



Akshantula Ramesh <ramesh.al.tra@gmail.com>

Fwd: consultation paper no 2/2019 Spectrum to Railways

S T Abbas Advisor TRAI <advmn@tra.gov.in>

Fri, Jun 28, 2019 at 10:34 AM

To: sonia madan <soniatrai@gmail.com>, ramesh <ramesh.al.tra@gmail.com>

----- Original Message -----

From: **padam Mohan** <consumertalk@rediffmail.com>

Date: Jun 24, 2019 3:57:21 PM

Subject: consultation paper no 2/2019

To: jaca <jaca@tra.gov.in>, "advmn@tra.gov.in" <advmn@tra.gov.in>

Respected sir

We are sending herewith the comments and views on the above Consultation Paper .
We hope you will find the same in order.

Thanking you
With regards

Padam M Misra
Secretary
Upbhokta Sanrakchhan & Kalyan Samiti KANPUR
CAG Member

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S.T. Abbas

Advisor (Network, Spectrum & Licensing)

Telecom Regulatory Authority of India

PH- +91 11 23210481

**COMMENTS22.docx**

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COMMENTS ON CONSULTATION PAPER NO-2/2019-Allotment of spectrum to Indian Railways for Public Safety and Security services by Upobhokta sanrakshan and kalian samiti, Kanpur, member of consumer advocacy group of Telecom Regulatory Authority of India.

Q.1 Whether spectrum in 700 MHz band should be assigned to Indian Railways for RSTT in India? Please provide justification for your response.

A.1 Now, At present, IR is using GSM-R based networks similar to various Railway networks deployed around the world. In India, 1.6 MHz (paired) spectrum in 900 MHz band has been assigned to Indian Railways for deployment of its GSM-R based network. There has always been a demand for increase in speed of trains. A new system is required to fulfill High Speed Rails (HSR) operational needs, with the capability of being consistent with LTE, offering new services but still coexisting with GSM-R for a long period of time.

Q.2 In case your answer to Q1 is in affirmative, how much spectrum should be assigned to Indian Railways?

A.2 The GSM-R: Future spectrum options for GSM-R to consider are: Extension of the UIC band width: UL: 873-876 MHz; DL: 918-921 MHz; UL: 698-703 MHz, DL: 753-758 MHz and/or UL: 733-736 MHz, DL: 788-791 MHz. The GSM-R system is planned to be replaced when it has reached "end of life" around 2030. The successor of GSM-R is unknown at the moment and is currently defined by the FRMCS (Future Radio Mobile Communications System) program under the UIC.

Q.3 In case your answer to Q1 is negative, i) what are the other bands (including 450-470 MHz) in which spectrum can be assigned for RSTT, ii) how much spectrum should be assigned to Indian Railways?

A.3 it is affirmative as above.

Q.4 In case it is decided that spectrum in IMT bands which have already been earmarked for mobile services, be assigned to Indian Railways for RSTT in India, what should be the methodology (including price) of allotment of spectrum?

A.4 The Resolution 236 (WRC-15) recognized that timely studies are required on technologies providing for railway radiocommunication and that international standards and harmonized spectrum would facilitate worldwide deployment of RSTT. Further, it invited ITU Radiocommunication Sector (ITU-R) to study the spectrum needs, technical and operational characteristics and implementation of RSTT. Consequently, ITU-R Study Group 5 is studying relevant technical and operational characteristics for railway radiocommunication systems.

Q.5 In case it is decided to assign spectrum in other spectrum bands (including 450-470 MHz band), what should be the methodology (including price) of allotment of spectrum?

A.5 DoT commented that LTE based communication is proposed to be used along the Rail tracks laid by IR for which 15 MHz of 700 MHz spectrum has been demanded from DoT. If this quantum of spectrum is reserved for Railways network, the same spectrum cannot be reused by Telecom operators in respective service areas.

Q.6 Do you foresee any challenges, if IR makes internet services available onboard i.e. within the train using spectrum allocated for signaling purpose?

A.6 No.

Q.7 Whether the requirement of IR for RSTT can be fulfilled using the following alternate methods: i) Alternate methods suggested in para 4.47, wherein a TSP could build, deploy and maintain LTE-R network for IR; while the control, use and operation of the LTE-R network may be with IR. OR ii) Alternate method suggested in para 4.48, wherein there could be a common integrated network (with common spectrum) for Public Safety i.e. Public Protection and Disaster Relief (PPDR) and Railways, using PS-LTE and LTE-R technology respectively. OR

58 iii) Any other method as may be suggested by the stakeholders. (Please provide detailed response with justifications and required enabling provisions.)

A.7 Long Term Evolution (LTE) is 4th Generation (4G) Mobile Communication System and is emerging as Global Standard for all new Train Control and Railway Signalling applications replacing the incumbent 2nd Generation (2G) GSM-R technology and is likely to see the broadest deployment of any new wireless technology over the next decade in Railway Safety, Security and Passenger experience applications. Installing an Ultra-high-speed LTE based communication corridor along IR network would cater to the current and future data and voice needs for Train-Ground and Train-Train communication for improved train operations, passenger safety and passenger security services and remote rail asset monitoring & management. The applications of LTE can be classified under the following three broad categories

Q.8 If there are any other issues/suggestions relevant to the subject, stakeholders may submit the same with proper explanation and justification.

A.8 The ITU-R has identified the digital dividend spectrum in the frequency band 698-806 MHz for IMT in Region-3 (Asia-Pacific). This frequency range can provide effective mobile broadband services for

Public Safety network and thus is most suitable for Indian Railways requirement. Adoption of 700 MHz frequency spectrum is growing across world's railways because of its inherent advantages such as wide coverage, low Capex, efficient network utilization etc. Another driving force is the ability in 700 MHz spectrum of LTE to provide efficient high speed, low latency, low setup time, and high-security data connectivity, which is the precondition to provide multimedia and especially mission critical multimedia communication for safety and security application on Railways.