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भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011

Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011



No. STT/WL/MTRC/503

Dated : 11.11.2005

To,

Chief Signal & Telecommunication Engineer,

1. Northern Railway, Boroda House, New Delhi.- 110 001
2. North Central Railway, Allahabad
3. East Central Railway, Hajipur.
4. Eastern Railway, Fairly Place, Kolkata - 700001

Chief Signal & Telecommunication Engineer / Construction,

5. Northeast Frontier Railway, Maligaon, Guwahati.- 781 011

**Sub : Uniform Numbering Scheme for Mobile Train Radio
Communication Network for Indian Railways.**

Uniform Numbering Scheme for Mobile Train Radio Communication for implementation on all Zonal Railways prepared by RDSO, has been approved by Railway Board, vide Letter No. 2004/Tele/Trg.3/MTRC, dated 07.11.2005.

Salient features of uniform numbering scheme of Mobile Train Radio Communication networks for Indian Railways are as under :

1. Network name will be **IR-GSM-R** (maximum 8 Character), which will be displayed on mobile instruments.
2. Railway Access Code (RAC) will be **091** (maximum 3 Character).
Uniform numbering scheme for MTRC network for all Zonal Railways has been prepared using MCC=405 and MNC=48 as provisionally allotted to Indian Railways by DOT, vide their letter No. 824-91/2004-LR, dated 15.07.2005 and communicated vide Railway Board Letter No. 96/Tele/MW/5/Pt., dated 15.07.2005.
Access code for Railways' mobile network has not been allotted by DOT and for preparation of numbering scheme, it has been taken as 99.
International Mobile Subscriber Identity (IMSI) numbers have been developed based on different Home Location Register (HLR) Identification code for different Railways.
The numbering plan has been divided in different categories based on Call Type & function as per EIRENE numbering plan.

The details of uniform numbering scheme for Mobile Train Radio Communication works along with EMSI numbers marked as Version - 1 are enclosed herewith for information and necessary action please.

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The numbering scheme may be modified later on, based on the field requirement during commissioning of the MTRC network.

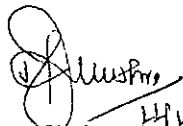

 (A.K. Mishra) 11/11/05
 Director/Telecom-II
 for Director General/Telecom

Copy to :

Chief Signal & Telecommunication Engineer, - for information and necessary action please.

1. Central Railway, CST, Mumbai. - 400001
2. North Eastern Railway, Gorakhpur. - 273012
3. Southern Railway, Park Town, Chennai. - 600 003
4. South Central Railway, Rail Nilayam, Secunderabad. - 500371
5. South Eastern Railway, Garden Reach, Kolkata. - 700043
6. Western Railway, Churchgate, Mumbai. - 400020
7. North Western Railway, Jaipur
8. East Coast Railway, Bhubaneshwar.
9. South Western Railway, Hubli
10. West Central Railway, Jabalpur
11. South East Central Railway, Bilaspur.
12. M/s NOTEL Networks (India) Pvt. Ltd., A-8, Qutab Institutional Area, U.S.O. Road, New Delhi. Fax No. 011 - 51542292.
13. M/s Siemens Public Communication Networks (Pvt.) Ltd., 484-485, Phase - III, Sector - 20, Udyog Vihar, Gurgaon - 122 016 Fax No. 0124 - 2345111.
14. M/s TCIL, TCIL Bhawan, Greater Kailash - I, New Delhi - 110 048.


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 (A.K. Mishra) 11/11/05
 Director/Telecom-II
 for Director General/Telecom

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VERSION - 1

NUMBERING SCHEME FOR MOBILE TRAIN RADIO COMMUNICATION NETWORK OF INDIAN RAILWAYS

1. International Mobile Subscriber Identity (IMSI)

Railway	MCC	MNC	MSIN	
			HLR Identification Code	
Zone	405	48	3 digit as listed below	0000000- 9999999

For Eastern Railway, IMSI numbers will be

Railway	MCC	MNC	MSIN	
			HLR Identification Code	
Eastern Railway	405	48	250	0000000- 9999999

- Numbers from 0000000 to 9999999 can be used depending on number of SIM cards. Eastern Railway will be using only 410 SIM cards initially, the numbers to be used will be from 0000000-0000410. The balance may be kept as reverse to cater for future procurement.
- If each Railway (16 nos.) will be having separate MSC and HLR, then they will be having separate HLR identification code i.e. 250 for Eastern Railway, 100 for Central Railway and so on as per table given below. If any two or more zones use same HLR, then they will be having same HLR identification code.

