



Ultra Wide Band Alliance Applauds the Publication of Next Generation IEEE 802.15.4z Ultrawide Band (UWB) Standard

New UWB Amendment Brings Centimetre Precision and Secure Ranging Transaction Capabilities to Smartphone Masses

(Washington DC – August 25, 2020) A major milestone in the explosive adoption of UWB was marked today with the publication of the IEEE 802.15.4z amendment. This amendment includes improvements in ranging integrity and multiple other technical advances with updates to the High Rate PRF (HRP), and Low Rate PRF (LRP) UWB PHY Physical layers, as well as the MAC layer clauses in the IEEE 802.15.4 standard.

Major contributors to the High Rate PRF (HRP) amendment included engineers from Smartphone giants Apple, Samsung, as well as chip suppliers Qorvo and NXP. The LRP amendment includes major contributions from Microchip and 3dB Access. However, there were many other engineering contributors from entities such as Huawei, NICT, and many others.

UWB technology has been blasting into mainstream consumer awareness since Apple incorporated it into all models of the iPhone 11 last year. This marks the start of a new era for the technology in its sixteen-year evolution. Samsung also announced that it is included in the new Galaxy Note 20 Ultra model launched last month.

Tim Harrington, TG4z Chairman, and Ben Rolfe, Vice Chairman, led the task group. Billy Verso an engineering leader from Qorvo was the Technical Editor.

Harrington and Rolfe have a long history in UWB and founded the UWB Alliance in 2018 to represent and promote the industry. “We needed to form a strong external organization to complement the activities of the IEEE 802.15 TG4z Task Group” commented Harrington who serves as Chairman to both organizations. “The UWB Alliance has been expanding internationally to seven local offices throughout the USA and Europe. Members include two of the five largest international smartphone vendors, five semiconductor companies, automotive OEMs and Tier 1 suppliers, as well as thirteen companies offering wearables for contact tracing. We expect other global players to take the step soon. The announcements from Apple and Samsung confirmed our projections, recently shared with the FCC, that UWB is on a growth path to deliver well over 1 Billion devices annually by 2025. “Harrington went on to explain that it’s a common misconception that UWB took longer than other wireless standards to mature. He points out that from the creation of the rulesets to arrival in mass-market consumer devices like the iPhone, UWB has evolved in approximately the same time frame as Bluetooth - sixteen years - while Wi-Fi actually took longer at twenty-three years.

Secure Access is the first application to use the new amendment with BMW and Volkswagen using it to make vehicles more theftproof. Certain new BMW models will even be accessible



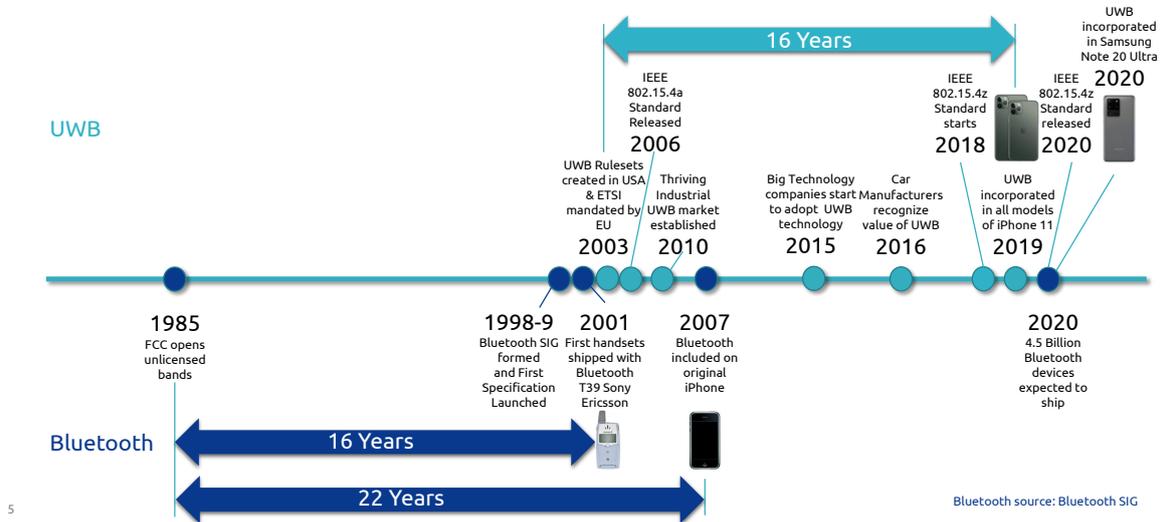
using an iPhone. COVID-19 contact-tracing applications are also being improved by the incorporation of UWB which provides pin-point accuracy regardless of changes in the physical environment. “UWB wearables are multiplying exponentially because the technology delivers the most accurate and robust distance measurement available from any radio technology”, observed Rolfe, “UWB is also being deployed pervasively in other IoT applications such as secure payment transaction processing, and no contact health monitoring. It is even being designed into next generation positional awareness and communication for applications like AR and VR. The anticipated publication of IEEE 802.15.4z has fostered a plethora of new applications for UWB. “

