SAFETY SERVER

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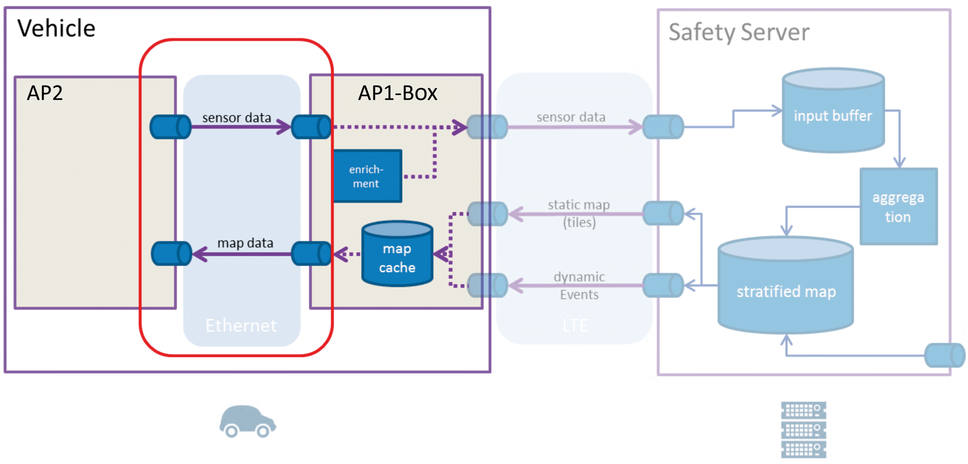
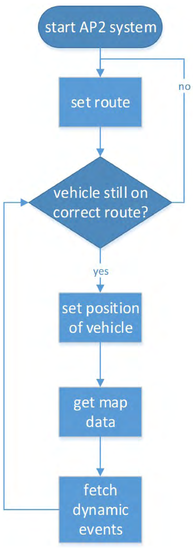
In-vehicle Communication: AP1-Box and Map Cache



COMMUNICATION BETWEEN AP1-BOX AND AP2 SYSTEM

- The in-vehicle communication between AP1-Box and AP2 system is based on Ethernet 1000Base-T.
- Upload: The SENSORIS data, captured by the sensors of the AP2 system, is sent to the AP1-Box.
- To enlarge the sensor range of the vehicle environment, the AP2 system uses the data provided by AP1-Box as a virtual sensor.

To achieve data requests of high frequency, the following process is defined:



- At first, the route of the vehicle must be published to the AP1-Box enabling it to load the necessary data.
- The position of the vehicle is regularly updated. The AP1-Box updates its map data based on the position and loads it into the RAM.
- The functionality to provide the data is separated into two methods.
  - *getMapData()* – provide static data
  - *getEvents()* – provide dynamic events

This enables the AP2 system to choose different ranges for the various types of data.

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