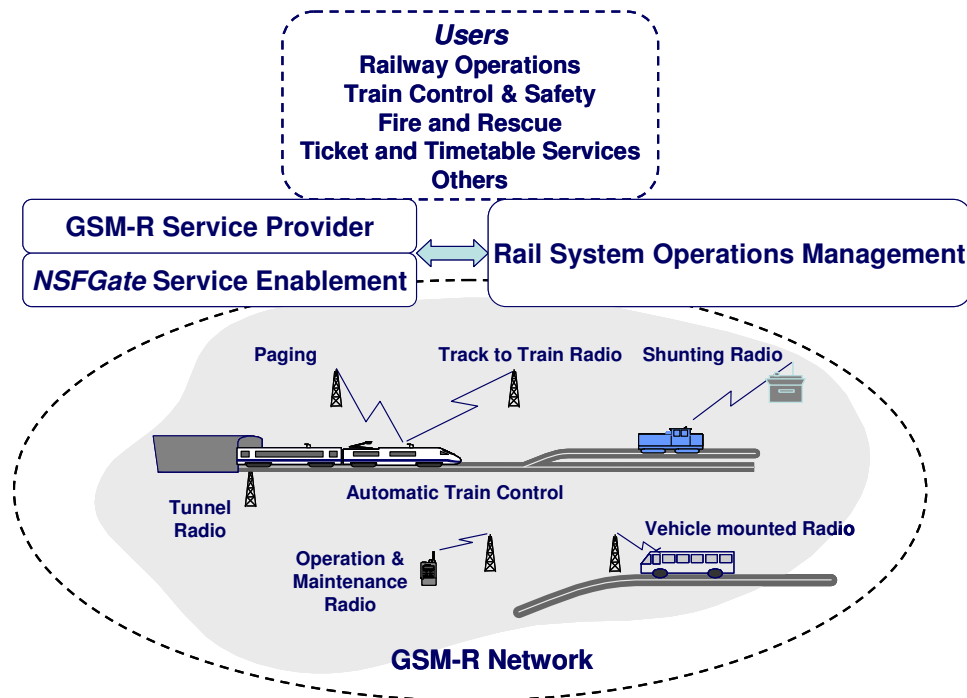


NSF Telecom solutions for GSM-R

GSM-R, the GSM based radio system for Railways. The system focuses on safety, reliability, prevention of accidents, emergency communication and serving people traveling on railways.

GSM-R networks are constructed to provide voice and data transmission between the train conductor, rail system operations management, station crews and dispatching staff. It also supports reception and control of track signaling through the European Train Control System protocol, meaning the safety of travelers and crews is dependent on network reliability.



When establishing the operation of a GSM-R network, the user definition, i.e. commissioning in terms of the terminal users and user groups in multiple user organizations must be easy and rational. The operational personnel have automated authentication with differentiated access privileges including the logging function in order to be able to track the actions taken.

The day to day operation and maintenance tasks are to be automated in order to secure the effective use of resources and the high service level that is expected of these mission critical communication networks.

In order to ensure the operational excellence now and in the future a lot of information is collected, manipulated and distributed for different purposes like, cost allocation, interconnect clearing, service level assurance, alarm handling, user statistics, traffic analysis, network planning, logging functionality, tracking unauthorized access attempts etc.

The service enablement middleware **NSF Gate** is the intelligence between the operative systems and the network resources.

NSF Gate executes all the task commissioning and takes care of the security issues. The in-built intelligent logic allows the automation of the tasks in order to make it secure and easy to operate. The retrieval of information i.e. the collection and mediation of the information received from the network elements as well as the distribution of this retrieved and manipulated data to the desired predefined destinations in proper formats is also taken care of. The distributed information can only be accessed by the authorized personnel in order to secure the network and user integrity.