

IntelliDrive Research Signal Phase & Timing (SPaT) and Related Messages

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Research Goal

- Define an open interface for two-way communication of traffic signal information between traffic signal controller and a mobile device

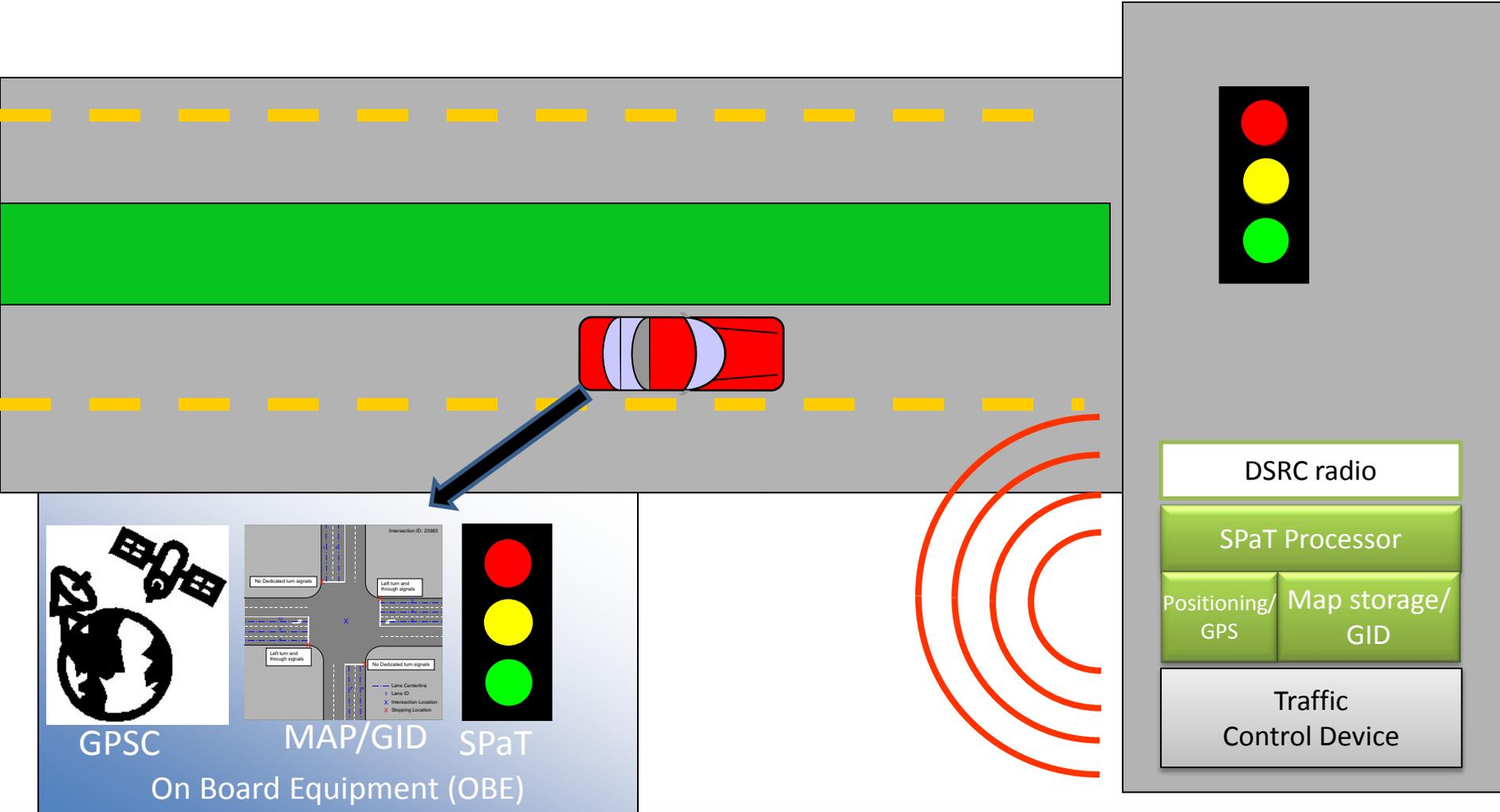
Purpose of SPaT

- Traffic signal control information that conveys the current movement state of each active phase in the system will provide the capability for:
 - **Safety** applications such as warnings and alerts for crash avoidance
 - **Mobility** applications to enable dynamic and efficient traffic management
 - **Environment** applications that allow savings in fuel consumption and reduction in CO₂ emissions.

