

2016/Sig/P/Misc

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SB

**Sub: Supply of material pertaining to the Ministry of Railways for the Pre- Budget Economic Survey 2019-20.**

**Ref: Economic Adviser's Note reference No. 2016/EU/50 dated 31.10.2019.**

Vide note under reference above, information pertaining to Signal and telecom Directorate is enclosed herewith.

**This has the approval of MST.**

*Adwards*  
19/11/19  
**Director (Signal)**

**Economic Adviser**

2016/Sig/P/Misc

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Vide note referred above, the information pertaining to Signal & Telecom Directorate is as under:

**Signaling**

**ADOPTING MODERN TECHNOLOGIES**

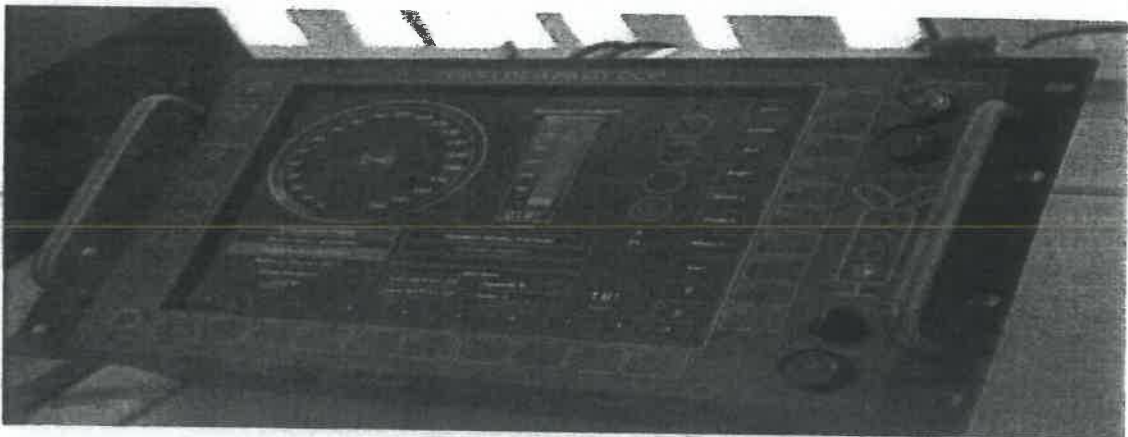
For prevention of accidents, increase in speed and section capacity, Automatic Train Protection (ATP) System has been planned to be provided over complete Indian Railways. Following progress has been made in the efforts of providing ATP system over Indian Railways:

**1. European Train Control System (ETCS) Level-2:-**

A work of Modernization of Signaling System on complete Indian Railway network has been included in the works programme 2018-19 pending approval of NITI Aayog, EBR and sanction of Cabinet Committee on Economic Affairs (CCEA).

The work includes provision of ETCS level-2 System, which is the state of art ATP System. This system increases line capacity, in addition to enhancing level of safety. It has been decided, initially to go for extensive trials of this system before large scale deployment on Indian Railways.

Accordingly, ETCS Level-2 work has been sanctioned on 4 sections on Nagpur – Badnera, Jhansi – Bina, Yerraguntalla – Renigunta, & Vizianagram – Palasa sections totaling to 640 Route km on Golden Quadrilateral & Diagonal route.



**Driver Machine Interface (DMI)**

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19/11/19

## 2. Train Collision Avoidance System (TCAS):-

Train Collision Avoidance System (TCAS) is an indigenous Automatic Train Protection (ATP) System developed under Make in India policy in association with Indian Manufacturers. Field trials and safety validation of the system for Absolute Block Signaling System for speeds upto 110 Kmph has been completed. The system has been installed on Lingampalli – Vikarabad – Wadi & Vikarabad - Bidar sections (250 Route km) on South Central Railway. The system is being further implemented on 1199 Route km on South Central Railway. Trials on Automatic Block Signalling System and for speed upto 160 Kmph are under progress.

## Telecom

### A. Wi-Fi Facility at Railway Stations

Indian Railways have planned to provide Wi-Fi facility at Railways stations. So far Wi-Fi facility has been provide at **5326 stations** and work is in progress at balance feasible stations. This facility will augment the digital footprint and bridge the digital divide between urban and rural masses.



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JM  
19/11/19