of these services. In particular, investments in backbone infrastructure in Norway typically account for approximately 50% of the total cost of DSL projects. Thus, the lease of dark fibre represents a considerable proportion of these backbone costs.

Margin squeeze

A number of responding operators raise the issue of a margin squeeze. According to two operators, there is a margin squeeze between the price Telenor charges for access to its local loops and the price it charges its own retail customers. For example, Telenor's retail offer of a PSTN subscription is NOK 1450 (€181.10) per year, while an ISDN subscription is NOK 2140 (€267.28) per year.

Meanwhile, Telenor's charges its competitors NOK 1200 (€149.88) per year for a PSTN line and NOK 1490 (€186.10) per year for an ISDN line. Telenor's prices for full (category D and E) and shared access are NOK 2015 (€251.67) and NOK 1500 (€187.34) per year, respectively. According to the operators, the margin between the wholesale and retails rates are too small to cover the competitor's other expenses, for example, one-off installation, collocation, equipment depreciation, equipment operations, maintenance, surveillance, etc.

According to one operator, the difficulties concerning margins are more obvious for the establishment of new lines. An alternative operator requesting a new lines is required to pay Telenor NOK 1123 (€140.26) per year while Telenor charges its own retail customers NOK 613 (€76.56) year.

F. xDSL Wholesale Offers

According to a number of the responding operators, Telenor offers wholesale xDSL services, *i.e.,* ADSL services (including a bitstream access product), *i.e.*, ADSL services. However, some of these operators do not consider this wholesale offer to be substitutable for local loop unbundling because, among other reasons:

- The alternative operator does not maintain control over its services and, therefore, xDSL is not an alternative from a technical perspective;
- Telenor's xDSL wholesale offer lacks flexibility regarding the choice of services and quality that the operator wishes to offer its customers;
- Telenor's pricing policy is designed to establish one or more PVPs for every DSLAM in its network. This causes rollout to be nearly as complicated as the new entrant establishing its own DSL infrastructure and, consequently, is considered an unattractive option; and
- For business customers, symmetric services are typically required, but Telenor's xDSL wholesale offer is only for asymmetric services (*i.e.,* ADSL).

Another operator, meanwhile, considers Telenor's xDSL wholesale offer to be a long-term alternative to LLU, while another operator considers it to be a short-term alternative. Finally, one operator states that the wholesale offering is a short to medium-term solution. These operators do not elaborate.

G. Effects of Any Such Problems or Limitations

Many operators consider that the obstacles identified above are detrimental to their businesses. One operator states that it has lost market share as a result of the lack of availability of shared access until 1 October 2001, while Telenor was providing itself with shared access since November 2000. The same operator also claims that it was not able to achieve expected growth for full access services due to the limited availability of second copper pairs.

Another operator claims it has been unable to offer services across the Nordic countries because ITUg.SHDSL and ETSI SDSL are not yet offered in Norway.

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H. Proceedings at National Level

Only two operators report that they have initiated proceedings at the national level.

One operator reports that it has lodged a formal complaint with the NPTA concerning access to information on copper network topology for planning its VDSL launch and an additional formal complaint concerning the use of international standards such as ITUg.SHDSL and ETSI SDSL in Norway, which Telenor refused to include in its RUO. Although both of these complaints were successful, the operator states that Telenor has yet to comply, despite the threat of fines by the NPTA in April 2001.[47]

Another operator states that while it has not initiated any national proceedings regarding the unbundling of the local loop, it has complained to the Norwegian competition and regulatory authorities with respect to Telenor's refusal to provide a wholesale offer of its PSTN and ISDN subscriptions. The NPTA ordered Telenor in October 2001 to offer these subscriptions on a wholesale basis and Telenor has appealed this order.

I. Summary of Findings

- Access to local loops has been available in Norway since April 2000 and the incumbent, Telenor, published a RUO in December 2000. In its initial form, the RUO covered only full access. Shared access became available on 1 October 2001. The NPTA has reviewed Telenor's RUO and has made a number of criticisms, particularly with respect to Telenor's supply conditions as being fairly one-sided. The NPTA is currently investigating whether Telenor's prices for local loop unbundling are consistent with the pricing principles set forth in the *Unbundling Regulation*.
- Seven operators identify full unbundled access as part of their business strategy, while two operators states that both full and shared unbundled access are part of their business strategy. All of these operators focus predominantly on business customers and provide a range of narrowband and broadband services.

[47] Telenor appealed the NPTA's decision regarding inclusion of the new standards. However, according to the NPTA's report of 20 December 2001 concerning unbundled access to the local loop, Telenor has now withdrawn the appeal.

- None of the operators report that they require any special authorisation or registration to be an unbundled local loop operator. General registration duties are only required to the extent the operators provide public telecoms networks or services.
- The responding operators identify a number of obstacle to obtaining unbundled access to local loops. These include: (i) Telenor's incomplete RUO; (ii) unjustified and unfair contractual terms; (iii) refusals to provide; (iv) delivery times and delays; (v) problems with collocation; (vi) insufficient quality of lines; and (vii) discrimination. Of particular interest, operators report that delivery times for collocation can range between 6 weeks and three months, and delivery of unbundled lines can take between three and ten weeks. **[CONFIDENTIAL INFORMATION REDACTED]** Finally, one operator reports that 30% of the xDSL lines delivered by Telenor have faults.
- Prices for local loop unbundling are contained in Telenor's RUO (in force from 1 January 2001). These prices have not been approved by the NPTA and a number of operators complain that the prices are unjustifiable and excessive, particularly in relation to other Nordic countries. Collocation prices are not included in the RUO and are determined by Telenor on a case-by-case basis. A number of operators raise the issue of a margin squeeze, particularly in relation to PSTN and ISDN services.
- Today, Telenor is offering wholesale ADSL services (including a bitstream access service). The operators are divided, however, whether this offer is an alternative to local loop unbundling.
- Many operators consider the obstacles to obtaining access to the local loop to be detrimental to their business strategy. One operator emphasises, in particular, the unavailability of a shared access offer until October 2001, even though Telenor was provided its own retail component with shared access since November 2000.
- Two operators state that they are involved in proceedings related to local loop unbundling before the national authorities. Both operators report success in their claims, but are critical of Telenor for refusing to promptly honour these decisions, either by appealing the decision or simply delaying implementation, despite threats of fines by the NPTA.

PORTUGAL

Two alternative operators in Portugal responded to the Commission's Questionnaire.[48]

A. The Incumbent's Offers of Full/Shared Access to the Local Loop

The Portuguese regulator ("ICP") adopted a Resolution on 6 November 2000 stating that the local loop of the incumbent Portugal Telecom should be unbundled beginning on 31 December 2000. The Resolution also set forth the compulsory items that should be included in Portugal Telecom's Reference Offer for local loop unbundling. The Resolution followed a public consultation process on local loop unbundling, the results of which were published in November 2000.

Portugal Telecom presented to the ICP a Reference Offer proposal on 1 March 2001 pursuant to which three telephone exchanges were made immediately available for unbundling trials. That first version of the Reference Offer was updated and expanded in April 2001.

On 28 June 2001, the ICP adopted a decision regarding further amendments to be introduced in the Reference Offer, the most important being:

- That refusal of access to loops should be based on objective criteria in connection with technical feasibility or network integrity.
- The possibility that operators may share infrastructures when collocating, as a mean of reducing costs.
- The minimum space that should be made available for collocation should be 5 m^2 (provided that space is available).
- A 10-day period for the incumbent operator to include in the Reference Offer the 40 exchanges deemed by new entrants as a top priority. Up to 1 October 2001, the incumbent should progressively integrate the 80 exchanges that are considered a priority.
- In connection with prices, a cap for unbundled access service and collocation. Moreover, the incumbent operator should be required to submit, within 10 days, a service proposal for signal delivery, justification for dismantling prices, etc.

The reviewed Reference Offer was published on 16 July 2001 and is the version commented on by the responding operators. The latest available version of the Reference Offer is dated October 2001. The ICP recently issued a decision dated 22 November 2001 which addressed improvements to the list of accessible exchanges, the conditions of refurbishment of collocation space, and signal delivery. Portugal Telecom was to incorporate these modifications into its Reference Offer within 10 days. The ICP also issued draft decisions on 22 November 2001 proposing the cost-orientation of certain prices and the obligation to provide additional information, on 29 November

[48] **[CONFIDENTIAL INFORMATION REDACTED]**

2001 proposing penalties for provisioning delays, and on 14 December 2001 proposing pricing for shared access.

The October 2001 version of the Reference Offer comprehends both full and shared access (although pricing for the latter is yet to be determined) as well as the following related services: collocation (including external cabling for distant collocation), signal delivery and information services. Collocation is currently limited to a specially-prepared operator's room, although the ICP's decision of 22 November 2001 also foresees the possibility of Portugal Telecom offering the option of physical collocation without a specific operator room ("cageless collocation"); the Reference Offer does not include this possibility. Virtual collocation has not been proposed.

Access to existing vacant loops is provided for, although Portugal Telecom excludes loops with "*active systems*", non-copper loops (*i.e.*, fibre), and vacant loops which the incumbent needs to reserve in order to fulfil its universal service obligations. These exceptions have been expressly accepted by the ICP (28 June 2001). Active systems relate to services provided over a bundle of loops which are capable of interfering with the unbundled loops. The ICP has decided to exclude such loops because of the possibly disproportionate impact that the removal of these systems could imply for other users.

The Reference Offer provides a list of 80 exchanges ready for access (24 of which do not offer the possibility of physical collocation). A complete list of Portugal Telecom's exchanges and remote units is not provided in the Reference Offer and, therefore, a large number of loops are not accessible for carriers. Access to sub-loops is not included in the Reference Offer. Currently, there are no plans to extend the scope of loops covered by the offer.

Applicable prices have been set by Portugal Telecom and were reviewed by the ICP on 28 June 2001. Monthly prices for fully unbundled access are €11.96 per line for narrowband services, and €13.78 per line for broadband plus a one-off charge of €82.80. Other regulated prices relate to the assessment of loop eligibility, qualification test, dismantling, lawful intervention, although only in relation to fully unbundled access, as well as to collocation space, internal cabling and signal delivery. Space refurbishment is subject to a budget for each exchange. As already mentioned, shared access prices are not provided in the offer, although they are in the process of being determined by the ICP and draft prices were published on 14 December 2001. As noted above, the ICP's draft decision of 22 November 2001 proposes the reduction of certain prices in order to make them cost-oriented. On 22 November 2001, the ICP also required Portugal Telecom to reduce the refurbishment costs for collocation space.

B. Services to be Provided Over the Local Loop

Most responding carriers report that the services they intend to provide over unbundled lines are focused on three areas: a) high speed Internet access services, based on xDSL, aimed mainly at business customers and, residually, residential customers (these services will be the basis for value-added services, such as broadband portals, thematic intranets, etc.); b) voice services based on narrowband systems, VoDSL or VoIP; and c) access to IP/FR/ATM data services for business customers.

C. Licences and/or Authorisations

Access to the local loop in Portugal can be provided either on the basis of a licence for the establishment of a public telecommunications network (in accordance with the legal regime established by Basic Telecommunications Law no. 91/97, of 1 August), or by registering as a telecommunications services provider (under the terms of Decree Law nº 381-A/97 dated 30 December).

Most responding operators hold a licence to establish a public telecommunications network and to provide fixed telephony services. Some of them also hold an authorisation to provide telecommunications services to the public.

D. Obstacles to Obtaining Access

The responding operators highlight that the scope of their responses is necessarily limited because unbundled local loops (with the exception of trials in 3 pilot exchanges) have only been available since August 2001. The operators consider that the current Reference Offer does not comply in various aspects with either the *Unbundling Regulation* or with relevant ICP decisions. They point to Portugal Telecom's delays and failures to supply in the time frames required by the *Unbundling Regulation* as evidence of it "deny, delay, degrade" attitude.

Failings of the Reference Offer

Responding operators state that Portugal Telecom has not provided complete information in the Reference Offer in relation to the availability of local loops (for instance, loops joined to remote concentrators units, basic loop characteristics, intermediate concentrator points, HDSL systems per exchange), despite the fact that operators participating in the ICP-sponsored Advisory Working Group on unbundling identified such information as necessary as early as December 2000.[49]

Sub-loop unbundling (loops linked to remote units) is not covered by the Reference Offer despite an ICP recommendation stating that the incumbent should make a survey of the necessary conditions so that the possibility of access to the sub-loop could be included in the Reference Offer.