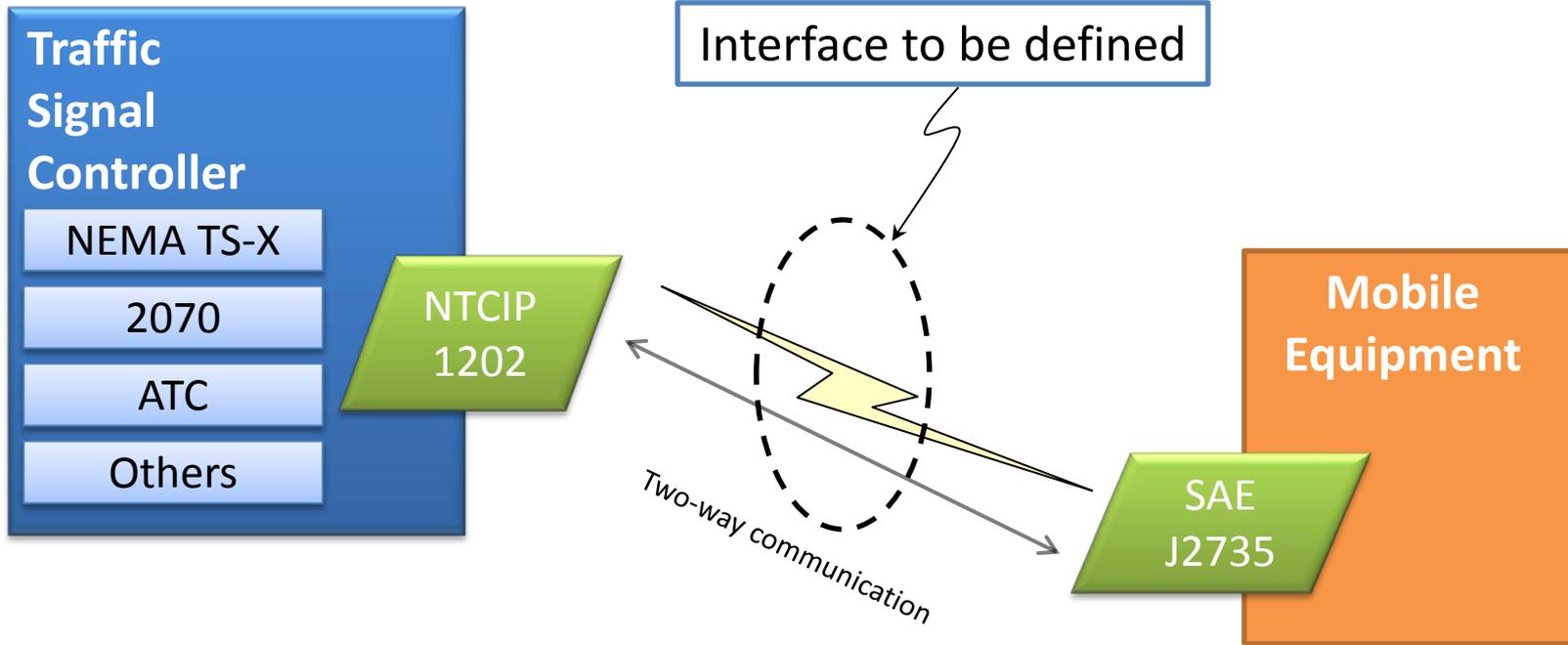
Related Messages

- Map data that conveys the geometric layout of the associated intersection
- Positioning data that allows the correlation of the signal and map data

SPaT Operation Overview



Open Interface – Concept



Desirable Characteristics

- Minimize the need for new standard objects, or ideally: no new objects.
- Traffic Controller standard may reference SAE J2735
- SAEJ2735 reference NTCIP 1202
- Updates expected for both Standards

Process for Development

- Review of relevant Past and Current research
- Creation of user forums
 - Traffic Control Industries
 - Modal Partners
 - Vehicle and Tier-1 OEM
- Concept of Operation Development
- Prototype Development
- Finalize Interface

Signal Phase and Timing Research Roadmap (planned)