Railway	HLR Identification Code
Central Railway	100
East Central Railway	150
East Coast Railway	200
Eastern Railway	250
North Central Railway	300
North Eastern Railway	350
North Western Railway	400
North East Frontier Railway	450
Northern Railway	500
South Central Railway	550
South East Central Railway	600
South Eastern Railway	650
South Western Railway	700
Southern Railway	750
West Central Railway	800
Western Railway	850

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2. Mobile Subscriber ISDN Number (Call Type 8) for Eastern Railway :

Railway	CC	NDC		CT8	Subscriber Number			
		AC	ZONE		HQ/Divn.	Deptt.		
Eastern Railway HQ	91	99	25	8	0	0	GM	0000 - 0199
							Vigilance	0200 - 0299
							CPRO	0300 - 0399
							Law	0400 - 0499
							Civil Defence	0500 - 0599
							Audit	0600 - 0699
							Reserved	0700 - 0999
							MSRN,HON, GCN	1000 - 1999
							SMSC	2000
							Reserved	2001 - 9999
	91	99	25	8	0	1	Personnel and Commercial	0000 - 9999
							Officers (Personnel)	0000 - 0099
							Supervisors (Personnel)	0100 - 0299
							Reserved	0300 - 0999
							Officers (Commercial)	1000 - 1099
							Supervisors (Commercial)	1100 - 1299
							Reserved	1300 - 1999
							Reserved	2000 - 9999
	91	99	25	8	0	2	Security and Medical	0000 - 9999
							Officers (Security)	0000 - 0099
							Supervisors (Security)	0100 - 0299
							Reserved	0300 - 0999
							Officers (Medical)	1000 - 1099
							Supervisors (Medical)	1100 - 1299
							Reserved	1300 - 1999
							Reserved	2000 - 9999

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Eastern Railway HQ	91	99	25	8	0	3	Electrical	0000 - 9999
							General	0000 - 0299
							Officer	0000 - 0049
							(Maint.+ Con.)	
							Supervisor	0050 - 0199
							(Maint.+ Con.)	
							Reserved	0200 - 0299
							TRD	0300 - 0599
							Officer	0300 - 0349
							(Maint.+ Con.)	
							Supervisors	0350 - 0449
							(Maint.+ Con.)	
							Tower Wagon	0450 - 0459
							Reserved	0460 - 0599
							TRS	0600 - 0999
	Officers	0600 - 0649						
	Supervisors	0650 - 0749						
	Driver	0750 - 0999						
	Reserved	1000 - 9999						
	91	99	25	8	0	4	Engineering	0000 - 9999
							Officer	0000 - 0099
							(Maint.+ Con.)	
							Supervisors	0100 - 0299
							(Maint.+ Con.)	
							Reserved	0300 - 9999
	91	99	25	8	0	5	Operating	0000 - 9999
							Officer	0000 - 0099
							Supervisor	0100 - 0299
							Guard	0300 - 0599
							Station Master	0600 - 0899
							Reserved	0900 - 9999
	91	99	25	8	0	6	Mechanical	0000 - 9999
							C & W	0000 - 0399
							Officer	0000 - 0049
							Supervisor	0050 - 0199
							Reserved	0200 - 0399
							Power	0400 - 0699
							Officer	0400 - 0449
							Supervisor	0450 - 0499
						Driver	0500 - 0689	
						ART	0690 - 0699	
						Diesel	0700 - 0999	
						Officer	0700 - 0749	
						Supervisor	0750 - 0799	
						Reserved	0800 - 9999	

