



Initiatives Launched under InTranSE-II

For Prelims: Onboard Driver Assistance and Warning System (ODAWS), Bus Signal Priority System and Common SMart IoT (Internet of Things) Connectivity (CoSMiC) software.

For Mains: Intelligent Transport System, Initiatives to control road accidents.

Why in News?

Recently, the Ministry of Electronics and Information Technology (MeitY) has launched an indigenous **Onboard Driver Assistance and Warning System (ODAWS), Bus Signal Priority System and Common SMart IoT (Internet of Things) Connectivity (CoSMiC) software.**

- It has been launched under **Intelligent Transportation System Endeavor Phase-II (InTranSE -II).**

What is Intelligent Transportation Systems Endeavor for Indian Cities?

- Intelligent Transportation System(ITS) is a revolutionary **state-of-the-art technology.**
- It will **achieve traffic efficiency** by prompting efficient infrastructure usage, minimising traffic problems, enriching users with prior information on traffic, reducing travel time and enhancing safety & comfort of commuters.
- This system **can detect any accident and receive alerts** for ensuring that an ambulance reaches the accident spot within 10-15 minutes.
- To **synergize the transformation in ITS with more energy and pace** MeitY took early steps by bringing together premier academic institutes like Indian Institute of Technology (IIT), Indian Institute of Science (IISc), Indian Institute of Management (IIM) etc. and Premier R&D **Centre like Centre for Development of Advanced Computing (C-DAC)** under one umbrella.
- Such an initiative formulated the Collaborative **Intelligent Transportation Systems Endeavor for Indian Cities (InTranSE)** during the year **2009-2012 (Phase-I).**
- The **InTranSE Phase-II program (2019-2021)** is an extension of the **InTranSE Phase-I program which** is aiming at undertaking R&D projects collaboratively with IIT Bombay, IIT Madras, IISc Bangalore and C-DAC Thiruvananthapuram.

What is 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 **Millimetre Wave RADAR** (mmWave radar) sensor.
 - The mmWave RADAR is **an extremely valuable sensing technology ideal for detection of objects and providing information on range, velocity and angle** of these objects.
- The navigational sensor provides a precise **geo-spatial orientation of the vehicle as well as trends in driving behaviour.**

- The ODAWS algorithm is used to interpret sensor data and offer **real-time notifications to the driver, boosting road safety.**

What is a 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 minimise person delay by providing priority to public transport buses**, either through Green extension or Red truncation, considering all vehicles approaching a signalised intersection.
 - **Green Extension** provides **extra time for a detected transit vehicle to clear an intersection.** Green extension is most applicable when transit runs at the back of the vehicle queue, as is common at the first signal after a far-side stop.
 - **Red Truncation** provides a green phase earlier than otherwise programmed, clearing an intersection approach with a waiting transit vehicle sooner than otherwise.

What is CoSMiC?

- It is a **middleware software providing standard based deployment of IoT** adhering to oneM2M (Machine -To Machine) based global standard.
 - **oneM2M** is the global standards initiative that covers requirements, architecture, [API \(Application Programming Interface\)](#) specifications, security solutions and interoperability for Machine-to-Machine and IoT technologies.
- 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.
- With this in view, **CoSMiC common service layer is used to interface any vendor specific standards and for increasing interoperability** with smart city dashboard.

What are the other Government Initiatives to Control Road Accidents?

- **Identification and Rectification of Black Spots:**
 - **High priority has been accorded to identification and rectification of black spots** (accident prone spots) on national highways.
 - Regional Officers were delegated powers for technical approval to the detailed estimates for rectification of identified Road Accident black spots.
- **Road Safety Audit:**
 - Road safety has been made an integral part of road design at the planning stage. **Road Safety Audit of all highway projects** has been made **mandatory at all stages i.e. design, construction, operation and maintenance.**
- **Facilities for the Persons with Disability:**
 - Centre also issued **guidelines to all states for pedestrian facilities on National Highways for persons with disabilities.**
 - Government made **provisions for ambulances with paramedical staff, Emergency Medical Technician or Nurse at toll plazas** on the completed corridor of National Highways.
- **Rewarding the Savers of Accident Victims:**
 - A scheme was announced for **grant of award to those who save lives of accident victims by administering immediate assistance** and rushing them to hospital or Trauma Care Centre.

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