One responding operator cites the exclusion of lines associated with the provision of universal service as contrary to Article 3, Paragraph 2 of the *Unbundling Regulation* which states: "*Requests shall only be refused on the basis of objective criteria, relating to technical feasibility or the need to maintain network integrity*". This exclusion has been approved by the ICP.

The prices for shared access have not been included in the Reference Offer. The ICP issued a Resolution on 28 June 2001 stating that these prices should be included in the Reference Offer by the end of August 2001. In the October 2001 version of the

[49] Pursuant to the ICP's draft decision of 22 November 2001, Portugal Telecom would be obliged to provide competitors with a certain minimum level of information (relating, for instance, to the number of active pairs and the number of pairs per distribution frame). It would also be obliged to provide operators with the same information it provides to its own affiliates.

Reference Offer, these prices were still lacking and the ICP has itself since issued a draft determination on these prices.[50]

Certain operators have complained of the lack of alternative options for physical collocation (in particular, cageless collocation), of deadlines for access provision, of rights of inspection of exchanges where collocation has been refused, and of standard commercial contractual terms (including compensation for failure to meet deadlines).[51] In the view of the respondents, these demands have not been properly attended to.

Operators also complain about the restrictive terms of distant collocation and the possibility for operators to access by their own means the incumbent operator's premises. Operators can only access the premises through an external joint box and at very high prices (other options such as optical fibre or radio links are excluded from the Reference Offer). The ICP's decision of 22 November 2001 requires Portugal Telecom to provide a non-discriminatory signal delivery offering equivalent to that its provides for its own wholesale service.

Additionally, responding operators consider that there are aspects of the Reference Offer which are incomplete, such as information concerning physical collocation, availability of local loops in specific parts of the access network, and automated information systems capable of providing timely answers concerning the local loop offering. These operators fear that these failings will cause serious delays in implementing the local loop unbundling process.

Other restrictive elements of the Reference Offer identified by responding operators are the existence of an additional period of 15 working days for the preparation of a budget in the case of non-active loops, and the requirement that operators present conformity certificates (issued by certified bodies in accordance with relevant Portuguese regulation: DL 192/2000) for terminal equipment.[52]

Finally, responding operators underline the numerous difficulties and obstacles experienced during the trial carried out in the three exchanges, which had initially been scheduled by the ICP for January 2001. Although a number of operators had installed equipment in one of those exchanges beginning on that date, the trials did not begin until June 2001.

Delays

Operators point out the serious delays suffered in the three exchanges that have been operative from June 2001 under a pilot scheme. One of the operators complains about the significant delay in supplying E1 backhaul circuits to provide connections to collocated DSLAMs (installation being significantly later than the standard established time).

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[50] Draft decision of 14 December 2001.

[51] However, the ICP's draft decision of 29 November 2001 foresees the establishment of penalties for delays in provisioning by Portugal Telecom.

[52] In its resolution of 22 November 2001, the regulator requires Portugal Telecom to remove the terminal equipment conformity obligation from its offer.

In general terms, the few deadlines established in the Reference Offer are deemed excessive (*e.g.*, 80 working days for operator room delivery, 10 days for local loop delivery, 120 working days for the whole process). Although the LLU process has just begun, operators are already reporting infringements of these deadlines (for example, the first phase has lasted three times longer than the period required in the Reference Offer).

Collocation

Collocation is only permitted in local exchange sites (it is estimated that this restriction excludes 80 to 90% of Portugal Telecom's buildings and 20 to 30% of its loops).[53] As a result of ICP's requirements that the incumbent offer a minimum space of 5 m^2 for collocation, the incumbent does not offer any collocation space at all where less space is available. There is no specific provision for access seekers to visit sites where physical collocation is not made available.[54] The Reference Offer only includes a limited number of exchanges available for access (46), despite the fact that some operators have insisted since October 2000 that they need to proceed quickly with a survey of all buildings. The October 2001 version of the Reference Offer increases the number of accessible exchanges to 80 (24 of which do not include the possibility of collocation).[55]

Operators also have detected express refusals of physical collocation by Portugal Telecom in exchanges considered by alternative operators to be a major priority, and where Portugal Telecom is already offering ADSL services.

Portugal Telecom has also restricted access to certain sites made available for collocation. In Portugal Telecom's first Reference Offer, it did not even contemplate the possibility that its premises would be accessible. After the 28 June 2001 ICP Decision, exchange inspections must be facilitated within 5 business days from the alternative operator's request at a price of €20.87 per hour, plus €11.17 per visit for additional Portugal Telecom expenses.

With a view to increasing the availability of collocation space, responding operators also suggest that Portugal Telecom be prohibited from refusing collocation on the grounds of lack of space whenever space is occupied by unused equipment, or by administrative or back-up services not directly associated with the operation and maintenance of Portugal Telecom's network.

53 Pursuant to the ICP's decision of 22 November 2001, Portugal Telecom will also be obliged to provide unbundling in remote units.

54 The 22 November 2001 decision of the ICP requests the incumbent to determine the conditions for exchange visits where collocation is denied because of lack of space.

55 Portugal Telecom must now extend this list according to the new definition of local exchange introduced by the ICP's decision of 22 November 2001.

According to operators, it is not possible for alternative operators to refurbish collocation rooms themselves, even if they have more economic alternative proposals for the refurbishment.[56]

Line quality and quality of services

As the LLU process has only just been initiated in Portugal, there is as of yet no experience in terms of line quality. Nevertheless, responding operators consider that the Reference Offer does not take into account the quality of lines. In particular, a number operators allege important deficiencies in repair times (10 working hours for 90% of incidents) and complain that Portugal Telecom is not obliged to offer access seekers the same repair schemes it offers its own customers.

Operators further cite a discriminatory condition related to collocation whereby operators must notify the incumbent operator of maintenance activities that they are going to carry out. The incumbent, by contrast, is not obliged to notify alternative operators in advance of any work they plan for the network which could affect the quality of their service (provided interruptions are limited to 3 minutes or less).

Unfair contractual terms

Operators also complain that the loop transfer process is excessively complex and bureaucratic (*e.g.*, a formal declaration by the customer is required to authorise local loop availability testing, with testing being mandatory in every case). Testing cannot be carried out by the alternative operator itself. Coordination with the number portability process is not provided for at all.

Discrimination

Operators point out that in the last quarter of 2000, Portugal Telecom launched its own ADSL offer. Since then, operators report cases where the incumbent has refused operators access to physical collocation space due to lack of space. According to these operators, the available space in these instances is being occupied by the incumbent for its own ADSL offer.

One of the operators has asked the regulator to suspend Portugal Telecom's DSL service for up to 2 months from the date of approval of the conditions for local loop unbundling. This, and other proposals to prevent discrimination, have not been addressed by the regulator.

E. Economic Conditions of Unbundling

A number of LLU prices were set by the ICP in its Resolution of 29 June 2001. Other prices, initially set by Portugal Telecom, are subject to review by the ICP. As indicated above, the ICP is preparing a decision to orientate these prices toward cost and has also

[56] It should be noted that the ICP's decision of 22 November 2001 compels Portugal Telecom immediately to restart refurbishment work under new more flexible rules. Through this ruling, the ICP aims to reduce unnecessary and disproportionate costs.

published proposed pricing for shared access. We provide information on these proposed changes in footnotes to the information below.

a) Access prices

Monthly fee by line	
Fully unbundled access for narrowband services (ISDN or basic access)	€11.96[57]
Fully unbundled access for broadband services (narrowband services provision is also possible within this service)	€13.78

57 The ICP's draft decision of 14 December 2001 proposes monthly charges of €7.80 (POTS) and €7.90 (ISDN) for shared access.

One-off fees	
Installation (fully unbundled access)	€82.80[58]
Assessment of eligibility	€29.33[59]
Qualification test	€34.92 (full unbundling- narrowband) €104.75 (shared access- narrowband) €69.83 (broadband)[60]
Lawful intervention	€44.89
Dismantling	€9.50[61]

The installation price for fully unbundled access in vacant loops is, according to the Reference Offer, to be fixed on a case-by-case basis depending on the additional costs involved.

b) Collocation prices

Cageless collocation is not available. The recent draft ICP decision of 22 November 2001 foresees the removal of metallic divides within the operator room, with corresponding slight reductions in price. However, true cageless collocation in the incumbent's own equipment room is not yet provided for.)

Collocation space refurbishment

Prices are set case-by-case according to a prior estimate. This cost is to be borne by the collocated operators according to the collocation units required. The ICP's decision of 22 November 2001 introduces new rules for reducing fitting-out costs, and compels Portugal Telecom immediately to restart refurbishment works under these new conditions.

Collocation space (set by ICP)

Units collocation	One-off fee	Monthly fee
5 m^2 Unit[62]	€4,468.48	€515.06
8 m^2 Unit[63]	€4,827.32	€821.37

Power

58 The draft decision of 14 December proposes installation fees of €143.90 (POTS) and €167.80 (ISDN) for shared access.

59 The draft decision proposes a fee of €29.90 for shared access.

60 The draft decision proposes a fee of €69.80 for shared access.

61 The ICP's draft decision of 22 November 2001 proposes a dismantling fee for fully unbundled access of €8.08 and, as of 14 December 2001, an equivalent fee of €8.10 for shared access.

62 The ICP's 22 November 2001 draft decision foresees a one-off fee for 5 m^2 units without metallic grid of €2,624.43 and a monthly fee of €512.94.

63 The ICP's 22 November 2001 draft decision foresees a one-off fee for 8 m^2 units without metallic grid of €2,624.43 and a monthly fee of €821.35.

The power supply cost for the incumbent multiplied by a factor of 1.5625.

Site access fees

Access through an automated system is set case-by-case.

Accompanied access

€20.87 per hour plus €11.17 per visit.

c) Internal cabling[64]

Internal cabling- full unbundling	**One-off fee**	**Monthly fee**
First installation (100 pairs)	€3,155.40	€25.11
Upgrade (until 10 blocks of 100 pairs each)	€1,422.07	€13.24

d) Signal delivery

Leased lines

The ordinary leased lines offer for operators is applicable. There is no specific offer for local loop unbundling.

Signal delivery service (delivery of signal to an adjacent joint-box)

Modalities	**One-off fee**	**Monthly fee**
Multiple carriers (max. 4)[65]	€8,360	€85
Individual (6 fibres)[66]	€3,440	€15

e) Distant collocation (external link between incumbent premises and operator's premises)

600 pairs

External link **Cable for 600 pairs**	**Installation**	**Monthly fee**
First installation	€21,457.29	€136.45
Upgrade	€13,417.66	€123.20

[64] The ICP's draft decision of 14 December proposes the following fees with respect to shared access: initial installation (1,000 pairs) €10,359.40 (one-off) + €44.00 (monthly) and upgrades (100 pairs) €7,899.90 (one-off) and €42.60 (monthly).

[65] The ICP's 22 November 2001 draft decision foresees an installation fee of €7,668.27 and a monthly fee of €79.96.

[66] The ICP's 22 November 2001 draft decision foresees an installation fee of €2,859.06 and a monthly fee of €12.02.

300 pairs[67]

External link Cable for 300 pairs	Installation	Monthly fee
First installation	€20,460	€22,454
Upgrade	€8,110	€12,029

Operators' estimations

[CONFIDENTIAL INFORMATION REDACTED]

Another operator has provided economic estimates for unbundling, considering a client's average life of 5 years, an average number of loops per exchange of 15 and a useful life for investment purposes of 10 years. These are as follows (for fully unbundled lines):

Price per line

Item	Monthly fee	Installation fee
Information service		€0.90
Monthly fee for broadband	€13.78	
Loop installation		€82.80
Quality test for broadband and testing of eligibility		€107.50
Dismantling/cancellation		€61.90

Prices per exchange

Item	Monthly fee	Installation fee
Installation basic module (collocation)		€4.40
Delivery basic module (collocation)		€1.00
Monthly fee of basic module (collocation)	€529	
Installation of signal delivery		€3.80
Monthly fee of signal delivery	€13	
Installation of internal cable		€7.70
Monthly fee of internal cable	€75	

Total monthly fee per line: €5.06

Total cost per line: €23.05

General pricing comments of operators

67 The 22 November 2001 draft decision proposes the following prices for 300 pairs in external cabling: for first installation – €19,918.37 (one-off fee) and €82.25 (monthly fee); for upgrades (300 pair extension) – €8,063.74 (one-off fee) and €68.41 (monthly fee).