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Eastern Railway HQ	91	99	25	8	0	7	S & T	0000 - 9999
							Officer	0000 - 0049
							(Maint.+ Con.)	
							Supervisors	0050 - 0249
							(Maint.+ Con.)	
	Reserved	0250 - 9999						
	91	99	25	8	0	8	Stores	0000 - 9999
							Officer	0000 - 0049
							(Maint.+ Con.)	
							Supervisors	0050 - 0299
							(Maint.+ Con.)	
	Reserved	0300 - 9999						
91	99	25	8	0	9	Accounts	0000 - 0999	
						Officer	0000 - 0099	
						(Maint.+ Con.)		
						Supervisors	0100 - 0299	
						(Maint.+ Con.)		
Reserved	0300 - 9999							
Eastern Railway Howrah Division	91	99	25	8	1	Same as HQ.	Same as HQ.	Same as HQ.
Eastern Railway Asansol Division	91	99	25	8	2	Same as HQ.	Same as HQ.	Same as HQ.
Eastern Railway Sealdah Division	91	99	25	8	3	Same as HQ.	Same as HQ.	Same as HQ.
Eastern Railway Malda Division	91	99	25	8	4	Same as HQ.	Same as HQ.	Same as HQ.

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Numbering scheme for MSISDN number is for Eastern Railway. For MSISDN numbers of other railways, ZONE code will be different as mentioned below.

Railway	ZONE
Central Railway	10
East Central Railway	15
East Coast Railway	20
Eastern Railway	25
North Central Railway	30
North Eastern Railway	35
North Western Railway	40
North East Frontier Railway	45
Northern Railway	50
South Central Railway	55
South East Central Railway	60
South Eastern Railway	65
South Western Railway	70
Southern Railway	75
West Central Railway	80
Western Railway	85

Besides two digit Zone code, one digit has been allotted to distinguish zonal headquarter and divisions, i.e. 0 for headquarter, 1 for first division, 2 for second division and so on. Similarly one digit has been identified for various departments in zonal headquarter and divisions, i.e. 0 for Administration, 1 for Personnel & Commercial deptt., 2 for Security & Medical Deptt. and so on.

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3. Short Codes and Call Type 1 (CT 1) :

Location Dependent Addressing (LDA) and Integrated Acknowledgment Center (IAC)

Digits Family	Digits Range		Digits #	Remarks
	From	To		
1 LDA	1200	1200	4	Route to most appropriate Primary Controller
	1300	1300	4	Route to Secondary Controller
	1301	1301	4	Route to C&W Control
	1302	1302	4	Route to Engineering Control
	1303	1303	4	Route to Traction Power Control
	1304	1304	4	Route to S&T Control
	1305	1305	4	Route to Security Control
	1306	1306	4	Route to Commercial Control
	1400	1400	4	Route to Power Controller
	1 IAC	1612	1612	4
Short Codes	299	299	3	Train Groups: Emergency Call
	569	569	3	Trackside Maintenance Groups: Emergency Call
	599	599	3	Shunting Groups: Emergency Call

NOTE : 1201 to 1599 can be used for other secondary controllers.

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4. Train Function Number (9 Digits) (Call Type 2) :

CT (1 digit)	Day (1 Digit) (Schedule originating day of train)	Train Running Number (5 Digit)XXXXY	Function Code (2 Digit)	Remarks
2	1-Monday	First Four digits will be as per train number and last digit will be for type of train i.e. schedule train, link train or summer special train.	01	Leading driver
	2-Tuesday		10	Chief conductor
	3-Wednesday		20	Catering staff chief
	4-Thursday		30	Railway security services chief
	5-Friday		80	Guard
	6-Saturday			
	7-Sunday			

Note :

XXXX= Four Digit Train Number . The last digit Y will be some numeric depending on the type of train i.e.

Y = 0 for scheduled trains

Y = 1 for link trains

Y = 2 for summer special/ holiday special trains

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5. Engine Function Number (11 Digits) (Call Type 3) :

CT(1 digit)	Zone (2 Digit)	Engine Number (6 Digit)	Function Code (2 Digit)	Remarks
3	As per ZONE Code of MSISDN.	Last five digits will be as per the number of engine and first digit will be zero.	01	Leading Driver
			80	Guard

*
Note :

Goods trains can be identified by Engine Function Number.