The UWB Alliance is working with other radio technology stakeholders to promote coexistence with multiple protocols at the 6 GHz Multi-Stakeholder Group promoted by the FCC. The goal is to optimize sharing of unlicensed UWB, Wi-Fi, and NR-U technologies while protecting licensed operators sharing the band. “We are at the beginning of this the process of working out how to make all these complimentary technologies play nicely together” commented Harrington, “There is a lot of work ahead to ensure that we provide a seamless user experience for consumers in the growing wireless multiverse. All of these technologies have to work together on the handset whilst also allowing critical safety infrastructure and services to continue function without harmful interference or interruption. We all have a joint responsibility to work in respectful partnership with all parties to achieve these primary goals”.

The UWB Alliance is also involved in multiplying UWB use-cases for its membership by pushing for ruleset updates in Europe and the USA. They are advocating the addition of fixed outdoor transmitters, more range for UWB devices indoors and supporting proposed changes to simplify regulations for their automotive members. They are also supporters of changes proposed in Europe to extend UWB spectrum to 12.4 GHz.

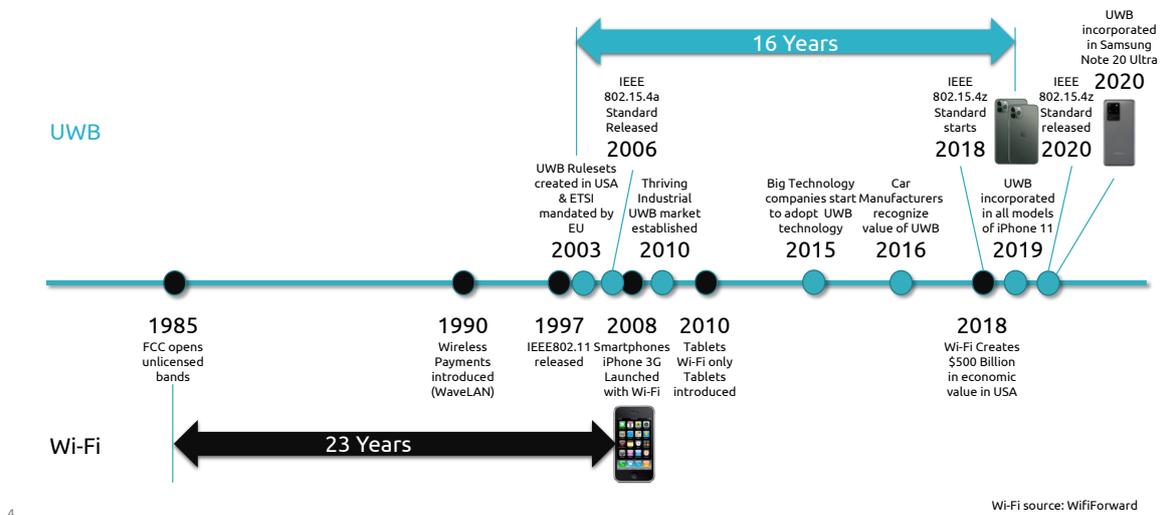
“All of these improvements will help to provide a next generation regulatory backbone to 5G IoT. They would increase consumer adoption of 802.15.4z into interoperability specifications such as the Digital Key 3.0 from the CCC as well as the work from the FiRa Consortium and Omlox.” Concluded Harrington.