One of the operators suggests that, in comparison with the practices in other EU Member States, there are important concerns as to the cost-orientation of the above-mentioned prices. In this regard, it found that ICP reductions on pricing are not sufficient in the case of full unbundling (€217.48: assessment of eligibility (€29.33) + installation (€82.80) + line testing (for ISDN primary access, €104.75)), versus what the operator quotes as European best practice: €130), access to vacant loops (which involves simple works in the sub-distribution frames), physical collocation (price well above European market), distant collocation, alternative power (an adjustment factor of 0.5625 is added), as well as the extremely high prices for supplying internal cables (installation €3,155.40 and monthly fee of €25.22).

In addition, the distinction made in the local loop monthly fee between its usage for the provision of narrowband services and broadband services has, in the view of respondents, been made without sufficient technical or financial justification. ICP has only stated in its pricing revision (June 2001) that "*the costs relative to broadband access would be superior to those for narrowband access as they include maintenance and increased investment costs*".

Margin squeeze

The monthly prices for full unbundled access to the local loop – €11.96 (for narrowband) and €13.78 (for broadband) – are 1% and 16%, respectively, above the monthly line rental for the fixed telephony service provided by the Portugal Telecom (€11.85). A margin squeeze is also identified in relation to Portugal Telecom's ADSL wholesale and retail services (see section below).

F. xDSL Wholesale Offers

Portugal Telecom provides a service known as "*Rede ADSL PT*", consisting of an ADSL wholesale offer for high speed Internet access.

Operators state that the above-mentioned service is suitable for an initial commercial phase of DSL offers. They are not, however, included in the Reference Offer. Operators also complain that Portugal Telecom does not provide detailed information on the scope of its offers in terms of telephone numbering ranges, nor does it justify the exclusion of a large number of customers connected to remote concentration units (17.6% of the cases). This, together with the fact that the network operator retains the QoS management and the access validation, means that the "*Rede ADSL PT*" service is not a true mid- or long-term alternative to local loop unbundling.

One operator reports a margin squeeze between the incumbent's ADSL wholesale offer and its retail offer (both that of Portugal Telecom and its ISP, Telepac), as set forth below:

	ISP incumbent ADSL retail prices	**ADSL wholesale prices**
256 Kbit/s-64 Kbit/s	€38.37	€29.93
768 Kbit/s-128 Kbit/s	€68.21	€44.89
1 Mbit/s-128 Kbit/s	€106.58	€74.82

G. Effects of Any Problems or Limitations

For some operators, successive delays have impeded the elimination of barriers and the promotion of competition in the electronic communications market. As a result, it is more difficult for them to fulfil their business objectives, such as the acquisition of new customers and the expansion of broadband services offerings.

It is also noted that with the existing prices, and without the possibility for operators to access Portugal Telecom's exchanges by their own means and to install their own internal and external cables, the unbundled local loop offer becomes economically too onerous for operators.

H. Proceedings at National Level

Responding operators have systematically submitted to the ICP detailed comments and analyses concerning the various difficulties experienced in the unbundling process (time schedules and delays in the process, extremely high prices, etc.). They have also played an active role in the Advisory Working Group and in the two Working Parties created by the ICP. The National Competition Authority has also been informing the Advisory Working Group about delays in the implementation of the local loop offer and it has stressed the need for clear intervention by ICP. Recently, the Competition Authority has not had any further involvement in the process.

As noted above, the ICP (on 28 June 2001) adopted its decision on the "*Changes to be introduced in the Reference Offer for access to the local loop*". In this decision it set rules regarding relationships between parties, equipment compliance requirements, collocation, quality of service, deadlines for the availability of infrastructures, prices and interruption and suspension of the service.[68]

I. Summary of Findings

- Portugal Telecom's Reference Offer comprehends both full and shared access. The following related services are also covered: collocation (including external cabling for distant collocation), signal delivery and information services. Neither virtual collocation, access to sub-loops or cageless collocation are provided for in the Offer. Access to vacant loops is restricted (purportedly on the basis of the incumbent's universal service obligations). Information on accessible loops and collocation sites is substantially incomplete, although the ICP's decision of 22 November 2001 requires Portugal Telecom to provide a number of improvements.
- Most operators report that they intend to provide narrowband and broadband retail services over unbundled lines.

[68] Furthermore, the ICP's decisions of 22 November 2001 introduced a further set of modifications to the Reference Offer in relation, *inter alia*, to accessible exchanges, collocation space and signal delivery.

- LLU access is offered to operators holding a licence to operate a public telecommunication network and to entities registered as telecommunications service providers.
- The responses received identify a number of potential abuses in the provision of LLU services by Portugal Telecom, principally relating to refusals to supply and limitations on service deployment and production. Operators complain of significant delays and hindrances to LLU access. The first full version of the Reference Offer was not finalised until July 2001. In this Reference Offer, essential information on loop availability, collocation space and pricing was not provided, making business and investment planning impossible. Portugal Telecom also restricts access to vacant loops, sub-loops and access to its electronic information systems, and has made access procedures overly complex and bureaucratic. There are also potential tying and unfair pricing abuses relating to the need to purchase backhaul, internal and external cabling and certain collocation-related services from the incumbent. Finally, in relation to all these activities, there is an underlying accusation of discrimination that Portugal Telecom does not itself suffer the same degraded and delayed service that alternative operators encounter, as well as a specific allegation that Portugal Telecom has denied collocation space in sites where it is currently rolling-out its own retail xDSL service.
- Responding operators complain that the economic conditions of unbundling are prohibitively expensive, not cost-oriented and lack transparency. They point to the unjustified differentiation between narrowband and broadband access to local loops. Operators are still analysing the cost of LLU, but they fear that, unless conditions are modified, they will not be able to stay in the unbundling process. It may be that the ICP's forthcoming decision on cost-oriented pricing may improve matters somewhat.
- Portugal Telecom provides its "*Rede ADSL PT*" service, consisting of an ADSL wholesale offer for high speed Internet Access. Responding operators allege a margin squeeze between this ADSL wholesale service and the prices offered by the incumbent for its own ADSL retail service and that of its ISP, Telepac. They also point to the imbalance between line rental and loop prices.
- Operators report that, as a consequence of the obstacles to unbundling (particularly the high and unfair prices, the exclusion of a number of important resources, and the bundled nature of the incumbent offering), they have been severely restricted in launching their planned new services to customers. They complain that, under current conditions, the local loop offering is economically too onerous.
- Responding operators have systematically submitted to the ICP detailed comments and analyses concerning the various difficulties and delays in the process. They complain of a lack of the strong, effective, regulatory leadership and management of the process necessary to prevent the sort of damages the current situation is causing the Portuguese telecommunications market.

SPAIN

In total, seven alternative operators in Spain responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

In Spain, unbundling of the incumbent's local loop was mandated by Royal Decree 3456/2000, of 22 December 2000 ("Unbundling Decree"). According to this Unbundling Decree, the incumbent, Telefónica de España, S.A.U. ("TESAU", the dominant operator of the PSTN)[69], was obliged to open its access network (both local loops and associated resources) to alternative operators by 1 January 2001.

Following a 10-day consultation on a draft submitted by the incumbent operator to the Ministry for Science and Technology on 11 December 2000, TESAU's first Reference Unbundling Offer ("RUO") was approved, with a set of required modifications, by Resolution of the Secretary of State for Telecommunications and the Information Society on 28 December 2000, and subjected to revised pricing per an Order of the Government's Delegated Committee for Economic Affairs of 29 December 2000. A consolidated version of the RUO was published by Telefónica on 20 January 2001 incorporating (incompletely) these modifications.

On 31 January 2001, the Spanish NRA (the "CMT") initiated administrative proceedings (File MTZ 2001/4038) for the revision of the RUO, proceedings which, to date, are still open. In the context of these proceedings, the CMT issued three sets of interim measures, on 15 February 2001 (modifying certain aspects of the collocation procedure), on 21 June 2001 (modifying the whole collocation procedure and conditions, and including pricing) and on 8 November 2001 (on signal delivery procedure and conditions, and also including pricing).

An initial phase of collocation requests was initiated during a 20-day period from the official date for local loop unbundling (1 January 2001), terminating on 22 January. However, this process was cumbersome and circular producing no collocations and great uncertainty, and, following the CMT's 21 June resolution, the whole collocation process was restarted.

Technical trials took place during the spring and autumn of 2001 to test Telefónica's loop management plan contained in the initial RUO. The results of these trials are confidential to the participating operators and the CMT, and have not been published or given rise to any modifications to the loop management plan.

TESAU offers full and shared access to its local loop. The RUO also includes access to vacant loops and sub-loops, although the relevant conditions have, in the view of responding operators, serious limitations and are untested. A TESAU high bitstream

[69] In this report, we have referred specifically to this company using the abbreviated form "TESAU" and have used the term "Telefónica" to refer to the group of companies controlled by Telefónica, S.A.

access service (*"GigADSL"*) was mandated pursuant to a Ministerial Order of March 1999 and continues to be offered by TESAU pursuant to its transitory obligations under the *Unbundling Regulation*.

The prices for fully unbundled loops and for line sharing were set by the Government Order of 29 December 2000. The monthly rental charge is €13 (fully unbundled) and €6.49 (line share). The connection fee is €103.92 (for both fully unbundled and line sharing).

The prices of TESAU's bitstream access service are also regulated. Furthermore, in light of the Spanish Government's decision to approve TESAU's own ADSL retail services (a decision which was formally adopted on 3 August 2001), the CMT adopted a resolution in July 2001 requiring a modification to the regulated prices in order to avoid a price squeeze with these TESAU retail prices.

Collocation only was initially offered by TESAU in specially prepared operator rooms. TESAU also offers, in principle, connections of a limited radius to distant collocation sites if available in Telefónica premises or in the access seeker's own premises – neither of these solutions yet has been implemented in practice. As a result of the CMT's interim measures decision of 21 June 2001, TESAU is also required (in instances of low demand) to offer cageless collocation in TESAU's own equipment room. That decision also established *ex ante* pricing (significantly reduced and market-oriented prices derived from an external consultant's report). The per m^2 price for collocation in the major cities in Spain was set by that decision at €270 (preparation of the space) and €27 per month rental, in the case of collocation in Telefónica's equipment room, and approximately €1,700 to €2,000 (preparation of room) and €40 per month rental for collocation in an independent operator room.

The costs for a number of other LLU-associated resources (including internal cable connections from the access seekers' collocation area to the MDF, energy consumption, certain information services and exchange access) have also been set pursuant to the Government's Order of December 2000 (see section E below). At the time of the responses, signal delivery (backhaul) services had not been regulated and had not yet even reached the negotiation stage with TESAU. These services have since been subject to a CMT interim measures decision dated 8 November 2001.

B. Services to be Provided Over the Local Loop

Only four of the seven responding operators are planning to offer services using local loop unbundling. Two of these operators are offering, and plan to offer, the full range of narrowband and broadband access, ISP, content and portal services to business, residential and wholesale customers. Both of these operators view local loop unbundling primarily as a means of implementing direct access to their customers and view fully unbundled access as the main priority. One operator focuses on broadband access products provided to business, residential and wholesale customers. **[CONFIDENTIAL INFORMATION REDACTED]** One response is from a cable operator which was interested in complementing its services with DSL, but since decided in May 2001 to withdraw from the process owing to the undefined and unfavourable conditions of access.

C. Licences and/or Authorisations

Operators are entitled to LLU access pursuant to an infrastructure licence, whether that be a pure fixed infrastructure licence (type C1, wireline, or type C2, radio-based) or a fixed public voice telephony/infrastructure licence (type B1). Internet access services and data transmission services are provided pursuant to a type C general authorisation. This authorisation, while not giving a right to LLU access, entitles an ISP to connect to TESAU's bitstream access service.

D. Obstacles to Obtaining Access

Responding operators consider that the regulated operator TESAU and, to a lesser extent, the mandated regulation itself, are at fault in creating the current situation where, 10 months after the date mandated for LLU, not one single loop has been unbundled, no equipment has been collocated and the dominant operator controls a market share in the provision of DSL retail services of well over 90% (100% in the case of wholesale).[70] In particular, comments have highlighted the following high-level problems:

- *TESAU has taken a "deny, delay, degrade" attitude at every step of the process of implementation of LLU while it obtains and reserves for itself, and the rest of the Telefónica group, a quasi-monopoly on the downstream market for DSL services.* **[CONFIDENTIAL INFORMATION REDACTED]** The view of responses is that in the current environment, any changes to the terms of LLU, many of which have been and continue to be required by new entrants, depend entirely on regulatory intervention.
- *Ex ante regulation has been incomplete and weak and ex post intervention has been too slow and insufficient.* Operators have stressed that the initial RUO was based on a TESAU draft which was subject to a too-brief consultation and a complete lack of information on Telefónica's self-provision terms. The CMT has, particularly recently, been working hard to make modifications to these initial drafts but, given its lack of resources, progress has been slow and conditions continue to be unsatisfactory for competitive entry.
- *The Spanish Administration has supported the strengthening of Telefónica's dominant position in the downstream DSL service market by allowing the entry of TESAU, in addition to other already present Telefónica companies (Telefónica Data and Terra Networks).*[71] According to responding operators, this is an apparent calculated attempt to promote the launch of TESAU's ADSL service in Spain, at the expense of competition.

