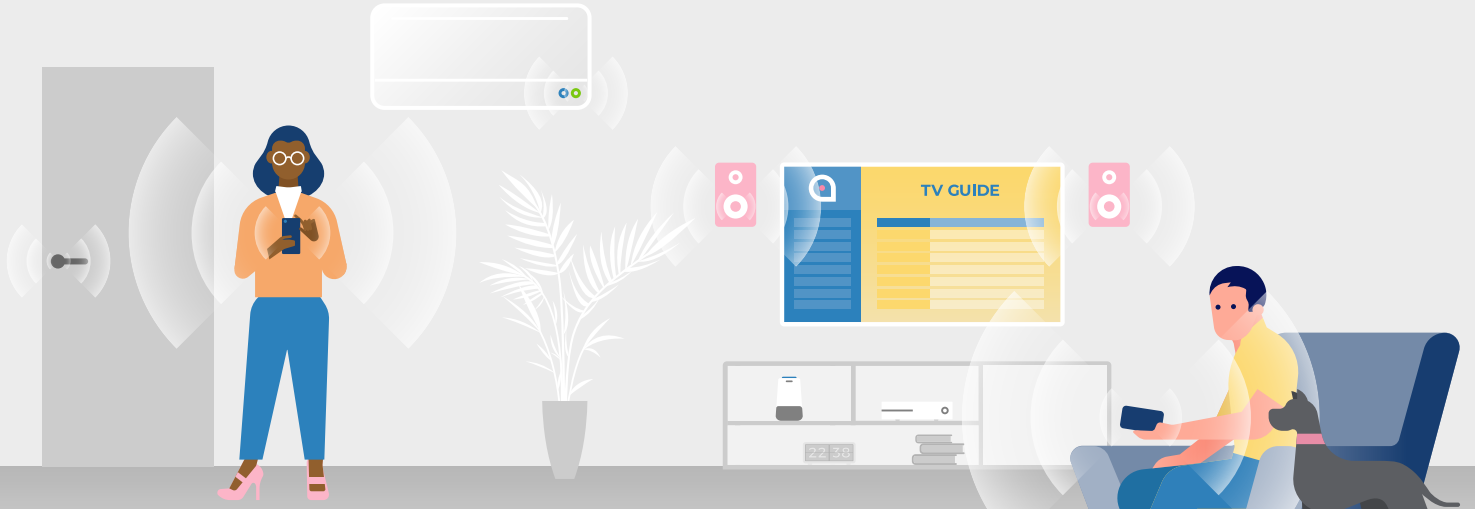

Point-and-Trigger Control

The Challenge: An Easier Way to Control Your Home Electronics

By now, many of us have gotten used to voice-activated AI assistants like Alexa, Google Assistant, and Siri, and smartphones, as well as smart watches, plugs, thermostats, televisions, and more. Many of them have or soon will be, equipped with ultra-wideband (UWB).

While AI has helped simplify controlling home electronics, it's not always ideal. Maybe someone is sleeping nearby and you don't want to use voice command. Or you might have five different light fixtures programmed, but can't remember what you called the one you want to turn on. In these cases, searching through our phone for the correct device or app can be time-consuming and cumbersome.

The Solution: Smart, Intuitive Control Apps with UWB

Since UWB is becoming more prevalent in the marketplace, our idea of smart devices is getting an upgrade with point-and-trigger control applications. Just like the name says, point-and-trigger applications allow you to point your UWB-enabled device – like a smartphone – toward another UWB-enabled connected home device like a television, light, or thermostat – to interact with that device.

Because UWB technology is highly accurate in determining your precise location in real-time, your smartphone can detect exactly which device you're pointing at and will automatically open up a relevant control panel. Once the relevant control panel is open, you'll be able to change the TV channel or radio station, turn up a speaker, turn on a light, or turn down the temperature. Ultimately, point-and-trigger applications will also be able to find song lyrics and suggest new ways of engaging with your devices. Before you know it, every electronic home device will be under your control!

Point-and-Trigger in the Marketplace

This IoT revolution in smart home UWB-enabled devices has already begun, and FiRa® Consortium member Xiaomi dove right in. It has exhibited the potential of this technology with what it calls “one finger control” where users can pick up their phone, point it at the smart device, and the control interface will automatically pop up. This lets users turn on the television, change the desk lamp color, select songs, and view lyrics. This allows them to control every smart device with one finger.

Apple, another FiRa member, has incorporated UWB in its iPhone, Apple Watch, HomePod mini, and HomePod (2nd generation). Apple is also using UWB technology for its Nearby Interaction (NI) framework which allows an app to acquire the position of devices such as a taxi or rideshare app that uses real-time user information to identify the relative locations of a driver and a customer. The NI framework was created to help easily integrate UWB into various apps and accessories, giving users near seamless control over their devices.

Linking Usage Behavior to Usage Costs

UWB is not only positioned to make your life easier with smart home technology, it could help you save money. Using UWB and other technology, your phone and home electronics will one day be able to collect and analyze data on your behavior and electricity usage in a set environment. This could allow you to track your power consumption for specific electronic home devices.

Seeing how much power you use for lights, televisions, heat/AC, and other devices, you may be encouraged to adopt more reasonable and sustainable usage habits. This can help keep utility costs down, enable you to make adjustments when overall community usage is highest (like using air conditioning on a hot day), and ultimately help reduce a household’s energy-related carbon dioxide emissions.

The Future of Point-and-Trigger

Smart home applications are at an exciting tipping point when it comes to UWB. Having UWB technology in our smartphones and watches is just the first step. We’re well on our way to being able to control our home electronics and systems with a simple touch or voice command to our personal devices. This use case is just the tip of the iceberg for UWB-enabled point-and-trigger smart home technology.