GEONAV IoT

User Consultation Platform – Mass Market session
02/12/2020
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GEONAV IoT is an innovative Thales IoT solution, allowing real-time Indoor/Outdoor precise (<1m) tracking at PNT (Position, Navigation, Timing) User level and available worldwide.

GEONAV IoT positioning algorithms take advantage of two existing positioning technologies: E-GNSS (European Global Navigation Satellite System) and Ultra-Wide Band (UWB).

In constrained areas, the GEONAV IoT solution improves GNSS positioning, by deploying a light UWB infrastructure computing an augmented GNSS-UWB PVT (Position, Velocity, Timing) information.
GEONAV IoT

- European Global Navigation Satellite System (E-GNSS)
- Ultra-Wide-Band (UWB)
- Use-cases: Elite sport and Valuable Asset Management

GEONAV IoT H2020:

- Improving GeoNav IoT outdoor location using Galileo dual-frequency and 5G
- Addressing new use-case: Autonomous drones
- Setting up a European value chain for industrialisation and preparing market entry
3 use cases

LBS challenges

- Continuous, accurate and reliable position
- Real time localisation monitoring
- Related use case data computation and visualisation
GeoNav IoT for elite sport

Positioning in constraint environment such as stadium

Web application designed for real time monitoring and performance assessment

Equipment size and weight adapted to athletes

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Service area</th>
<th>Availability / Timeliness</th>
<th>Resilience (Robustness/Trust)</th>
<th>Integrity</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>Vertical</td>
<td>Urban canyon</td>
<td>Canopy</td>
<td>Indoors</td>
<td>TTFF</td>
</tr>
<tr>
<td>2m (2 sigma)</td>
<td>2.5m (2 sigma)</td>
<td>Global</td>
<td>Yes</td>
<td>Yes</td>
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GeoNav IoT for asset management

Positioning indoors and hybrid environment

Web application adapted to each industrial site

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2m (2 sigma) : 2,5m (2 sigma) : Global

Yes : average 6 month autonomy of the full system

Typical battery capacity (in A/h) : 2.4 A/h

Battery capacity available for GNSS (in % of the total battery capacity) : 1.3%
Thank you!

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