InTranSE -II Program

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In news– Indigenous Intelligent Transportation Systems (ITS) Solutions for Indian Traffic Scenario has been launched under the InTranSE -II Program recently.

About InTranSE -II Program-

- An indigenous Onboard Driver Assistance and Warning System – ODAWS, Bus Signal Priority System and Common SMart iot Connectiv (CoSMiC) software have been launched under ITS Endeavour for Indian Cities Phase-II initiative of Ministry of Electronics and Information Technology (MeitY).
- The product was developed as a joint initiative by Centre for Development of Advanced Computing (CDAC) and Indian Institute of Technology Madras (IIT-M).
- Mahindra and Mahindra was the industrial collaborator for the project.

Onboard Driver Assistance and Warning System – ODAWS-

- **ODAWS incorporates vehicle-borne sensors for monitoring driver propensity** and vehicle surroundings to **deliver acoustic and visual alerts for driver assistance**.
- The project **involves the development of sub-modules such as the navigational unit,** driver assistance console, and **mmWave radar sensor** that probe positional and dynamic characteristics of surrounding vehicles.
- The ODAWS algorithm is used to interpret sensor data and offer real-time notifications to the driver, boosting road safety.
- As per Ministry of Road Transport and Highways of India (MoRTH), **in around 84 percent of cases, "driver error"** was cited as the cause of the accident.

Bus Signal Priority System-

- **Bus signal priority System is an operational strategy that modifies normal traffic signal operations to better accommodate in-service public buses** at signal-controlled intersections.
- Unlike a blind priority that is given for emergency vehicles, here it is a conditional priority, which is given only when there is an overall reduction in delay for all vehicles.
- The developed system will enable to **minimize person delay by providing priority to public transport buses,** either through Green extension or Red truncation, considering all vehicles approaching a signalized intersection.

Common SMart iot Connectiv (CoSMiC)-

- It is **a middleware software** providing standard based deployment of IoT (Internet of things) adhering to oneM2M based global standard.
- **It facilitates users and application service providers in various vertical domains to use application agnostic open standards** and open interfaces **for end to end communication** with well-defined common service functionalities complying with oneM2M standard.
- The horizontal silo architecture ensures interoperability and data exchange between different IOT devices and applications and **avoids vendor lock-in**.
- **CoSMiC comply with 12 common service functions which are** Registration, Discovery, Security, Group Management, Data Management & Repository, Subscription & Notification, Device Management, Application & Service Management, Communication Management, and Delivery Handling, Network Service Exposure, Location, Service Charging and Accounting.
- It provides a Dashboard page showing IoT units, products, applications, and its live data in a Geographical Information System (GIS) map.

- A secondary data repository is also available for historic charts and reports.