UWB and Bluetooth Evolution into Consumer Electronics



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UWB and Wi-Fi Evolution into Consumer Electronics



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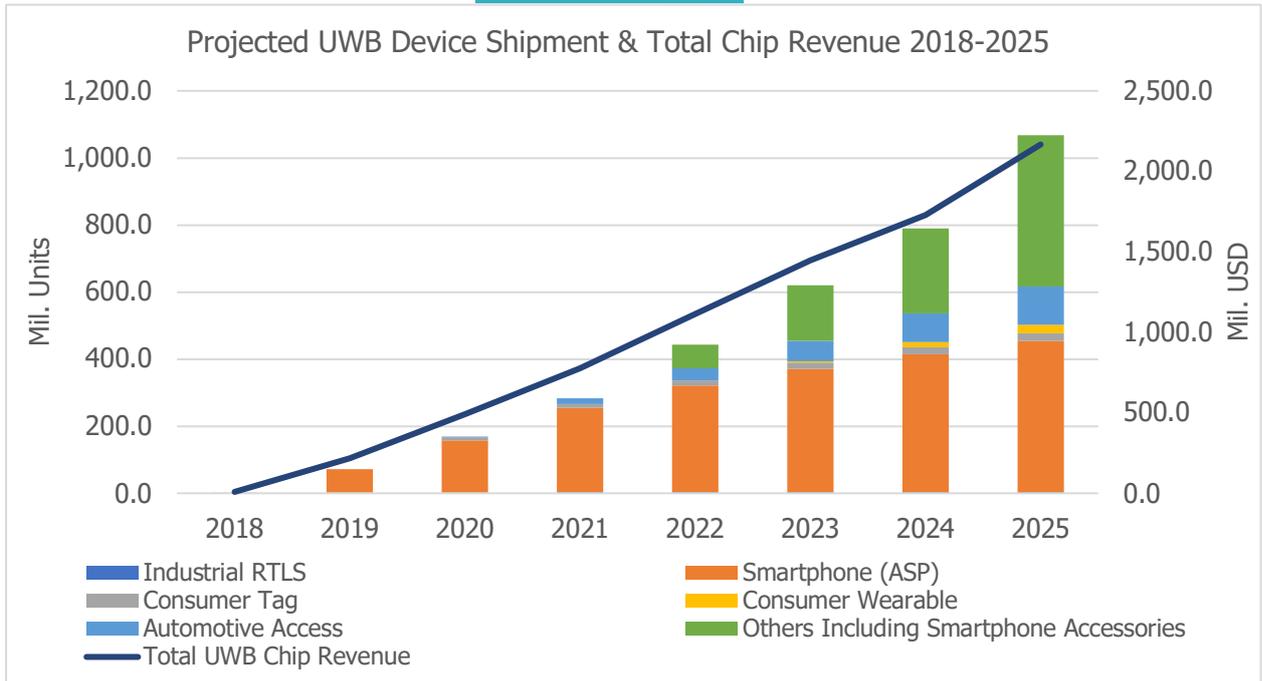


Figure 2 Device shipment and chip revenue, Source UWB Alliance, June 2020



About UWB Alliance

UWB Alliance is an international non-profit organization headquartered in Washington D.C. dedicated to the promotion and growth of the Ultrawideband (UWB) industry. The UWB Alliance promotes large- scale deployments of UWB technology by fostering the advancement of the regulatory environment for UWB technologies, providing a centre of excellence for UWB education and coexistence, while endorsing cooperation with interoperable specifications and standards. For more information regarding the UWB Alliance, visit www.uwballiance.org

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