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Minutes of Meeting held in Railway Board on 19.12.19 to review performance of Centralised Traffic Control (CTC) System, Tundla.

Attended by,

RAILWAY BOARD	NCR	CRIS	ASTS
Sri Rajeev Sharma (AM/Signal)	Sri G S Rawat (CSTE/P-II/ALD)	Sri Rajiv Gupta (GM/COA)	Sri Gaurav Srivastava (Manager)
Sri Anshul Gupta (PED/Signal)	Sri D K Verma (CPTM/ALD)	Sri Rahul (Dy CPM/IT)	
Sri Pradeep M Sikdar (ED/Signal Development)	Sri Vijay Malviya (Dy CSTE/CTC)	Sri Achal Jain (PPE/COA)	
Sri A S Tomar (DIR/Signal)	Sri Samarth Gupta (DTM/TDL)		

The issues discussed & deliberated as under,

SN.	Item discussed	Action by
1	<p>Sri Rajeev Sharma, Additional Member/Signal welcomed all the participants in the meeting and complimented all for successful operation of stations from CTC Tundla since 14/03/19. Presently, 20 stations are regularly being operated under CTC round the clock. CTC control is transferred to local stations for Shunting operations, Traffic Blocks and Emergency operations.</p> <p>It was discussed that following advantages are being realized from CTC Tundla:</p> <ol style="list-style-type: none"> Centralized Control & Supervision of a large section with real time movements. Operator can set the long routes (covering 2 or 3 stations by one click) within a territory with a single command. Route Stacking Command at any station to avoid frequent operation and setting of routes repeatedly at that station. Advance planning of path and plan movement of unscheduled trains. Controllers of other Departments can also see status of section without disturbing the section controller. Playback for a large section is possible. Fault management control from a central location and better disaster management. <p>AM/Sig mentioned that the various issues highlighted in the D.O. no. NCR/S&T/2115/Telecom/CTC/Pt.1 dated 17.12.19 of GM/NCR addressed to CRB, should be acted upon on priority. The additional functionalities to be provided in CTC Tundla & future CTCs being planned for IR need to be made part of CTC Specifications by RDSO.</p>	All Railways, RDSO.

1.1	He also briefed the participants regarding latest status about planning of CTCs on IR and to keep the experience of CTC Tundla in view while planning/commissioning new CTCs.	
1.2	He congratulated Eastern Railway, CRIS and M/s HBL team for their excellent efforts in achieving the successful integration of Howrah TMS with COA, which has resulted in zero manual charting of trains on COA in TMS territory. Integration of COA with TMS/CTC is a very important step and need to be invariably done wherever such Traffic Management systems are being executed.	
2	AM/Signal advised that since many CTCs/TMSs are coming on IR soon, there is a need to provide universal specification for the integration of CTC with COA at the earliest. Attributes, which are required for integration, may be asked from the user departments like Traffic, Signaling, Crew Operation and Safety.	All Railways, RDSO.
3	CTC system should be made interactive i.e. the Controller should be able to get traffic related information by raising queries for movement of trains say in next 3-4 hours so that CTC operators can plan train movements effectively. The details for this functionality to be obtained from CPTM NCR & given to ASTS for implementation.	ASTS, NCR.
4	Integration of CTC with COA at Tundla	
4.1	Integration of CTC with COA at Tundla should be planned immediately along with other requirements like PIS (Passenger Information System), MIS reports generations. The formats of MIS Reports should be obtained from Traffic and based upon logged data, required reports to be got generated. Ambience of CTC Control room building needs to be improved upon. To reduce ambient sound levels, proper acoustic absorption should be planned by providing suitable wall panels. Improving visibility of CTC wall display and work stations for CTC operators by having higher resolution displays and bigger fonts size, should be planned.	CSTE, NCR.
4.2	ASTS mentioned that they have already submitted their technical & commercial proposal for integration of CTC with COA to NCR. NCR should examine & confirm all the USER required functionalities have been included.	NCR (CSTE, COM), ASTS.
4.3	Team of ASTS, NCR (Operating, S&T) should visit TMS, Howrah jointly to see the integration of COA with TMS.	
4.4	The work of integration of CTC with COA should be planned to be completed by March 2020.	NCR (CSTE, COM), ASTS.
5	A need was felt for split control in CTC functionality where the main line and first loop line operation could be with CTC and the yard shunting operations could be with local Station. This shall be examined by ASTS from their OEMs.	CSTE, NCR, ASTS



