



AŽD Praha s.r.o.

C-ITS
GS SWOC

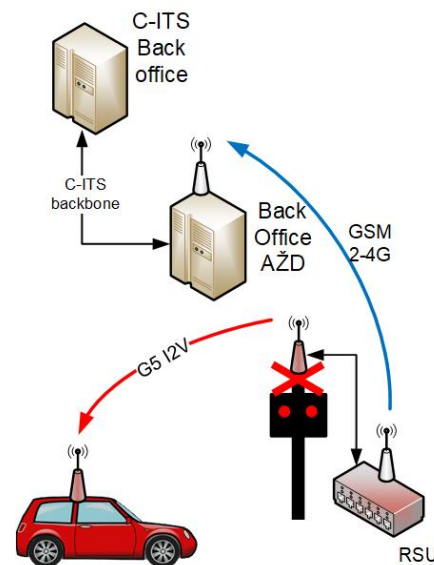
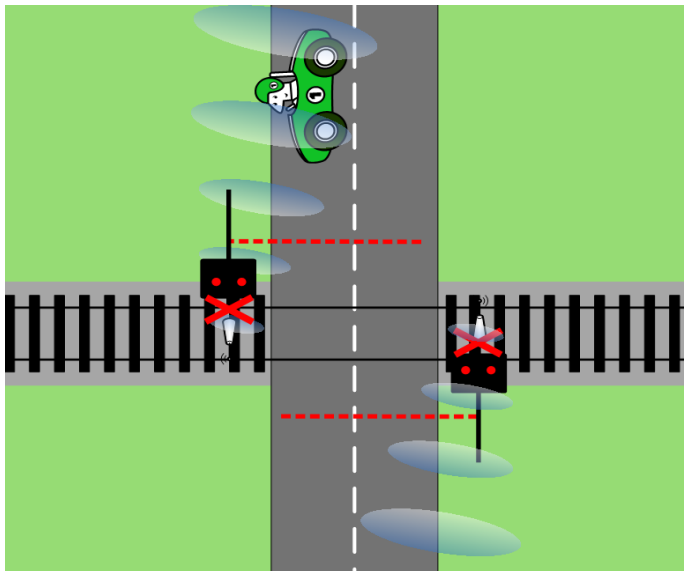
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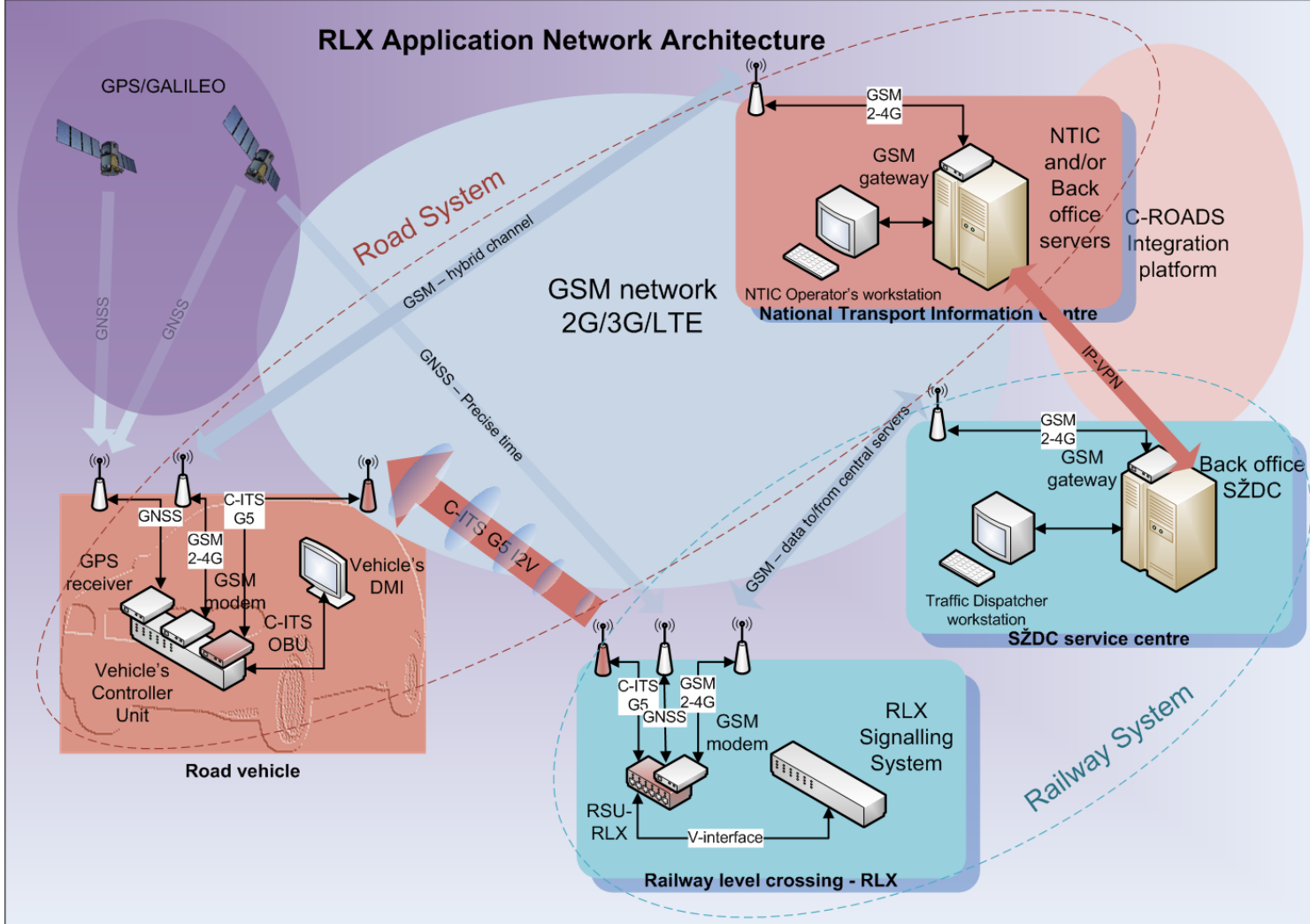
Innotrans 2022, Berlin

