

ULTRA-LOW POWER CONSUMPTION IC SOLUTIONS FOR TRACKERS AND TELEMATICS

INTERACTIVE SESSION REPORT 2/3 - HOSTED BY SONY EUROPE

The 8th Telematics Conference CEEurope was held in Poland end of September 2018. The main topic this year was Telematics Industry Collaborations. The event also hosted 3 interactive sessions, which provided brainstorming and workshop style interaction among the participants and the facilitators.

The second interactive session was hosted by company Sony Europe and facilitated by Steve Beck, General Manager at Sony Semiconductor. The facilitator introduced the framework of the session and acted as moderator, while the participants actively participated in the discussion about “Ultra-Low Power Consumption IC Solutions for Trackers and Telematics”. The goal of this session was to describe the IC, module, and algorithm solutions Sony offers to tracker/telematics device developers. These include GNSS Rx, CAT-M1/NB-IoT cellular wireless connectivity, and Untethered Dead Reckoning (UDR) technologies.



The session began with Sony briefly outlining the low-power silicon solutions and the benefits to battery life and reductions in cost and size that could be achieved. These benefits enable a number of use-cases that are currently commercial unviable or they allow improvements to the services offered for existing use-cases.

In this interactive session, the new and innovative telematics use cases opened up by the ultra-low power consumption were discussed. The audience was engaged in a discussion about the use-cases that would benefit their businesses and some of solutions are listed below:

- Tracking of railway wagons – power is not available, so the tracker must have a battery life of approximately 5 years while being robust and tamper-proof;



- Shipping containers – again no power is available, but the harsh radio frequency environment of a container ship and the challenges of wireless connectivity when at sea were acknowledged as additional items to be studied;
- Tracking of perishable and fragile items whilst in transit – trackers must be small and cheap so they can be deployed in large numbers;
- Car theft and kidnapping – trackers that can remain in a quiescent state (sleep) for a long time, maybe several years, then transmit location for many days or weeks when triggered.



The 90 min interactive session was, according to its facilitator Steve Beck, General Manager at Sony Semiconductor, “very useful to exchange views between those who are creating systems and solutions with technology providers such as Sony Semiconductor. Information about the capabilities of technology allowed new thinking amongst the solution providers”.

One outcome for further action was the need for a power consumption calculator for the GNSS Rx and wireless communication IC that would allow the tracker/telematics vendor to input the conditions of their use-cases and obtain an accurate battery life.