179897

6. Voice Broadcast Service (VBS) & Voice Group Call Service (VGCS) Number ^{SN 89/9}
Plan (10 Digits) :

Call Type (CT) 50 for Group Call and Call Type (CT) 51 for Broadcast Call

Call Type (CT) (2 digit)	Service Area Indicator (SA) (5 digit)	Group ID (GID) (3 digit)	Remarks
50 or 51	LLL00 (First Service area) Note: LLL is Location Number of Service Area. Zone = 2 digit, Division = 1 digit same as MSISDN. For example, for ER/HWH LLL = 251, for ER/SDAH LLL = 252	200	Train Group: Drivers
		201	Train Group: Conductors
		202	Train Group: Catering
		203	Train Group: Guards
		204	Train Group: Security
		205	Accident Relief Train Group
		206	Emergency Doctor Group
		207-298	Reserved
		299	Train Group: Emergency Call
		500	Default shunting group
		501-520	Reserved for other shunting groups
		530	Station staff(SM) group
		531	Security staff group
		539	Station and security staff : emergency call
		560	Engg trackside maintenance group
		561	S&T maintenance group
		562	Electrical Maintenance group
563	Mechanical Maintenance group		
569	Trackside Maintenance group: Emergency call		
570	Controller group		
579	Controller group: Emergency call		
599	Shunting group; emergency call		
50 or 51	LLL01 (Second Service area)	DO	DO
50 or 51	LLL02-LLL99 (reserved for other service areas in a Division of a Zone)	DO	DO

50: Group call in the defined service area.

51: Broadcast call in the defined service area.

179893

7. Maintenance and Shunting Team Numbers (Call Type 6) :

CALL TYPE (CT)	LOCATION NUMBER (LLLLL) (5 Digit)	FUNCTION CODE, FC(TT,Y,XX) (4 Digit)	Remarks	
6	LLLLL is location number where Called Party is registered. Zone=2 digit, Division=1 digit same as MSISDN. First two LL as 00 Last Three LLL as Zone and Division	TT=5 for Shunting Team	TT=Team Type (1 Digit)	
		TT=6-9 used for Maintenance Teams		
		TT=6 (S&T Maintenance Team - Signal and Telecom)		
		TT=7 (Electrical General, TRD, TRS)		
	For example	00250=ER/HQ	Y=0 (TT=5) for Shunting Leader	Y=Team Member Function (1 Digit)
		00251=ER/HWH	Y=1-3 for Shunting Team Member	
	00252=ER/SDAH	For TT=6-9, Y=0-9 is available for team leader and members		
	00253=ER/ASN			
	00254=ER/MLDT			
		XX=00-99 available as team number for TT=6-9	XX=Team Number (2 Digit)	
		FC for Maintenance team Number		
		6 0 00 (1st S&T maintenance team leader)		
		6 1 00 (1st S&T maintenance team-1st member)		
		6 2 00 (1st S&T maintenance team-2nd member)		
		6 0 01 (2nd S&T maintenance team- Leader)		
		6 1 01 (2nd S&T maintenance team-1st member)		
		6 2 01 (2nd S&T maintenance team-2nd member)		
		Same pattern will be applicable for other teams also.		

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8. Functional Structured Number (FSN) for Train Controller (Call Type 7) :

Digits Family	Digits Range		Digits #	Remarks
	From	To		
FSN	7 LLLLL 01	7 LLLLL 01	8	Controller 1
FSN	7 LLLLL 02	7 LLLLL 02	8	Controller 2
FSN	7 LLLLL 03	7 LLLLL 03	8	Controller 3
FSN	7 LLLLL 04	7 LLLLL 10	8	Controller 4
FSN	7 LLLLL 11	7 LLLLL 99	8	Controller 5

LLLLL (5 digits) reserved for Location Number as specified in Call Type 8. For example : Zone + Division Code of HWH is 251. Therefore LLLLL for HWH Division of Eastern Railway will be 00251. Thus Primary Controller Functional Structured Number will become 70025101(8 Digits).

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FAx copy

**Government of India
Ministry of Railways
(Railway Board)**

No.2004/Tele/Trg.3/MTRC

New Delhi, dated 07.11.2005.

✓ Director General (Telecom),
RDSO,
Lucknow.

**Sub:- Uniform Numbering Scheme of Mobile Train Radio
Communications for Indian Railways.**

Ref:- Your letter No. STT/WL/MTRC/503 dt. 03.10.2005.


The numbering scheme submitted by you vide above reference has been approved by the Board. This scheme may be marked as Version -1. Since after the commissioning of network and with the usage, modifications may have to be incorporated at a later date; these should be marked clearly with a separate version number to avoid any ambiguity in this matter.

This may be circulated to all the concerned Railways.


(Sanjay Dungarakoti)
Director/Tele

Dir. SA.

Pt. P.Y. on file for circulation to all the Railways.


7/11/05