[70] According to the report submitted by the CMT to the Spanish Government on 21 June 2001 in relation to TESAU's request for the approval of its own ADSL retail prices, Telefónica, even without the entry of TESAU, already controlled a market share in ADSL services of 94%. This information was based on data provided to the CMT by TESAU.

[71] The focus of Telefónica Data's ADSL services has been on the wholesale and business/professional segments, while Terra's focus is on the wider residential market. TESAU is offering a range of services to residential, business and wholesale customers, including the commercialisation of the Megavia service offered also by Telefónica Data (www.telefonica.es).

Failings of current RUO

As already pointed out, responding operators complain that the RUO had, and continues to have, a number of important failings, some of which have been subject to interim measures adopted by the CMT and others which are still pending modification within the scope of the administrative proceedings opened on 31 January 2001. These failings relate to:

- Exchange information – information on exchanges (the full list of exchanges available for LLU, their coverage and those available for collocation) provided in the original RUO was incomplete and misleading and, despite improvements, continues to be inadequate; no information is provided regarding exchange topology and the condition and characteristics of particular exchanges.
- Loop information – the RUO does not include information on loop topology. TESAU began to offer in August 2001 a per loop consultation procedure at a small (regulated) cost, but this service is cumbersome, provides limited topological information and does not guarantee that a particular service will be able to be provided over a particular loop (it is, in any event, limited to providing information on ADSL). A "bulk" characterisation service (up to a maximum of 1000 pairs per consultation) will be offered at a set-up cost of €1,803 per operator plus €150 per month and €0.60 per individual loop. A further "loop characterisation" service is offered by TESAU at a cost of €73 per consultation (per individual loop) which includes testing of the line in question. Part of this cost is deductible if the specific pair is rented in the following three months. Presently, this service is unused by new entrants and, it appears, unavailable.
- Collocation conditions – TESAU originally offered collocation only in specially-built operator rooms although cageless collocation now has been mandated by the CMT in certain instances (when demand relates to space requirements of 20 m^2 or less). Operators complain that procedures are complex, slow and prone to abuse by TESAU and that, in general terms, collocation conditions are excessively rigid. One operator adds that conditions do not permit a demand-supply-oriented provisioning of space.
- Loop management plan – TESAU has unilaterally established a loop management plan which, according to alternative carriers, is highly restrictive of DSL services.
- Vacant loops – the definition of vacant loops included by TESAU in the RUO is restrictive and will, according to one respondent, exclude a large part of spare copper in the TESAU plant.
- Backhaul – the original RUO restricted TESAU's offering of connection services to access seekers' PoPs to a so-called signal delivery service consisting in the delivery of signals by fibre optic cable to a joint-box in the street outside the relevant exchange. TESAU was required to include alternative connections (use of optical points of interconnection, use of radio links, use of Telefónica leased line and capacity services) in its revised offer published on 20 January 2001.

The conditions for these services were, nevertheless, still not defined in the RUO and required CMT intervention in November.[72]

- OSS systems – TESAU has not made available an OSS system for the on-line management of services, provisioning, incidents, etc., nor an electronic interface to enable connection of new entrant own management systems. OSS systems were identified by the CMT as an important item which would create a serious limitation to competitive market entry and a working group was set up in the autumn of 2000 to develop a solution with TESAU, although work is limited currently to meetings within the context of the competitive carriers association, ASTEL. No results have come out of this process. One operator has expressed its concern that there may be a similarly inadequate OSS implementation to that which has already seriously impeded pre-selection in Spain.
- Service Level Agreement – the RUO includes certain service levels, but they are extremely limited, insufficient and lack any financial penalties for failure to comply. Furthermore, operators have pointed out that it has been impossible to negotiate with TESAU any improvements to the SLA.

Preliminary issues (information, network characteristics, contract negotiations, etc.)

Initial information on local exchange location and availability of collocation, as well as in relation to MDF coverage (addresses, geographic area and covered number ranges), was incomplete and contained errors. The CMT took action to require changes to this information, partially in response to informal complaints made by one operator. This operator alleges that information is still inadequate and, given the history, does not have sufficient confidence to permit full and proper business-planning or to make a full and proper request for LLU access.

The CMT also required information from TESAU on its self-provision of collocation space and on its provisioning to other companies in the Telefónica group (noting, in particular, the rule contained in the Unbundling Decree pursuant to which the dominant operator of the PSTN, TESAU, is permitted to reserve for its own general use 25 per cent of additional space in exchanges). This information was made available in part to interested parties in the RUO administrative proceedings before the CMT. However, despite an administrative appeal by one interested party, the CMT by a resolution dated 26 July 2001 consented to TESAU's request to maintain information relating to the allocation of exchange space to third parties in combination, so as not to distinguish collocation by Telefónica group companies from that of third parties. The complainant in that case considers that this CMT decision contravenes the need for transparent conditions necessary to ensure non-discrimination.

Operators have complained that the negotiation of agreements with TESAU are proving extremely difficult since TESAU is unwilling to negotiate. Conflicts regarding terms and conditions need to be referred to the CMT for resolution. According to certain operators, the incumbent operator has not used the standard contract annexed to the RUO in negotiations but, rather, has submitted to alternative operators a new standard contract

[72] The CMT imposed conditions for these backhaul services in its interim measures decision of 8 November 2001.

containing a number of abusive clauses which it is not willing to negotiate with alternative operators. Additionally, Telefónica is requiring the signature of a collocation pre-contract, drafted unilaterally by it and not subjected to regulatory review, and, because of its abusive terms, competitive operators have not been prepared to sign the pre-contract.

One of the operators responding to the Questionnaire has expressed grave concerns over the ability of new entrants to negotiate and, ultimately, to compete with the dominant operator on the basis of its initial negotiations on an access agreement. **[CONFIDENTIAL INFORMATION REDACTED]**

One operator denounces the obligation imposed on alternative operators to pay half of the collocation price at the moment of confirmation of the collocation request and before the initiation of any collocation works.

Loop management plan

Two operators have stated that the loop management plan devised by TESAU imposes important and unjustified limitations on signal penetration, which impede the provision of xDSL services over the local loops in most cases. In particular, certain non-standardised Telefónica services exclude the provision of xDSL services from the bundles in which they are located and, therefore, are an effective use of the copper pair. Alternative operators that participated in the technical trials in 2001 point to their unsatisfactory execution, the delays caused by TESAU, the very restrictive interpretation of the results adopted by the incumbent and, owing to TESAU's refusal to accept the conclusions reached by alternative operators, the impossibility to finalise a report on the trials.

Collocation

Operators complain of the considerable delays in delivery of even the first collocation sites. At the time of the responses to the Questionnaire, operators were still waiting for TESAU's first technical projects for requested exchanges and collocation had not yet been implemented in any exchange. As pointed out above, an interim measures decision of the CMT of 21 June 2001 redefined the terms and conditions of collocation and instigated a whole new process. During the delays of the initial phase which began in January 2001 (during which time no exchanges were prepared or delivered) many participating carriers decided to withdraw entirely from the unbundling process (including ONO, Vodafone-Airtel, Aló Comunicaciones, Ola Internet, Alúa and Skypoint). Following the interim measures decision and the resumption of the collocation process, operators expect that some exchanges should be conditioned for collocation by mid October 2001 and that they should themselves be collocated in at least some exchanges by the end of 2001, despite the fact that TESAU continues not to comply fully with CMT requirements.

One operator considers that the action of TESAU in relation to collocation has amounted to a refusal to supply for the following reasons: lack of relevant information; restrictions on the provision of cageless collocation; lack of objective, transparent and non-discriminatory criteria for assessing lack of collocation space; lack of space optimisation processes (*e.g.*, removal of legacy equipment); economic and procedural barriers for the visit of exchanges; and impossibility of assessing whether TESAU is properly applying the rule which entitles it to reserve for itself up to 25% additional space in exchanges. At this stage, the CMT reportedly does not plan to carry out any further investigation *ex officio* as regards Telefónica's self-provision of collocation space and will act only on the grounds of additional evidence provided by operators.

It was reported by operators that one particular exchange, Madrid-Prosperidad, has been excluded from the list of available exchanges on the grounds that TESAU wishes to establish its network security centre there. This exchange is reportedly the ninth most important in Madrid and is being used by Telefónica to offer ADSL. The CMT adopted a decision on 4 October 2001 obliging Telefónica to provide a remote collocation solution if physical collocation is not available. To date, no solution has been provided.

Finally, one operator alleges that TESAU is guilty of discrimination in the context of collocation, pointing out that (as disclosed by comments made by the CMT in its 21 June resolution) cageless collocation is widely used by Telefónica's group companies in Telefónica exchanges and certain exchanges have been excluded from the list of exchanges available for collocation for competitive carriers on the basis that all the space is already occupied by Telefónica group companies.

E. Economic Conditions of Unbundling

A number of prices for unbundled access were regulated by agreement of the Spanish Government's Delegated Commission for Economic Affairs of 28 December 2000. Others have been set by the CMT pursuant to interim measures decisions and others are set by Telefónica. Some of the key prices are as follows (we have marked with an asterisk non-regulated prices).

a) Monthly line rental access fee

Charge	Euro
Fully unbundled	13.00
Line share	6.49

b) One- off costs per line.

Charge	Euro
Installation charge	103.92
Cancellation fee	18.03
Line testing	73.00
Installation of NTPs (only in the case of full LLU)	48.00
Line testing and installation of NTPs (only in the case of full LLU)	87.00
Notification of non-existent fault	38.00

c) Internal cabling charges

Initial internal cabling (capacity: 100 loops)		Euro
Fully unbundled access	Subscription fee	1,104.18

	Monthly fee	90.83
Shared access	Subscription fee	4,300.84
	Monthly fee	174.94

100 loop extension		Euro
Fully unbundled access	Subscription fee	262.76
	Monthly fee	0.23
Shared access	Subscription fee	2,557.91
	Monthly fee	2.64

d) Collocation charges

Preparation of collocation space

Telefónica equipment room	Euro
Cost per m^2	270.45

Separate operator room	Euro
Cost per m^2	According to table below
Specific price for basic cage	369.02
Specific price for extended cage	402.69

Costs for operator room are €1,688.84 x F_k per m^2, where F_k has the following values:

Usable surface (m2)	Fk
30-40	1.19
40-50	1.00
50-60	0.85
60-70	0.74
70-80	0.61

Energy supply costs

	Euro
Price per operator for DC supply	1,358.29
Price per operator for AC supply	643.08

Monthly rental fees

Monthly fee	Euro
Telefónica room	21.98 x (area factor) x m^2
Operator room	21.81 x K_h x (area factor) x m2

Where area factors are as follows:

Geographic area	Area 1[73]	Area 2[74]	Area 3[75]	Area 4[76]
Area factor	1.22	1.07	0.93	0.78

And where K_h has the following values:

Usable surface (m^2)	K_h
30-35	1.54
35-40	1.52
40-45	1.51
45-50	1.49
50-55	1.47
55-60	1.44

73 Madrid, Barcelona and towns with more than 500,000 inhabitants.

74 Towns in the provinces of Madrid, Barcelona, Basque Country and Navarre with more than 100,000 inhabitants.

75 Province capitals and towns of Balearic and Canary Islands with more than 20,000 inhabitants.

76 Rest of the country.

60-65	1.41
65-70	1.40
70-75	1.38

Operators present the following pricing-specific complaints in their responses:

Excessive and unfair prices

- Initial collocation prices were more than 12 times higher than current market prices (TESAU sought to apply prices that amounted to as much as €267,980 per m^2 for preparation and €367 per m^2/month rental). These prices were revised towards market-oriented prices by the CMT's interim measures decision of 21 June 2001.
- The minimum installation costs (which refer to a capacity in the MDF of 100 loops) are excessive and do not allow a simultaneous use for both shared and full unbundled access.
- It is unreasonable to charge for shared access given that the end user continues to pay TESAU for the access line.
- Excessive costs for visits to exchanges (€300 per accredited person and €192 for a one-hour minimum site visit for unguarded sites) despite regulatory intervention by the CMT in its 21 June 2001 Resolution.

