

[Translation]

**Automatic Warning System**

892. SHRI DATTA MEGHE :  
 SHRI PANKAJ CHOUDHARY :  
 SHRI P.C. THOMAS :  
 SHRI RAMPAL SINGH :  
 SHRI SURESH WARPUDKAR :

Will the Minister of RAILWAYS be pleased to state:

(a) whether the Railways have developed an automatic warning system based on the latest modern radio technology which would rectify the errors committed by driver while signalling in case of any danger;

(b) if so, the details thereof; and

(c) the name of the routes where this new technique is likely to be introduced initially on experimental basis?

THE MINISTER OF STATE IN THE MINISTRY OF RAILWAYS, MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS AND MINISTER OF STATE IN THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION (SHRI RAM NAIK) :  
 (a) The Railway have not yet developed Automatic Warning System based on radio technology. However, it is proposed to undertake a pilot project of radio based European Train Control System (ETCS)—Level 2 on Delhi-Mathura section in co-ordination with UIC (International Union of Railways, Paris).

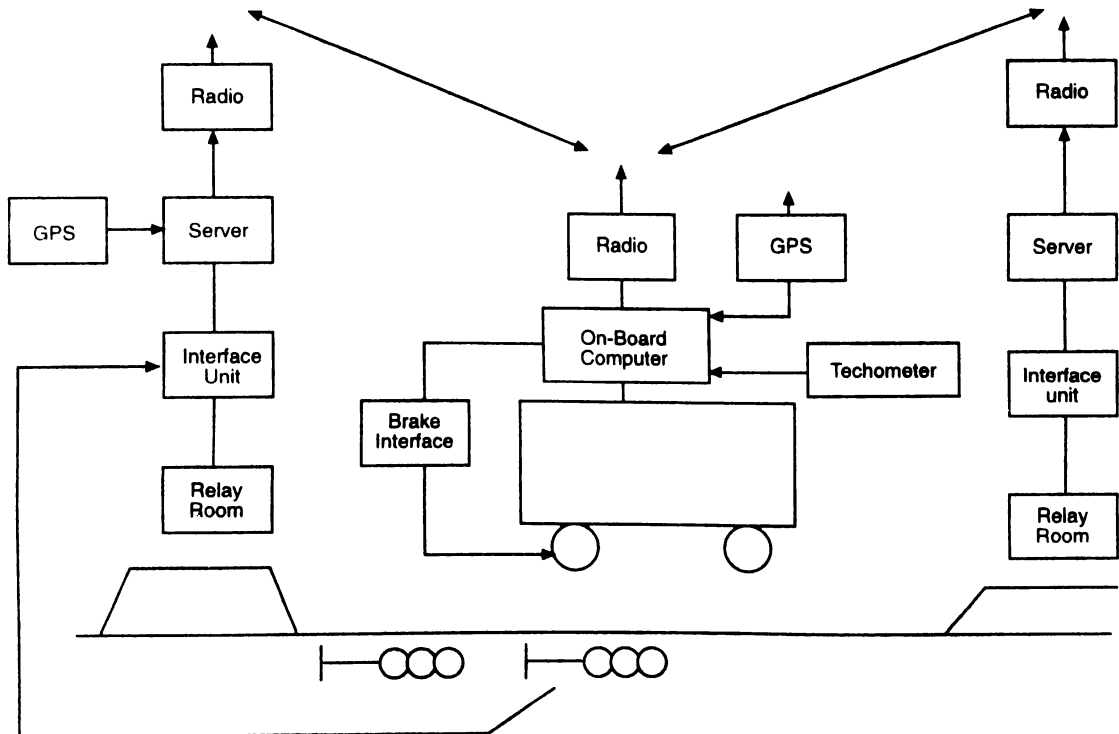
(b) A Statement is attached.

(c) The new technology is proposed to be taken on Delhi-Mathura Section.

**Statement**

(b) The details are as under:—

ETCS Level-2 system will be an overlay on the current signalling system as shown in the sketch.



From the station interlocking, the conditions about signal aspects are acquired and then processed for its transmission via radio to locomotive. Signal aspect conditions of auto signals, intermediate block signals and interlocked gates can be brought to station on signalling cable and connected to interface, scanning station signal aspect condition. Where more than one cabin are used for interlocking at station, signal aspects can also be brought at one cabin and then further transmitted via radio. Potential free contacts of signal aspect position of station and other signals between adjacent station can be made available at station.

Digital radios shall be installed at each station. Server at each station keeps track of all the locomotives in its jurisdiction. Software and hardware for inclusion of DGPS input for train position determination shall be included in ATP architecture. The train positioning module is connected to odometers and to DGPS-satellite receivers, which produce position information. The actual train position is determined logically and is based on a stored route map, differential correction data received from station and odometer on loco.

ETC-Level 2 system is envisaged to provide the following safety features:—

1. Automatic stoppage of train to 'Red' signal in case driver does not apply brake in time.
2. Enforcement of Permanent Speed Restrictions.
3. Enforcement of temporary Speed Restriction.
4. Approach Warning of train to Level Crossing.
5. Approach Warning of train to staff working at site.

[English]

#### **Construction of Over Bridges in Maharashtra**

893. SHRI ASHOK NAMDEORAO MOHAL : Will the Minister of RAILWAYS be pleased to state:

(a) whether the Union Government have received proposals from the Government of Maharashtra for construction of over bridges on the railway lines at Kedgaon, Kiraki Bazar-Aundh and Dapodi in Pune district;

(b) if so, the details thereof;

(c) whether the local Members of Parliament have also requested the Union Government in this regard;

(d) if so, the time by which the decision for construction of over bridges at said places is likely to be taken; and

(e) the time by which the construction work of over bridges is likely to be undertaken?

THE MINISTER OF STATE IN THE MINISTRY OF RAILWAYS, MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS AND MINISTER OF STATE IN THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION (SHRI RAM NAIK) :  
(a) Yes, Sir.

(b) A Statement is attached.

(c) Yes Sir. Hon'ble M.P. Sh. Ashok N. Mohol wrote to Minister of Railways in Aug. 1998 on the issue.

(d) Depends upon the fulfilment of necessary formalities by the sponsoring Authorities.

(e) Depends upon the approval of works.

#### *Statement*

(i) **Road Over Bridge (ROB) at KEDGAON** : The proposal is in regard to replacement of existing level crossing at K. 246/0-1 on Pune-Solapur section. The level crossing qualifies for replacement with ROB on cost sharing basis but the State Govt. has not yet sponsored proposal required under extant rules. However, it is learnt that State Govt. has directed IRCON to execute the work on behalf of Maharashtra State Road Development Corporation on deferred payment basis.

(ii) **ROB at Khadaki Bazar—AUNDH** : Proposal for construction of ROB in lieu of existing level crossing at Km. 185/13-14 on Lonavala and Pune section was extended by Pune Municipal Corporation/Cantonment Board in Nov. 1995. The Level crossing qualifies for replacement with ROB on cost sharing basis but neither the Pune Municipal Corporation nor Khadaki Cantonment Board has yet completed necessary pre-requisites to enable Railway taking further action. Khadaki Cantonment Board has been reminded in Sept. 1998.

(iii) **ROB at DAPODI** : Pune Municipal Corporation has extended a proposal for construction of ROB at Km. 182/8 in March 1993 who were asked to conduct joint inspection with Railway Engineers to examine feasibility thereof. But no