Kapsch CMCC.
Connected Mobility Control Center.

The Kapsch Connected Mobility Control Center (CMCC) provides highly robust and advanced capability for managing the connected transportation assets used in a Smart City. It serves as central ITS station (C-ITS-S) and represents therefore the interface between the Traffic Management Center (TMC) or Traffic Control Center (TCC) and the connected vehicle roadside equipment (Roadside ITS stations or R-ITS-S).

The Kapsch Connected Mobility Control Center (CMCC) provides advanced capability for managing, configuring and monitoring of V2X roadside equipment. It also enables the operator to generate C-ITS messages and collect data from vehicles for further processing. CMCC manages therefore your network of Roadside Equipment e.g. Roadside Units (RSUs) and the messages that they send and receive to and from vehicles and other road users.

Specific services enable the monitoring and managing of the Connected Vehicle devices. Generally these services cover all important operation and maintenance aspects for a central ITS station.

Device Management: Functionality to configure and setup Roadside Units (R-ITS-S).

Message Management: Graphical interfaces to define and configure standardized messages according

> ETSI ITS-G5 standard set

> IEEE WAVE standard set

Events and warnings about hazardous locations or dangerous situations like broken down vehicles, work zones or traffic jams can be disseminated as well as speed limits and topological information of intersections.

System Monitoring: Real-time displays, alerts, notifications and
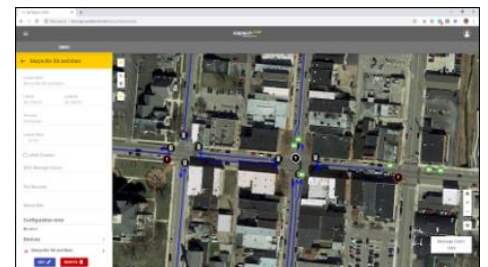
CMCC manages, configures and operates your V2X system standalone or integrated in your Traffic Management Center.

dashboards of the status of the various devices R-ITS-S and V-ITS-S in the connected vehicle system.

Data Monitoring: Real-time displays, alerts, notifications and dashboards showing data elements and they pass through the system. The data can be used for example for traffic flow analysis and similar.

Communication Services: The CMCC provides connectivity to outside systems for data gathering, external processing and analytics.

Technical features

Device Management

> Defining and configuring all the devices in the system.

>> RSUs – RoadSide Units
>> Mobile Units (e.g. work zones)
>> Other Data Input Sources

> Assigning them to Locations and configuring the locations

Message Management

> Support of standardized protocol sets

>> ETSI ITS-G5
>> SAE J2735 / IEEE WAVE

> Customized dissemination and broadcasting of the desired information

System Monitoring

> Monitoring tools to continuously evaluate the system performance

> Issue can be identified and solved before they become problems

> Automated alerts to not miss anything.

Data Monitoring

> Real-time data display - see what happens
> Storage, processing and forwarding of sent and received messages
> Enabling of statistical analysis and prediction possibilities

Graphical User interface

> Intuitive User interface to easily create desired messages

> Easily plot out intersection and road segment details

Flexible Architecture

> Easily scaleable – grow as you need

> Platform independent

> Robust, high availability (HA) architecture

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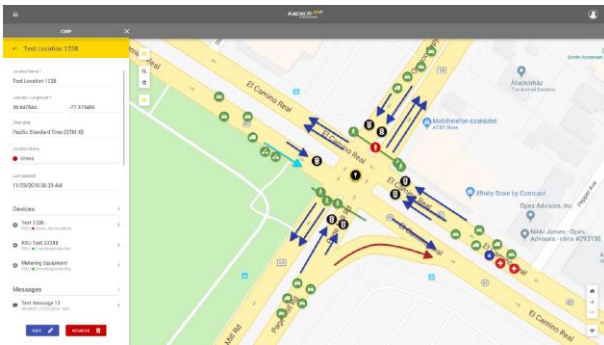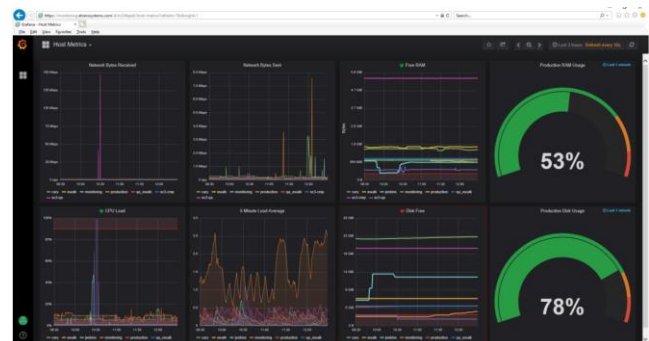

CMCC – Live-Data View

CMCC – Core Components
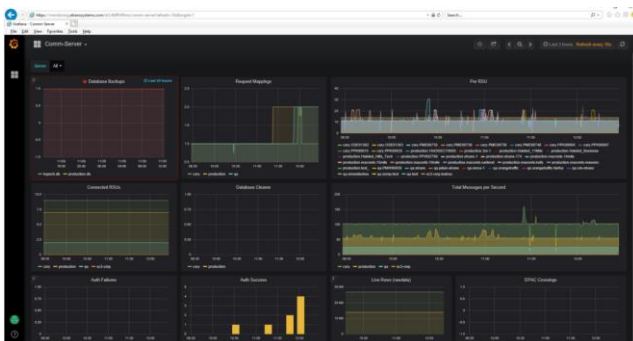
**CMCC – Data Monitoring Dashboard
showing overall processing of received messages**

**CMCC – System Monitoring Dashboard
providing insights into the general system performance**