6	The excessive delayed trains should be displayed with different color.	- do -
7	CTC monitor units be provided to other Controllers like Loco Controller, Engineering Controller, Signalling Controller etc for monitoring.	- do -
8	<p>CPTM/NCR highlighted following issues:</p> <ul style="list-style-type: none">i. It is not possible to immediately view playback display immediately in CTC. It is available only after 8 Hrs. The design should be such that the playback can be seen immediately say within 30 minutes to analyse any failure or incidence report. This functionality is available in TMS, WR and should be implemented on similar lines.ii. Call barging facility should be designed in present ISDN communication for CTC operators. This is required in emergencies so that Station masters can intervene in on-going communication of Controllers with other Stations.iii. Almost every week layout changes are being done in Panki – Ghaziabad section, however the CTC alteration is not performed simultaneously. This creates confusion and anomalies in the CTC territory. Field work and CTC database updation should be carried out concurrently.iv. KMs should be displayed with stations on the screen, which will help in deciding maintenance blocks and identification of sections for imposition of caution.v. Issue of TWRD with the CTC terminals for planning & granting of power blocks was discussed. TWRD diagrams may be made available on separate monitors.vi. Need is felt for higher resolution/bigger font size of wall display so that the CTC controllers can see train numbers on the wall display effectively for traffic planning. <p>AM/Signal advised NCR & ASTS to comply above observations on priority.</p>	- do -
9	<p>It was discussed that for following operations, CTC control is transferred to station:</p> <ul style="list-style-type: none">a. Shunting Operationsb. Emergency Remote Release/Cancellation.c. Axle Counter reset operation.d. Emergency Point Operation. <p>It was discussed that these may continue to be done locally from the Stations as done presently.</p>	



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10	<p>Following functionalities should be incorporated in present CTC/Tundla at the earliest:</p> <ol style="list-style-type: none"> i. CTC should be able to identify the signals where trains are slowing down due to one or other reason i.e. late closing of LC gates/lowering of signal and generate required reports. ii. Demo of Passenger Interface for Train Indicators & automatic Announcements for one station in CTC territory should be given by ASTS. Necessary E1s for the same to be provided by NCR. iii. Punctuality report of any Mail Express trains to be generated from CTC logged data. The train detention points to be noted in sections via CTC inputs. The logged data can be exported to Excel files, which can be downloaded, and analysis done. iv. As a trial on one territory for at least 2-3 days, CTC Train Graph should be used instead of COA for identification of attributes required in CTC for better planning & control. v. One territory should be changed to suit as per operator's requirement, even if it requires changing of 3 workstations to 4 workstations with proper bigger size VDU. The font size for trains to be adjusted with creating space by providing alternate blocks on VDU. If the controllers find these modifications convenient, same should be implemented for all CTC workstations. 	- do -
11	Reliable communication arrangement should be available for the ISDN Network. Presently in case of single OFC cut, the stations get isolated. RailTel should be advised to provide backup path. If required, it may be through a hired channel also.	- do -
12	It was informed that training of Operating & Signalling officials has been planned at OEM's place in Italy in two batches. The training shall be held in March 2020 likely.	- do -
13	The meeting concluded with vote of thanks to all participants.	

This is issued with the approval of AM/Signal.


 (Pradeep M Sikdar)
 ED/Signal Development

File no.2019/Sig/17/37/CTC

New Delhi, Dated 30.12.19.

**Copy for information & necessary action to,
 All CSTE's
 ED/Sig/Co/RDSO/LKO
 ASTS**