Margin squeeze

Two operators state that there is a price squeeze between Telefónica's ADSL retail prices and its wholesale prices currently for its bitstream access service (as confirmed by the CMT's interim measures decision of July 2001) and prospectively for unbundled access.

The CMT adopted a decision in July 2001 (initially on 5 July and then, in a modified version following an appeal by TESAU, on 26 July) which, as a result of its view that there would be a price squeeze between TESAU's proposed ADSL retail prices and its GigADSL wholesale bitstream access service, imposed retail-minus price caps on the wholesale service. The coefficients imposed were:

Modality	Coefficient
D (256/128 kbit/s)	0.58
B (512/128kbit/s)	0.60
C (2 Mbit/s/300 kbit/s)	0.60

One operator appealed the CMT decision requesting that the retail-minus system refer not only to TESAU's ADSL retail prices but also to those of Telefónica's affiliates (Telefónica Data and Terra Networks). The CMT, in a resolution of 8 November 2001, dismissed the operator's appeal on the basis that it had not established the legal basis for annulling the decision but, nevertheless, recognising the validity in principle of the arguments raised by the operator, opened new proceedings against Telefónica and its affiliates for possible anti-competitive practices in ADSL services.

This operator also notes that in 1999, when the Ministerial Order was approved, a number of alternative operators brought to the attention of the European Commission the serious competition problems caused by this price squeeze.

At present, there is a price squeeze caused by the monthly fee for fixed telephony services, currently set at €10.47, while the monthly rental fee for a fully unbundled loop amounts to €13.00. The forecasts for retail and wholesale prices for the next two years are as follows and continue to present a pricing imbalance:

	2002	**2003**
Retail line rental	€11.68[77]	€12.71
Wholesale	€12.62	Unknown

F. xDSL Wholesale Offers

TESAU was obliged to offer a wholesale ADSL/ATM bitstream access service pursuant to a Ministerial Order of 26 March 1999. The offer, known as "GigADSL", includes three modalities: A (256/128 kbit/s), B (512/128kbit/s) and C (2 Mbit/s/300 kbit/s). TESAU provides a 10% SCR guarantee for these three modalities. An additional modality, D, was subsequently introduced pursuant to Royal Decree Law 6/1999 of 15 October, which did not include any bit rate guarantee. Access to the service was to be offered on a rolling basis in 109 ADSL demarcation areas which, once all on line, would provide national coverage (although responding operators complain of TESAU incurring in unjustified delays in this roll-out).

Following the Unbundling Decree of 22 December 2000, which derogated the above-mentioned Ministerial Order, TESAU was obliged to maintain the GigADSL offer for a transitional period of at least two years from the date of the new Regulation.

In the responding operators' opinions, the wholesale offering is only a transitional alternative permitting them immediate access to the market (while awaiting effective unbundling) and national ADSL coverage. Once unbundling is implemented, there may be a residual use of the service to reach geographic areas of low demand. Nevertheless, the actual use of the service will depend on the result of the revision of the applicable terms and conditions currently being carried out by the CMT (File MTZ 2001/4935).

The comments of responding operators also highlight the following elements of the GigADSL offer which are, in their view, restrictive of competition:

- <u>Service restriction</u>: operators using the offer suffer the constraints of its poor technical, qualitative and operational conditions (for instance, the transmission speeds offered do not allow the provision of voice over DLS (VoDSL), and the services are limited to asymmetric transmission and do not meet the speed and quality expectations of business clients) and are afforded little service enhancement or control possibilities (for instance, configuration of ATM ports), thereby limiting their ability to offer differentiated or better services.

[77] Estimated according to the adjustment factors of the Price Cap Ministerial Order of 10 May 2001.

- Price squeeze: as already referred to above. In this context, operators continue to complain that Telefónica is offering customers its ADSL service with free connection despite continuing to charge competitive carriers connection fees in its GigADSL offering. They also complain that there is a risk that Telefónica is eluding the price control imposed by the CMT's July 2001 interim measures decision on TESAU by offering ADSL retail services through its other companies (Telefónica Data and Terra Networks).
- Discrimination: one operator alleges that TESAU is discriminating in favour of its own retail services by offering to its affiliates network elements and conditions more favourable than those offered to alternative operators and by delivering the service to final customers more quickly (approximately 15 days as compared to the average 35 days that alternative operators have to wait in order to be able to deliver the service to their clients). Another operator points to the need to impose strong controls on Telefónica's activities to guarantee that the service is provided under the same terms and conditions.

Operators accuse Telefónica of reserving for itself the downstream market (obtaining for itself a significant "first-mover advantage") where it already has well over a 90% market share.

G. Effects of Any Problems or Limitations

Responding operators point to a number of different specific consequences of the problems and limitations outlined above, although all agreed that competition is restricted.

One operator, which has decided to withdraw from the unbundling process, points to its decision to employ wireless local loop technologies together with other third party access products to provide direct access to its customers because it cannot use the incumbent's local loop. This, in turn, entails a limitation in its coverage capabilities. Another points to the restrictions on new broadband services and the development of new xDSL services and the impossibility of offering VoDSL.

Many responses point to the significant delays and to the way in which Telefónica has managed to leverage its market power in the downstream services market while competitors have been restricted to using TESAU's limited wholesale service under discriminatory conditions. Finally, a couple of operators state that the delays and problems with unbundling have a real impact on the financial attractiveness of unbundling and, therefore, on potential competitors' business strategy. A number of competitors have already dropped out of the process.

H. Proceedings at National Level

All responses point to the work of the competitive operators' association, ASTEL, on abusive terms of the RUO (collocation and signal delivery) and to the CMT's interim measures decisions (collocation and ADSL price squeeze, and, on 8 November, signal delivery). In addition, one operator has worked with the CMT with regard to the lack of accurate information made available by TESAU on exchanges, has shared with the regulator the grave difficulties encountered in negotiating an access agreement, and has presented a complaint concerning the technical restrictions imposed on it by TESAU in connection with its provision of ADSL service using GigADSL.

At least two operators have argued for further action to be taken with respect to the price squeeze situation between Telefónica's retail service and the GigADSL wholesale service. One operator has argued that Telefónica not be permitted to offer its own ADSL services until unbundling is effective since the dominant operator otherwise would be obtaining an important first-mover advantage, thereby undermining the conditions for competitive market entry (requests which were apparently "not even seriously considered" by the CMT or central administration). The other operator has argued that the scope of the CMT retail-minus price cap on the TESAU wholesale service be applied by reference not only to TESAU's ADSL retail prices, but those of other companies in the Telefónica group.

I. Summary of Findings

- Both full and shared access to unbundled loops are included in the RUO. Sub-loops and vacant loops are also included (although alternative operators complain that the terms of access to vacant loops are restrictive). Physical collocation is available, initially just in specially-prepared operator rooms, but since a CMT interim measures decision of July 2001, now also in Telefónica's own equipment room (provided demand is for 20m^2 or less). Distant, but not virtual, collocation is also available in principle, but is as yet loosely defined and, in practice, untested. A number of prices (*e.g.*, loop and internal cabling prices) have been set by a Government decision of 28 December 2000 or have since been regulated pursuant to interim measure decisions of the CMT (for instance, collocation and so-called "signal delivery" services). The RUO is subject to a CMT administrative proceeding aimed at carrying out a full review by the end of this year.
- The responding operators, which include global operators, look to unbundling for their direct access services and, consequently, are primarily, but not exclusively, interested in using fully unbundled lines for a variety of symmetric broadband services. One responding operator is a niche DSL provider looking to offer a full range of DSL services over fully unbundled and shared loops to the business community. All operators are interested in offering services at the wholesale and retail level.
- LLU access in Spain is obtained pursuant either to a type B1 facilities-based fixed voice telephony license or a type C1 or C2 fixed infrastructure license. Data services are offered pursuant to a type C general authorisation, which also entitles service providers to contract Telefónica's wholesale bitstream access service.
- The major obstacles to obtaining access to unbundled local loops are the "deny, delay and degrade" tactics of the incumbent operator (which is seen to be seeking to protect a first-mover advantage in the downstream services market where it already has a clear dominant position), the ineffectiveness of initial regulation and the limited effectiveness of CMT intervention since. Operators accuse Telefónica of a number of potential abuses:

  - Effective refusal to supply, demonstrated by an unwillingness to negotiate non-discriminatory access conditions, withholding of vital network and loop information, refusal to provide cageless collocation and delay tactics in providing any collocation space, refusal to provide alternative backhaul solutions, refusal to offer an adequate SLA with penalty provisions, refusal to establish adequate, open OSS management systems with electronic interfaces to alternative operator systems, and a refusal to establish a frequency management plan capable of supporting competitive market entry;
  - Discrimination, in relation to collocation conditions and exchanges made available, and to the provisioning and conditions of its wholesale bitstream access service;
  - Unfair pricing, for instance in the case of initial collocation terms for highly expensive independent operator rooms, access to full loop information, the minimum in-site cabling and exchange access conditions; and
  - Restrictions on production, in the case of a number of the elements already mentioned (for instance, the OSS system and loop/frequency management plan).

- Complaints by responding operators relate to unfair pricing for collocation and other services related to LLU access, as well as to a price squeeze between Telefónica's ADSL retail services and its wholesale bitstream access service. There has been a CMT decision which affirms that assessment and imposes a retail-minus price cap on the wholesale service. However, operators have complained that the decision should be extended because it only refers to retail pricing of TESAU and not to those of other companies in the Telefónica group that are also providing ADSL services. Complaints are also aired in relation to the imbalance between wholesale loop prices and retail line rentals (the latter of which remain lower than the former).
- The view of responding operators is that Telefónica's ADSL/ATM bitstream access wholesale service is not a real alternative to unbundling, although, in the short term, it provides the only means to get to market and, in the long term, may provide an appropriate means for reaching areas of low demand. There are a number of complaints in relation to the allegedly restrictive and discriminatory terms and conditions of this service.
- As a result of the obstacles to LLU unbundling, collocation space is only now being delivered in the first exchanges, there are no unbundled loops, and the conditions of access still require significant regulatory intervention given the unwillingness of Telefónica to negotiate. Competition in broadband services and local connections has been damaged, a number of operators have already withdrawn from the process with a number more likely to follow, and Telefónica has managed to leverage for itself, apparently with the backing of the Spanish central administration, an almost unassailable first-mover advantage in the downstream services market.
- There have been a number of instances of regulatory intervention by the CMT to modify the terms of the initial RUO, frequently as a result of the submissions of

ASTEL, the competitive carriers' association, and to address the ADSL price squeeze. The CMT is in the process of finalising its initial review of the RUO, with outstanding issues relating primarily to procedures and provisioning, OSS and information systems, and the frequency management plan. The CMT has recently opened a proceeding to look into possible abuses by the Telefónica group in its pricing of ADSL services.

SWEDEN

In total, five alternative operators in Sweden responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

In March 2000, the incumbent Telia, through its wholesale network provider Skanova[78], began offering other operators full unbundled access to the local loop. Shared access has been included in the incumbent's Reference Unbundling Offer (RUO) since March 2001. Both full and shared access are offered by the incumbent in specific product packages – for example, Copper Access S50, Copper Access S300, Copper Access S600, Copper Access A1100, Copper Access ADEL 1000, and Copper Access ADEL900. Sub-loop unbundling (available beginning in the autumn 2001) and collocation (both physical and distant) are also included in the incumbent's RUO.

A bitstream access service (currently called ADSL ATM Access) has been available since 2000.

The incumbent includes specific service level timeframes within its RUO – for example, for orders for copper access, the incumbent will give notice of delivery within 7 working days and will deliver copper access within 10 working days or as agreed; the incumbent guarantees to repair faults on copper access within 24 hours; for collocation, the incumbent will reply to a request within 15 working days (or 20 working days for complex quotations) and will deliver collocation as quoted normally within 9 weeks; faults in collocation are normally repaired by the incumbent within 24 hours.

The prices of unbundled services have been published in the incumbent's RUO but have not yet been approved by the Swedish National Regulatory Agency (PTS).

B. Services to be Provided Over the Local Loop

The majority of responding operators indicate that their business strategy includes access to the incumbent's local loop. Two ISP operators state that Internet broadband access is the only service they offer using unbundled local loops. One operator provides this service (in combination with SDSL) exclusively to business customers while the other carrier offers Internet broadband access to both business and residential customers.

