

Apple's Comments on the European Commission's Preliminary Report in the
Consumer Internet of Things Sector Inquiry

September 1, 2021

1. Apple has reviewed the Commission's Preliminary Report on the consumer Internet of Things ("IoT") sector, and welcomes the opportunity to provide comments as part of the Commission's public consultation. Apple aims to share observations that are critical to a proper understanding of Apple's business model and the market forces that drive competition and innovation in the IoT sector.
2. Apple is first and foremost a device company. It sells devices that integrate hardware, software, and services. In fact, as of December 2020, more than 80% of Apple's revenues were generated from selling devices, like the iPhone, iPad, and Mac. Apple devices integrate a variety of high-quality Apple and third-party software and services to enhance their value to users and differentiate them in intensely competitive markets. Apple has invested billions of dollars to provide third-party developers with the tools, frameworks, analytics, and other resources they need to continue innovating to support an unmatched user experience on Apple devices.
3. One feature of Apple devices is the Siri voice assistant. Apple designed Siri to respond to user queries while protecting the user's privacy and security. Siri does not have a user base distinct from users of Apple devices generally as Siri is made available only via Apple devices. And Apple device users are also able to download apps from the App Store to use alternative voice assistants, including Amazon Alexa and Google Assistant.
4. As Apple introduces features or technologies like Siri, it works hard to make them available to third-party developers. In 2016, Apple introduced SiriKit to allow developers to enable users to interact with their apps via Siri. In 2018, Apple introduced Siri Shortcuts, extending the ability to integrate with Siri to any app in the App Store. In 2021, Apple is extending Siri functionality to third-party devices via a user's HomePod or HomePod mini. Earlier this year, Apple updated the Find My app to allow third-party products to use the private and secure finding capabilities of Apple's Find My network, which comprises hundreds of millions of Apple devices, to enable third parties to develop and market products allowing users to locate and keep track of the important items in their lives.
5. At the same time, Apple believes privacy is a fundamental human right, and it remains scrupulously careful when providing access to these new technologies to ensure that it protects user privacy and security. Apple has introduced innovative privacy technologies, techniques, and features to minimize the amount of user data accessible to Apple or anyone else. For example, by extending Siri functionality to third-party devices via a user's HomePod or HomePod mini, Apple ensures that user queries are processed on-device where possible and that any communications sent to remote servers are routed to secure Apple servers and are associated with a random identifier and not the user's identity. Similarly, the Find My network's location process is end-to-end encrypted and anonymous,

so users can rest assured that no one, not even Apple or their third-party manufacturer, can view a device's location or information.

6. The Preliminary Report fails to clearly distinguish between *de facto* standards resulting from marketplace adoption over alternatives and proprietary technologies that, while popular, face competition from multiple alternatives. Indeed, for each category of voice assistants, smart home devices, and wearables that are characterized as *de facto* standards, the Preliminary Report itself lists three or more options. The Preliminary Report also recognizes that the IP on which these proprietary technologies are based do not preclude others from developing competing technologies, and in fact that standards and protocols are available alternatives. Market competition dictates that consumers benefit when companies define their own technical specifications, including the terms of interoperability. This is how Apple has *enhanced* competition—by giving users high performance and privacy- and security-enhanced alternatives to products and services designed to maximize the collection and monetization of user data.
7. Apple supports the development of open source and standardized technologies. As a member of the Thread Group and the Connectivity Standards Alliance, Apple has participated in the development of royalty-free standards and specifications to increase compatibility among IoT products. However, companies should be free to choose whether to invest in a) collaborative *de jure* standard setting, b) *de facto* standards that evolve as a favored solution over time (such as the QWERTY or the AZERTY keyboard layouts), or c) proprietary technologies that are based on superior ingenuity and used in the innovator's own ecosystem to differentiate its products from those of its competitors.
8. Many owners of proprietary technology, including Apple, find it in their interest to license their IP and enable interoperability to make their products or services more attractive. Forcing owners of proprietary technology to license IP and enable “full interoperability” risks stifling innovation from market competition that is a significant driver of economic growth. Such mandatory licensing is fundamentally different from enforcing commitments to license standard essential patents (“SEPs”) on fair, reasonable, and non-discriminatory (“FRAND”) terms voluntarily given by participants in *de jure* collaborative standard setting activities.
9. Maintaining a market-driven, consensus-based, standardization system in a fast moving technological environment allows choice, promotes innovation, and leads to better IP policies. Competition among Standards Development Organizations (“SDOs”) is more likely to lead to the development of standards where a) there are identified needs, b) participants reach agreement on how to address them, and c) the cost to license future use is fair, reasonable, non-discriminatory, and available to all seeking such a license. Multiple SDOs working on IoT technologies allows for complementary standardization activities that cover this broad technology field. Companies of all sizes can participate in this process, at different levels of engagement, and benefit from these standardization efforts, including those licensing IP on royalty-free FRAND terms to promote innovation, freedom to operate, market entry, and competition.

10. Well-designed SDO IP FRAND policies, including royalty-free policies, together with appropriate government enforcement of voluntary FRAND commitments, can help prevent and resolve issues related to licensing SEPs. The Horizontal Cooperation Guidelines correctly identify the competition basis for regulating abusive SEP FRAND licensing practices and can be revised to comprehensively address this need, supported by close monitoring of and enforcement against abusive SEP FRAND licensing practices.