C-ITS

- Proposed, developed and tested in the C-Roads pan-European project
 - Use case RLX - the level crossing status is transmitted to arriving road vehicles and presented to the driver via the dashboard



RLX Application Network Architecture

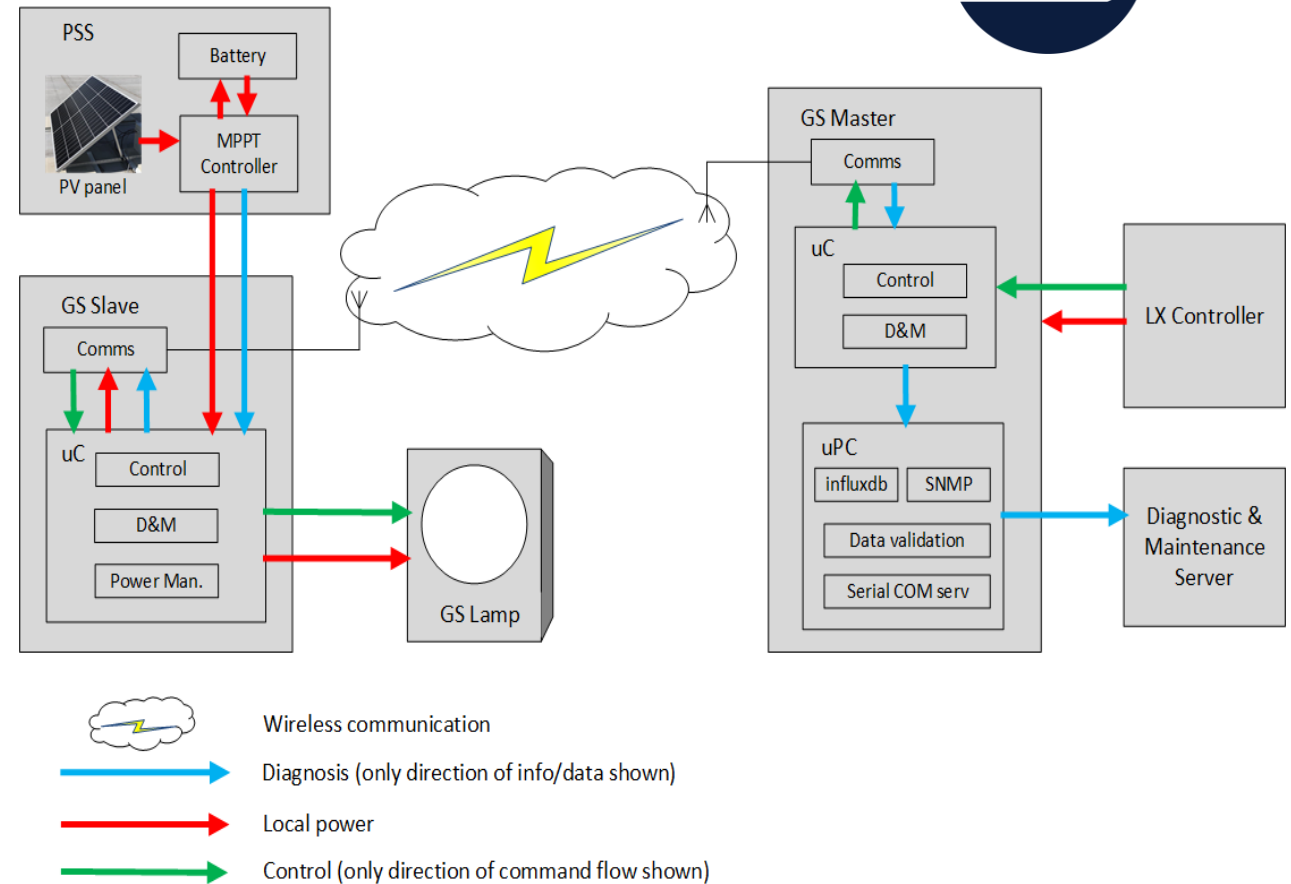


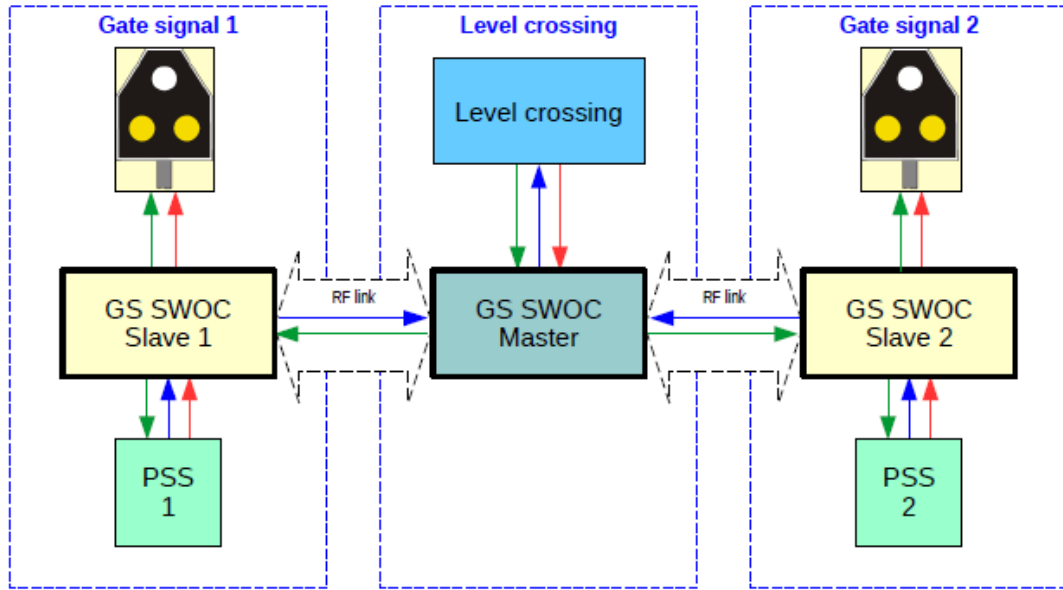
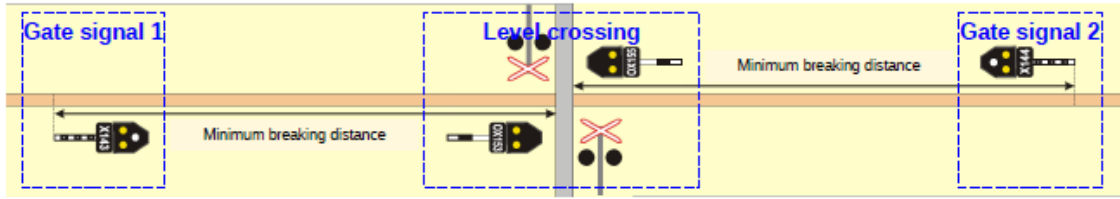
- Pole with transmitters and antennas near the level crossing

- The network architecture shows all constituents of the complete system solution
- Positions of the approaching car is derived from a GPS/Galileo satellites
- Information transfer is secured by state-of-the-art encryption and authentication

Gate Signal Smart Wayside Object Controller

- Proposed, developed and tested in the Shift2Rail IP2 projects
 - GS SWOC is locally powered by energy harvesting while using a LED lamp and applying a sleeping mode to save energy
 - It is connected by direct point-to-multipoint wireless connection to the respective level crossing while ensuring safe and secure data transmission





← Power
← Diagnostics
← Control



- The block scheme shows a Master located at the level crossing control system
- Gate signals are located in both directions from the level crossing at around 1 km
- Information transfer among Master and Slaves is secured by state-of-the-art encryption and authentication

- Pole carries LED lamp, solar panel, batteries, antenna and the Slave part of the GS SWOC

Thank you for your attention

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