Meanwhile, one operator indicates that it uses only shared access and provides retail broadband telecom services and Internet broadband access to business customers. Another operator identifies **[CONFIDENTIAL INFORMATION REDACTED].**

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78 Skanova operates Sweden's largest network for telecom, Internet and broadband services, and offers its customers full network access, services and support.

C. Licences and/or Authorisations

One operator states that it provides LLU services pursuant to **[CONFIDENTIAL INFORMATION REDACTED].** Another operator indicates that it operates pursuant to its registration with the PTS.

D. Obstacles to Obtaining Access

Some obstacles to obtaining access have been encountered by alternative operators. One operator reports instances where the incumbent refused to provide physical and distant collocation. According to this operator, the incumbent's reasons for denying access were a lack of space (with respect to both physical and distant collocation) and the impossibility of installation (only with respect to distant location). And even when distant collocation has been granted by the incumbent, the operator states that it has suffered through extremely long delivery delays (more than 20 weeks) and high installation fees.

Another operator reports that it has been refused collocation by the incumbent in certain local exchanges both before and after 2001 – Birka (Stockholm), Brunkebergs (Stockholm), Aspuddens (Stockholm), Limhamn (Malmö), Lund) – usually on the basis of a lack of space. According to the operator, in certain cases, the incumbent has offered an alternative: connecting to the customer with point to point copper outside the exchange; collocating equipment outside the exchange with a trunk cable connection to the exchange.

Responding operators report specific delivery times:

- Four weeks to sort out preliminary issues
- Six to 10 weeks (or 2 to 3 months) for delivery of collocation sites
- One to two weeks, or within three weeks, or four weeks, for the delivery of unbundled lines

Finally, one operator states that the line delivered by the incumbent always meets the minimum specifications and are often above the specifications, while another operator reports some difficulties (*i.e.*, "dämpningen") with the lines delivered by the incumbent for the provision of xDSL services.

E. Economic Conditions of Unbundling[79]

a) Copper access fees (quarterly rental charges and one-off connection charges)

The incumbent's current price list (dated 17 December 2001) for copper access is as follows:

[79] All rates converted to Euro using the European Central Bank exchange rate of 12 December 2001: 1 SEK = .1071432 Euro.

Product Version[80]	Per Quarter	One-Off Line Connection
Copper Access S50	SEK 213 (€22.82)	SEK 1430 (€153.21) (per line if one line ordered) SEK 680 (€72.86) (per line if multiple lines ordered)
Copper Access S300	SEK 240 (€25.71)	SEK 1540 (€165.00) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access S600	SEK 240 (€25.71)	SEK 1540 (€165.00) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access A1100	SEK 315 (€33.75)	SEK 1540 (€165.00) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access ADEL900	SEK 150 (€16.07)	SEK 1100 (€117.86) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access ADEL1000	SEK 150 (€16.07)	SEK 1100 (€117.86) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access V12	SEK 315 (€33.75)	SEK 1540 (€165.00) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access V12SUB	SEK 315 (€33.75)	SEK 1540 (€165.00) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access VIDEL12	SEK 150 (€16.07)	SEK 1100 (€117.86) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)
Copper Access VIDEL12SUB	SEK 150 (€16.07)	SEK 1100 (€117.86) (per line if one line ordered) SEK 790 (€84.64) (per line if multiple lines ordered)

The incumbent also charges a one-off fee for lines testing:

- SEK 70 (€7.50) per line for Copper Access S300, S600, A1100, ADEL900 and ADEL1000
- SEK 440 (€47.14) per line for Copper Access V12, V12SUB, VIDEL12 and VIDEL12SUB if no customer premises visit is required, or SEK 695 (€74.46) per hour if a customer premises is required

b) Collocation

In the incumbent's current price list (dated 17 December 2001) for collocation, it lists the following monthly rental spaces for a collocation cabinet in its exchanges:

80 A description of each product version, including applications and approximate frequency ranges, can be found at http://www.skanova.com/eng/varaaffarer/referb.html. Generally, A1100, ADEL1000 and ADEL900 enable ADSL, with A1100 for full access and ADEL1000 and ADEL900 for shared access; S50, S300 and S600 enable SHDSL; S300 and S600 enable HDSL; and V12, VDEL12, V12SUB and VDEL12SUB enable VDSL. The incumbent indicates that it has no maximum speed rates for any of these applications.

Local Exchange of more than 9000 connected subscribers, regardless of location

Size of Cabinet	SEK (per quarter)	Euro (per quarter)
¼ (600mm x 600mm x 525mm)	1260	135
½ (600mm x 600mm x 1050mm)	2520	270
¾ (600mm x 600mm x 1575mm)	3780	405
full (600mm x 600mm x 2100mm)	5040	540

Local Exchange of less than 9000 connected subscribers in all locations

Size of Cabinet	SEK (per quarter)	Euro (per quarter)
¼ (600mm x 600mm x 525mm)	1038	111.21
½ (600mm x 600mm x 1050mm)	2076	222.43
¾ (600mm x 600mm x 1575mm)	3114	333.64
full (600mm x 600mm x 2100mm)	4152	444.86

The incumbent's price list also includes a one-off fee of SEK 4400 (€471.43) for the right to install equipment as well as other charges.

Meanwhile, the fees for escorted visits to collocation areas are SEK 3000 (€321) up to four hours, and SEK 750 (€80) per hour for each hour over four hours.

Unjustifiable prices

One operator states that the line rental fees of unbundled lines, both point to point and when used in conjunction with collocation, are too high. Another operator states that the installation fee for access without collocation is too high, as well as certain collocation costs.

Margin squeeze

One operator describes a margin squeeze with respect to the incumbent Telia's fixed phone subscriptions and its retail ADSL Broadband service. The incumbent's retail monthly prices are as follows:

- For fixed phone subscriptions, the incumbent recently increased the price from SEK 116 (€12.43) to SEK 144 (€15.43).
- For ADSL Broadband, the incumbent recently increased the price from SEK 200 (€21.43) to SEK 260 (€27.86).

According to the operator, the prices of unbundled lines leave little or no margin for smaller ISPs to earn money when the total investments are taken into account, particularly given the incumbent's low retail rates. The operator states that the fact that the incumbent has raised its retail rates proves that they are currently too low.

The operator also appears to identify a margin squeeze with respect to the incumbent's wholesale ADSL offer – ADSL ATM access – and the incumbent's retail ADSL services. According to the operator, the incumbent's prices for its wholesale ADSL service (listed, at their current levels, below) are far in excess of the incumbent's retail rates for ADSL service, causing the service to be an untenable option for new entrants.

F. xDSL Wholesale Offers

Responding operators state that wholesale ADSL service (a bitstream access service currently called ADSL ATM Access) is available from the incumbent but disagree whether it is an alternatives to local loop unbundling. According to two operators, the incumbent's wholesale ADSL offering is not a viable alternative, with one operator stating that the offer is not an alternative because it is limited to ADSL and does not include HDSL. Meanwhile, another operator considers the incumbent wholesale ADSL service as possibly providing a long-term solution if its prices are adjusted.

Prices (excluding VAT) for the incumbent's ADSL ATM Access services (which includes three cost elements: ADSL ATM connection to an end customer; transport of the end customer connection to the operator access; and the cost of ports) are as follows:

[CONFIDENTIAL BEGIN]

a) For connection in a telephone exchange, with the operator access in the same telecom exchange/concentrator as the end customer's DSLAM

Bit rate, downstream	Bit rate, upstream	One-off charge	Quarterly fee
1 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 1410 (€151.07)
2 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 1610 (€172.50)
3 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 1810 (€193.93)
4 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 2010 (€215.36)

b) For connection in a city/town, with the operator access in a telecom exchange/concentrator other than the end customer's DSLAM

Bit rate, downstream	Bit rate, upstream	One-off charge	Quarterly fee
1 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 1746 (€187.07)
2 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 2169 (€232.39)
3 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 2649 (€283.32)
4 Mbit/s	100-600 kbit/s	SEK 4500 (€482.14)	SEK 3128 (€335.14)

The incumbent also includes additional prices for the cost of ATM connection if the ADSL connection is installed in a city/town other than the operator access, and the costs for connection to the incumbent's ATM network.

[CONFIDENTIAL END]

G. Effects of Any Problems or Limitations

According to one responding operator, one of the effects of the high prices charged by the incumbent is that it can only offer xDSL services to business customers. For these customers, the operator states that it adds additional values which justify the higher prices for these customers. However, the high prices prevent it from offering services to the small office/home office (SOHO) market, and the operator is looking into the possibility of entering that market using wireless solutions.

[CONFIDENTIAL INFORMATION REDACTED]

Meanwhile, one operator reports that, because of the obstacles to access, it was not able to offer services as quickly and, as a result, has fallen behind the incumbent in attracting new customers.

H. Proceedings at National Level

On or about 14 December 2001, the Swedish Competition Authority initiated a proceeding to examine whether the incumbent's retail prices for ADSL violates competition law principles. The Competition Authority began the proceedings after receiving complaints from four operators active in the Internet business.

I. Summary of Findings

- The incumbent Telia, through its wholesale network provider Skanova, offers competitive operators both full and shared access to unbundled local loops, as well as a bitstream access service. Sub-loops have been part of the RUO since the end of autumn 2001. Both physical and distant collocation are part of the RUO. The prices for unbundled services are published in the incumbent's RUO, but have not yet been approved by the Swedish NRA.
- Access to unbundled local loops, both full and shared, are part of alternative operators' business strategy and they will, in general, focus on broadband services and access to business and residential operators.
- One operator states that it provides LLU services pursuant to **[CONFIDENTIAL INFORMATION REDACTED]**, while another operator states that it operates pursuant to its registration with the PTS.
- The obstacles to access reported by responding operators include the incumbent's refusal to provide physical and distant collocation and, even where the incumbent does delivery collocation spaces, extremely long delivery times and high installation fees. One operator further reports being denied access to collocation in five exchanges, which it lists.
- Prices for local loop unbundling are set by the incumbent and two operator complains that certain of these prices are too high. One operator identifies a margin squeeze with respect to both broadband services and the incumbent's wholesale ADSL offering.

- The incumbent offers a bitstream access service called ADSL ATM Access, but there is no consensus among alternative operators whether this offer is a viable alternative to local loops.
- As a result of the high prices charged by the incumbent, one operator states that it can only offer xDSL services via unbundled local loops to business customers, and is prevented from even entering the market for SOHO customers. Another operator complains that the incumbent has prevented it from implementing HDSL services using unbundled local loops and this has meant that the operator has had to purchase other kinds of access from the incumbent at higher prices. A final operator states that the incumbent has benefited from a first-mover advantage in attracting new customers.
- Following the complaints of four operators, the Swedish Competition Authority initiated a proceeding on 14 December 2001 to determine whether the incumbent's retail pricing for ADSL creates a price squeeze.

UNITED KINGDOM

In total, 12 alternative operators in the United Kingdom responded to the Commission's Questionnaire.

A. The Incumbent's Offer of Full/Shared Access to the Local Loop

The requirement for local loop unbundling was inserted into incumbent British Telecom's ("BT") service licence through a licence condition (number 83) which came into effect on 8 August 2000. The licence condition also set out the collocation products that BT must offer and the conditions applying to the supply of collocation products and unbundled local loops, how prices would be set, and how disputes could be resolved.

Local loop unbundling and collocation are made available to alternative operators subject to the standard terms and conditions of BT's Reference Offer for unbundled access to the local loop (referred to as the Access Network Facilities (ANF) Agreement). In December 2000, BT updated its Reference Offer for shared access and sub-loop unbundling in accordance with the *Unbundling Regulation*.

OFTEL announced final pricing for full local loop unbundling in December 2000. Alternative operators that rent a local loop from BT will pay an annual rental charge and a one-time connection charge. Although full unbundling is available from BT and prices have been established, one operator reports that only trial sites have been unbundled at this time.

Shared access to local loops has also been mandated by OFTEL, although this in the early stages of development and has not yet gone through the trial process to assess the value and quality of the products. OFTEL recently concluded a consultation on prices for shared access (October 2001) and has set prices. BT also has published prices for sub-loop products, but these products are not yet in the developmental stage and therefore, according to one alternative operator, are not "available".

Alternative operators can opt for distant collocation, virtual collocation or co-mingling where they require it, although one operator reports that BT continues to object to co-mingling, even though mandated by an OFTEL decision dated 10 October 2001.[81] Prices for collocation-related expenses are included in BT's published price list, but these do not include a price for the design and construction of the collocation facilities themselves. BT contends that designating a single charge for collocation facilities across all exchanges is not appropriate because each exchange requires a custom design to accommodate the required number of operators. The price for collocation will be set by BT on a case-by-case basis after a full design has been undertaken. OFTEL has not objected to this method of pricing collocation. Nevertheless, alternative operators can ask OFTEL to determine prices for collocation if any costs are disputed.

