



# TSG UWB study – Status update

GSMA TSG#45

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# **Status and Next steps (proposals)**

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- LS(es) were sent to ETSI, FiRa, and CCC in Jan.
- ETSI – Requirements include UICC-UWB interface, HCI work pending
- FiRa – Liaison agreement under way, asking operators' needs
- TSG UWB Study pending – a gap analysis needs FiRa spec. (not open)
- **Next step #1 – to check operators' interests in UWB use cases**
- **Next step #2 – reply LS(es) to ETSI and FiRa**
- Next step #3 - Use cases gap analysis in TSGUWB
- Next step #4 – Requirements gap analysis in TSGUWB
- **Any volunteers to continue HCI work in ETSI SCP TEC?**
- **Any volunteers (FiRa members) for requirements gap analysis within TSGUWB?**

# UWB Use Cases (@TSG#42)

Home	Shopping
<ul style="list-style-type: none"><li>• Front door access</li><li>• Automatic control of lightning/smart speaker/TV – automatically turn on/off as people walk around</li><li>• Find my devices</li><li>• Car access</li></ul>	<ul style="list-style-type: none"><li>• Indoor navigation</li><li>• Target advertisement/discount coupon</li><li>• Tap free payment for shopping, parking, and drive-through</li></ul>
Work (Office)	COVID-19
<ul style="list-style-type: none"><li>• Building/office access</li><li>• Laptop/server access</li></ul>	<ul style="list-style-type: none"><li>• COVID-19 contact and tracing apps</li><li>• Counting people (e.g. shopping mall, conference room, theatre)</li></ul>
Others (General and combined)	
<ul style="list-style-type: none"><li>• Secure access: car/house/office/device access, rider identification</li><li>• Control: presence-based control (smart speaker, smart TV, lighting and temperature), directional sync with other peer devices</li><li>• Location: asset tracking, people counting</li><li>• Combined use cases with other connectivity: e.g. car door unlock with UWB, but activation of car with tap, other RF, or a user confirmation with UWB app</li></ul>	

# UWB Use Cases (FiRa consortium)

Smart home & Consumer	Smart Retail
<ul style="list-style-type: none"><li>• Point and trigger controller app</li><li>• Residential access control</li><li>• Easy (logical) access to personal Devices</li><li>• AR gaming</li><li>• Gesture-based control</li><li>• VR gaming and group play</li><li>• Find someone/something nearby</li><li>• Presence-based device activation</li></ul>	<ul style="list-style-type: none"><li>• Tap-free mobile payment</li><li>• Unmanned store access</li><li>• Foot traffic and shopping behaviour analytics</li><li>• Exhibition attendee management</li><li>• Targeted marketing</li><li>• Drone-controlled delivery</li><li>• In-vehicle payment</li></ul>
Smart building & industrial	Smart cities and mobility
<ul style="list-style-type: none"><li>• Social distancing</li><li>• Controlled access</li><li>• Physical access control</li><li>• Indoor navigation</li><li>• Employee gathering in emergencies</li><li>• Asset tracking</li><li>• Find equipment</li><li>• Patient tracking</li><li>• Teleconference system</li><li>• Proximity-based patient data sharing</li></ul>	<ul style="list-style-type: none"><li>• Indoor navigation</li><li>• Vehicle digital key, Rider identification</li><li>• Transportation sharing</li><li>• Ride sharing</li><li>• Driverless valet parking and pick-up</li><li>• V2X and autonomous driving</li><li>• Ticket validation</li><li>• Reserved seat validation</li><li>• Transportation fare payment</li><li>• eID validation in crowded environments</li></ul>

## **UWB Use Cases – Gap analysis (with FiRa)**

- FiRa use cases (updated) include all the use cases at TSG#42
- Combined use cases with other connectivity is missing (FiRa web site), but expect that it is included in the spec.
- Since FiRa spec. is not public, and thus gap analysis needs to be closed, after potential additional inputs and final review within TSGUWB
- To send reply LS(es) to FiRa and ETSI, with a use cases check list of operators (anonymously if preferred)

# UWB Requirements

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- Since FiRa spec. is not public, a gap analysis can only cover ETSI requirements (TS 102 412 v16.1.0)
- Alternatively, any volunteers (FiRa members) for a gap analysis with FiRa requirements
- ETSI requirements include UICC interface with UWB, while FiRa excludes it for now
- ETSI TS 102 412 v16.1.0, REQ-16-32-01 “The UWBC shall be accessible from the UICC.”

## Next steps

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- Reply LS(es) to ETIS and FiRa with operators' check list about UWB use cases (Sep.)
- Gap analysis of requirements (Oct.)
- Conclude the UWB study item by end of year?