[81] According to this operator, BT has threatened to try to have OFTEL's co-mingling decision overturned under the European Convention of Human Rights on the grounds that the decision abuses its right to enjoy property.

With respect to alternative operators' access to MDF sites in association with providing services over local loops, OFTEL decided on 13 December 2001 that, for all forms of physical collocation (including co-mingling), BT can only require an operator to buy or use "escorted" access where it can demonstrate that: (i) the person for whom the operator has requested that BT grant entry to an MDF site does not have "approved status"; or (ii) the same requirements would also apply to other third parties, including those used by BT. Where BT requires escorted access, it must promptly supply it, and the prices BT can charge must be cost-oriented and non-discriminatory.

Finally, OFTEL issued a consultation document and draft Direction on 17 December 2001 in which it considered that BT has an obligation under both the Interconnection Directive and the *Unbundling Regulation* to provide backhaul to alternative operators at cost-oriented prices.

B. Services to be Provided Over the Local Loop

Three responding operators identify wholesale broadband telecom services and retail Internet broadband access for business customers as the types of services its plans to offer over unbundled local lines. One operator states that it anticipates a requirement for both shared and full unbundled access to the local loop. In its initial roll-out phase, the operator states that it will be offering a shared access product whereby it provides a wholesale data product (including high-speed Internet access, video-on-demand services, and leased line replacements) with BT maintaining the voice telephony portion of the local loop. In a later phase, the operator intends to offer the so-called triple play option – voice, data and broadcast services.

[CONFIDENTIAL INFORMATION REDACTED]

C. Licences and/or Authorisations

The alternative operators that responded to this question state that they provide LLU services under PTO licences issued pursuant to the Telecommunications Act 1984. One operator, however, indicates that they operate under a non-PTO licence issued under Section 7 of the Telecommunications Act 1984. Two other operators state that they are in possession of a so-called Annex 2 licence. One of these operators states that it plans to apply for a full PTO licence at some point in the future.

D. Obstacles to Obtaining Access

Based on the responses, three significant obstacles appear to impede alternative operators from obtaining access to unbundled local loops and, in many instances, cause them to alter their business strategies:

(1) The excessive costs of collocating in BT's exchanges and the long delays endured by operators waiting for BT to deliver collocation facilities;

(2) Delays in concluding agreements with BT for local loop unbundling and continuing doubts about the availability of reasonable terms and conditions; and

(3) The ineffectiveness of the UK regulatory process to implement local loop unbundling, OFTEL's failure to intervene at an early enough stage, and its sparing (and often too late) use of its enforcement powers.

An additional overriding factor identified by operators as forcing them to postpone or turn away from LLU is the downturn of global capital markets, which has significantly affected the financial positions of many operators.

Collocation delays and high prices

Delays and excessive prices for collocation appear to the most common complaint among the responding operators. Before January 2001, BT produced to the industry a "blacklist" of those exchanges where only one or two operators could be accommodated. This list was subsequently withdrawn by BT after it was found to be based on incorrect data. Nonetheless, one operator reports that information on the availability of collocation space in BT's exchanges has not improved and operators are forced to use a "complicated and unwieldy" process to order collocation.

A number of alternative operators complain about long delays in obtaining collocation space and the fact that BT's retail arm is not required to go through the same process. According to one operator, it takes BT on average 12 months to deliver a collocation site. Another operator reports that although it placed an order with BT asking for physical collocation facilities to be built by 11 April 2001, BT has yet to hand any over. One operator further describes how BT has refused physical collocation at one local exchange since January 2001 because of insufficient collocation space at the exchange. The operator claims that BT's ANF Agreement for full access does not sufficiently address this scenario.

Apparently, the principal reason for these delays is that BT stipulates that before operators can order collocation facilities (physical or distant), they must first enter into a contract with BT. A number of operators, however, report that they are unhappy with the contractual terms and conditions offered by BT and, as a result, many operators have yet to sign an agreement with BT and, consequently, BT refuses to recognise their orders.

Another apparent reason for these collocation delays is that BT requires alternative operators to obtain a site survey (called a PCR-3) for each BT facility where an operator wants to locate equipment. Although the ANF Agreement sets a maximum limit of 60 working delays for delivery of the PCR-3 survey, one operator reports that BT consistently fails to meet this deadline.

Three operators complain about the excessive costs (described as "prohibitive" by one operator) of acquiring physical collocation, particularly the high cost of having BT survey local exchanges (costing in the range of £5,000 per exchange). According to one operator, BT's retail arm does not incur similar costs. One of the operators also states that there is a great deal of uncertainty over whether there are any additional costs associated with collocation.

As a result of the high costs of physical collocation, two new entrants state that they have been forced to consider distant collocation to provision unbundled local loops. Nevertheless, one operator reports that even distant collocation is a timely process, with it typically taking over 6 months to implement distant collocation unbundling (specifically, an operator is required to submit to BT a forecast for the designated exchange three months in advance; it then takes an additional 75 working days for BT to facilitate the operator's request for distant collocation).

Responding operators also report that pricing problems related to physical collocation have arisen during the LLU trials. One operator describes how it was forced to exit the LLU trials after participating in the first phase when BT announced that it would have to cover the costs of the collocation space that was built for operators that had already exited the trials, in addition to the costs associated with space built specifically for them.

Finally, a fundamental difficulty reported by alternative operators is that BT has refused to include backhaul with the provision of a collocation room and, moreover, has failed to offer an appropriate backhaul product.

No discrimination between operators requesting collocation has been reported.

Absence of reasonable terms and conditions

Some responding operators focus on the deficiencies of BT's ANF Agreement. One operator reports that BT's ANF Agreement, as originally drafted, falls well short of the minimum requirements annexed to the *Unbundling Regulation*. This issue apparently is now being addressed by BT after pressure from the operator community and OFTEL. Specifically, the operator complains that BT's Reference Offer does not include access too OSS.

Another operator states that the terms of BT's ANF Agreement are one-sided in favour of BT and onerous on new entrants. Moreover, the operator points out that BT's retail arm is not expected to accept the same terms and conditions.

Operators also complain about BT's service level agreement (SLAs) and BT's refusal to enter into clear and binding SLAs. According to these operators, service levels are still being discussed and negotiated by OFTEL and BT, despite OFTEL imposing a 30 April 2001 deadline for implementation of SLAs. Thus, no final SLAs have been implemented in the ANF Agreement. One particular criticism of the current SLAs is that they do not contain any levels of guarantees or commitments, and BT has no obligation to deliver loops or collocation facilities in agreed timescales and are not subject to penalties for nondelivery.

One operator also complains that there are no business-type SLAs in BT's LLU offer. The current SLAs are basic residential types and contain insufficient maintenance guarantees for business or carrier-type services. Nevertheless, BT has its own retail offering for business products on ADSL over local loops.

OFTEL's alleged regulatory failures

Two operators do not believe that the UK regulatory process has worked well in implementing LLU and state that OFTEL's determinations and initiatives have come too late in the process. Moreover, at least one operator complains that OFTEL has not vigorously enough enforced the *Unbundling Regulation* or OFTEL's own policy objectives, and OFTEL has sparingly has used its enforcement powers.

One operator is of the view that OFTEL has not been pro-active and has demonstrated a lack of intervention and/or preparedness to tackle the intransigence of BT in such a way to facilitate the roll-out of broadband in a timely manner. In this operator's opinion, "OFTEL has consistently either refused to take the necessary steps to open up the local loop to effective competition, or has followed a policy of appeasing BT."

E. Economic Conditions of Unbundling[82]

a) Full unbundled access

The following principal prices for full unbundled access are included in BT's Carrier Price List as of 29 November 2001:

Description of Charge	GBP (£)	Euro (€)
MPF Rental per annum	122	196.55
MPF Connection charge – Transfer	88	141.48
MPF Connection charge – Standard	265	426.94
MPF Hand-back charge – Transfer	29	46.72
MPF Hand-back charge – New Provide	10	16.11
MPF Standard line test – RWT	39	62.83

b) Shared access

In its 18 October 2001 Direction, OFTEL directed that BT shall not offer prices in its ANF Agreement for shared access to the local loop that exceed the prices listed below. BT incorporated these prices into its Carrier Price List as of 29 November 2001.

Description of Charge	GBP (£)	Euro (€)
Shared MPF Rental per annum	53	85.39
Shared MPF Connection charge – Transfer	117	188.50
Shared MPF Hand-back charge – Transfer	36	58.00
Shared MPF Disconnection charge	36	58.00
Shared MPF Standard line test – RTW	29	46.72
Shared MPF Conversion to Full MPF	0	0

It is important to note that the £53 charge for shared MDF rental per annum consists of a £13.90 charge for a so-called "basic element" (all costs not related to faults, *i.e.*, upgrade of NTEs and lines with pair gain equipment and wholesale and overheads) and £38.10 for a so-called "fault-related element" (fault handling, fault testing, fault repair costs, and

[82] All rates converted to Euro using the European Central Bank exchange rate of 12 December 2001: 1 GBP = 1.6110842 Euro.

the contribution to the customer guarantee scheme). The "fault-related element" is based on data from the first months of operation of BT's ADSL service and, according to OFTEL, the expected reports of faults is likely to reduce over time. Therefore, OFTEL states that it will review this rate when actual data becomes available. Moreover, the rate for the "fault-related element" is likely to decrease further once BT introduces some form of automatic test process to replace the current manual processes.

c) Escorted MDF site visit

The following charges for escorted access to MDF sites are included in BT's Carrier Price List as of 29 November 2001. These prices precede OFTEL's decision of 13 December 2001 on escorted access and BT must amend its prices to comply with the terms and conditions of this decision within 28 days of its publication.

Description of Charge	Minimum	Hourly
Business hours, planned	£162.40 (€260.96)	£40.66 (€65.50)
Business hours, unplanned	£325.28 (€523.98)	£81.32 (€130.99)
Nonbusiness hours, planned	£205.44 (€330.93)	£51.36 (€82.73)
Nonbusiness hours, unplanned	£410.88 (€661.87)	£102.72 (€165.47)

d) Sub-loop unbundling

The following principal prices for sub-loop unbundling have been included in BT's Carrier Price List as of 29 December 2000:

Description of Charge	GBP (£)	Euro (€)
Sub-loop MPF Rental per annum	122	196.55
Sub-loop MPF Connection charge – Transfer	88	141.78
Sub-loop MPF Hand-back charge – Transfer	29	46.72
Sub-loop MPF Standard line test – RTW	59	95.05
Sub-loop Access Tie Cable Connection	2235	3600.77
Sub-loop Access Tie Cable Rental per annum	393	633.16
Initial survey	636	1024.65

e) Collocation

The following principal prices for physical and distant collocation are included in BT's Carrier Price List as of 29 November 2001:

Description of Charge	GBP (£)	Euro (€)
Physical collocation –Initial survey	213	343.16
Physical collocation – Full survey	5396	8693.41
Distant collocation – Initial survey	911.24	1468.08
Physical collocation order rejection – no space available	213	343.16

Rental per kW per annum	19.28	30.98
Usage per KWh	6.63	10.68

Main pricing concerns

Four UK operators identified problems with BT's prices. One operator overall was "happy" with the LLU prices, but stated that BT's £265 connection charge for standard new provides was too high because the work involved is identical to the work done by BT when it provides a new PSTN line for its own retail customer, for which BT charges a connection charge of £99.

Another operator was of the view that even with OFTEL's intervention, LLU-related prices remain too high when compared with BT's estimated costs (BT's actual costs are not accessible) and BT's retail prices. **[CONFIDENTIAL INFORMATION REDACTED]**

This operator also states that although the absence of BT cost data makes it difficult to justify the prices, a comparison of BT's own "home500" retail ADSL offering, which comes with a monthly rental charges of £39.99 and a one-time installation fee of £150, are far lower than BT's wholesale rental and interconnection charges. According to the operator, this comparison proves that BT's prices are excessive.

A third operator responded that BT's current prices published on its Web site (before being updated with respect to shared access pursuant to OFTEL's recent decision) are "prohibitive to market entry" and that the whole package is too high. The operator further states that BT's unilateral right to change prices across its wholesale and retail offerings is unacceptable and gives no stability to operators' business plans.

Finally, a fourth operator stated that, at present, pricing issues were secondary to concerns about quality, availability and technical specifications of the services offered.

Three operators agree that the absence of complete BT cost information makes it difficult to ascertain with certainty whether a margin squeeze is occurring. Nevertheless, they believe that BT is guilty of a margin squeeze because, using a conservative proxy of BT's wholesale costs and comparing them to BT's retail prices for connection and conveyance demonstrates that the margins are too small for operators to make a profit, particularly given the additional connection, conveyance and equipment costs a new operator would have to incur. Moreover, one of the operators notes that the £150 wholesale connection charge for one of BT's broadband access products matches the retail connection charge, making it difficult for new entrants to turn a profit.

F. xDSL Wholesale Offers

BT does not offer bitstream access in the United Kingdom; it only makes available to alternative operators xDSL wholesale services for resale (in particular, IPStream 500, Datastream Home, and Videostream). The general consensus among responding operators is that although these xDSL services are cheaper to resell than providing similar services using LLU, they are not a sufficient alternative to unbundled local loops. Nevertheless, a number of operators are actively reselling BT's xDSL wholesale service, with two operators stating that reselling this service is an alternative to LLU in the "medium-term", or at least until a viable LLU product becomes available in the UK.

The common complaint about BT's xDSL wholesale offer is that it provides operators with a thin retail margin and, therefore, is not sufficient to support an efficient and sustainable retail service. One alternative operator filed two complaints with OFTEL at the start of October 2001 challenging BT's prices and installation charges for its IPStream, Datastream and Videostream products. Specifically, the operator contends that BT's drastic reductions in its installation/connection charges for these wholesale products (in the absence of any competition in the wholesale market) constitutes an abuse of BT's dominant position in the market for the supply of wholesale DSL services. Indeed, BT's reductions in installation costs effectively creates a margin squeeze and, according to the operator, is intended to counteract the consequences of local loop unbundling.

In addition, price pressures in the market (predominantly from BT itself), the high cost of the wholesale product, and the high cost of providing customer support to a technology that is not yet stable makes it an unfavourable option. According to one operator, all of these factors are compounded by the contractual terms imposed by BT, including having to make payments quarterly in advance and having to accept BT's service for a minimum of one year (even if the customer ceases service during that period).

Four operators also complain about the inflexibility of BT's wholesale xDSL product, namely, that BT only offers ADSL service, which is not always compatible with the type of services the operators plan to deploy. Moreover, it is a "managed" service, which means that there is very little scope for competitive differentiation of the end-product. Moreover, the technical characteristics of BT's wholesale ADSL product limits its potential uses; for example, according to one operator, it cannot be used as a leased line replacement. Finally, one operator states that BT's wholesale xDSL service is not satisfactorily able to address business needs, but rather is targeted to residential and small business users.

Operators also highlight the fact that there is currently no SLA for BT's wholesale xDSL service. Therefore, if BT fails to deliver or provides a poor service, which according to one operator BT has done, there is no compensation. One operator further states that BT seeks to place onerous and unfair conditions on all operators looking to purchase xDSL wholesale service, including a commitment to accept all liability for customers' use of the service.

G. Effects of Any Problems or Limitations

The principle effect of the obstacles identified above has been the delay in the availability of competitive broadband services across the UK. Indeed one operator reports that while BT has installed its own DSL in over 800 exchanges across the UK, BT hasn't opened any but the original "trial" MDF physical collocation sites, and only 27 additional distant collocation sites. As a result, BT has had the opportunity to develop their own retail broadband product in areas where it is not currently available, and has benefited from first-mover advantages in areas where they currently offer broadband services.

Moreover, the obstacles have affected the business plans of alternative operators in a variety of ways. Some operators have delayed offering xDSL service via unbundled local loops and have instead participated in DSL markets by reselling the wholesale product offered by BT. However, because of the limitations in reselling BT's xDSL wholesale product, one operator states that it has decided **[CONFIDENTIAL INFORMATION REDACTED]**.

Another operator complains that BT's delays in providing collocation has made financial forecasting very difficult and has resulted in it not being able to achieve first-mover advantage as it had planned.

Five other operators have decided to withdraw from the LLU process entirely due to, among other things, the fact that the environment for LLU in the UK is so unfavourable and their business case is not viable at this time. According to one operator, "the regulatory uncertainty and the unchallenged ability of BT to affect the viability of the market for its competitors" has led it to the conclusion that LLU is "no longer a viable commercial option, jointly or alone." Another carrier states that originally it had planned to utilise full unbundled access of copper pairs and was considering shared access, but withdrew from the unbundled local loop process because of collocation and pricing-related issues.

[CONFIDENTIAL INFORMATION REDACTED]

H. Proceedings at National Level

Responding operators report a series of LLU-related proceedings at the national level, some of which are ongoing while others have been completed.

- A number of operators in July 2000 requested that OFTEL bring into force BT's licence condition 83, which obligates BT to offer unbundled local loops. OFTEL caused the licence condition to come into effect as of 8 August 2000.
- In September 2000, a group of operators submitted to OFTEL a discrimination complaint against BT. The complaint asked for regulatory intervention to remedy the advantages enjoyed by BT's downstream retail businesses; namely, BT's advantage of rolling out its own DSL operations without being burdened by the terms and conditions imposed on competing operators. These terms and conditions include having to participate in an allocation process for collocation facilities (known as the "Bow Wave Process"). The operators alleged in the complaint that BT was allocating its resources in a discriminatory manner by favouring their own retail services. On 11 July 2001, OFTEL dismissed the complaint stating that it was unable to establish whether BT was acting in breach of the *Unbundling Regulation* requiring it to provide other operators with facilities equivalent to those provided for its own services and with the same conditions and timescales. As such, OFTEL ruled that it did not have sufficient evidence to establish a breach. One particular concern arising out of this decision is OFTEL's definition of the market as each individual MDF site rather than BT's incumbency area as a whole.

- In September 2000, operators requested a Determination of the terms of the ANF Agreement proposed by OFTEL, alleging that five substantive issues outlined in the Agreement were unreasonable, namely: (i) arrangements for the allocation of collocation space; (ii) BT's contractual commitments; (iii) imposition of certain restrictions; (iv) withholding of information about resources; and (v) "quality" of BT's agreement. OFTEL ruled that BT was to make substantive changes to the Agreement.
- Two complaints filed with OFTEL alleged that BT was cross-subsidising its ADSL products. In both complaints, OFTEL declined to find cross-subsidisation but agreed to review the complaints on a six month basis.
- One carrier has asked OFTEL to investigate whether BT is operating a margin squeeze with relation to its BT Openworld product. OFTEL concluded that it could not find any evidence supporting the allegation.
- OFTEL also has investigated BT's SLAs governing local loop unbundling, the costs of physical and distant collocation, and co-mingling of broadband access equipment among BT's own equipment without segregation. On 15 November 2001, OFTEL issued a Statement and Direction with regard to service level commitments and compensation. On 18 October 2001, OFTEL issued a Statement and Draft Direction with respect to BT's charges for distant and physical collocation. On 10 October 2001, OFTEL issued a Statement and Direction with respect to the provision of collocation in the form of co-mingling.
- On 18 October 2001, OFTEL concluded proceedings setting final prices for shared access.
- On 1 October 2001 and 3 October 2001, one operator filed complaints with OFTEL against BT concerning BT's pricing and installation charges for its wholesale xDSL products.
- The UK House of Commons Trade and Industry Select Committee has been investigating since December 2000 local loop unbundling in the UK, but has not yet reached an outcome.

I. Summary of Findings

- Both full and shared access to unbundled loops are available in the United Kingdom and final prices have been set by OFTEL. Physical, distant and virtual collocation are also available to alternative operators and prices have been established by OFTEL. Co-mingling has been mandated by OFTEL, but one operator reports that BT has resisted providing it. The collocation prices do not include a price for design and construction of the collocation facilities themselves, which is set by BT on a case-by-case basis.
- UK operators that remain committed to utilising unbundled local loops identify wholesale broadband telecom services and Internet broadband access for business customers as the services to be provided over unbundled lines. Another operator states that it fully intends to use unbundled lines to offer a full package of broadband and narrowband application and services, with different bundles of services to be provided to different market segments, including residential, home workers, small and medium businesses. All of these operators plan to utilise both

full and shared local loops. One operator also is considering offering services such as Internet portal activity and reselling content in the future to both business and residential customers.

- The majority of operators provide LLU services pursuant to PTO licences issued pursuant to the Telecommunications Act 1984.
- The major obstacles to obtaining access to unbundled local loops are (i) the excessive costs and delays associated with collocation, (ii) the absence of reasonable terms and conditions for local loops and related facilities, and (iii) the ineffectiveness of OFTEL's regulatory process. In particular, responding operators report that they are forced to use "complicated and unwieldy" process for ordering collocation and must first sign contract unilaterally drafted by BT and, as a result, have experienced long delays in obtaining collocation spaces. They also must pay excessive costs. According to these operators, BT's own retail arm is not subject to the same limitations or costs and does not experience the same delays.
- The majority view is that prices for LLU remain too high, particularly considering that wholesale charges often are higher than BT's equivalent retail charges. Nevertheless, a price squeeze is difficult to identify because of the lack of complete BT costing information.
- The general consensus is that BT's xDSL wholesale products (which are mere resale products) are not a sufficient alternative to unbundled local loops. One operator has filed complaints with OFTEL alleging that BT's pricing and installation charges for these products, particularly its recent drastic reductions in installation charges, creates a margin squeeze in the wholesale market and was intended by BT to price competitors out of the nascent market.
- As a result of the obstacles to LLU unbundling, a number of UK alternative operators have decided to either abandon or postpone entry through LLU.
- A number of LLU proceedings have been completed or are ongoing before OFTEL on a range of issues related local loop unbundling and collocation.

Annex 5
LLU Services Offered Across the EEA States

ANNEX 5 – LLU SERVICES OFFERED ACROSS THE EEA STATES

	Narrow-band Retail Access	Narrow-band Retail Call Services	Narrow-band Retail Dial-Up Internet Access	Wholesale Broad-band Telecom Services	Retail Broad-band Telecom Services	Internet Broad-band Access	Other Services	Retail Customer Target
Austria	√	√	√	√	√	√	√ (not specified)	Business; residential
Belgium	√	√	√	√	√	√	√ (Portal)	Business
Denmark	√	√		√	√	√		Business; residential; public service
Finland	√	√	√	√	√	√	√ (Portal)	Business; residential
France	√	√	√	√	√	√	√ (Portal; content)	Business; residential
Germany	√	√	√	√	√	√	√ (Portal; e-business; streaming email and news; hosting)	Business; residential
Greece			√	√			√ (Portal; content)	Business
Iceland		√	√	√	√	√	√ (Web hosting; mail hosting; firewall; managed router)	Business; residential
Ireland[83]	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Business; residential
Italy	√	√	√	√	√	√	√ (portal; content)	Business; residential
Liechtenstein[84]								
Luxembourg[85]	--	--	--	--	--	--	--	--
The Netherlands	√	√	√	√	√	√	√ (e-mail; Web	Business

83 The sole responding new entrant indicated that it plans to offer a full range of DSL services, but does not specify the particular services.

84 Unbundled access to local loops is not offered in *Liechtenstein,* and responding new entrants did not indicate which services they plan to offer using unbundled local loops once they become available.

85 No new entrants responded substantively to the Commission's Questionnaire.

	Narrow-band Retail Access	Narrow-band Retail Call Services	Narrow-band Retail Dial-Up Internet Access	Wholesale Broad-band Telecom Services	Retail Broad-band Telecom Services	Internet Broad-band Access	Other Services	Retail Customer Target
							hosting)	
Norway	√		√	√	√	√	√ (Web hosting; portal; content)	Business; residential
Portugal		√			√	√		Business; residential
Spain	√	√	√	√	√	√	√ (portal; content)	Business; residential
Sweden				√	√	√		Business
United Kingdom	√	√	√	√	√	√	√ (portal; content)	Business; residential

Annex 6
Number of Responses to the Questionnaire

ANNEX 6 – NUMBER OF RESPONSES TO THE QUESTIONNAIRE

EEA STATE	NUMBER OF NEW ENTRANTS RESPONDING TO THE QUESTIONNAIRE
Austria	10
Belgium	4
Denmark	4
Finland	11
France	11
Germany	42
Greece	1
Iceland	6
Ireland	1
Italy	12
Liechtenstein	5
Luxembourg	1
The Netherlands	7
Norway	11
Portugal	2
Spain	7
Sweden	5
United Kingdom	12

Total Responses: **152**

Annex 7
General Approach to Future Action
(CONFIDENTIAL – REDACTED FROM PUBLIC VERSION)