

## Press release

---

### **Kapsch promotes the harmonization of GSM-R standards**

**The Technical Committee for Railway Telecommunication (TC RT) of the European Telecommunications Standards Institute (ETSI) has recently published a new technical specification for Release 4 Core Network architecture. An official set of rules based on international standards for the implementation for digital wireless train communication has been created, which refers to technical innovations and GSM evolution towards IP (Internet Protocol). As a leading provider of GSM-R, Kapsch CarrierCom has contributed to establishing technology standards in renowned standardization bodies.**

"Kapsch's expertise supports railways in operating their GSM-R infrastructure more cost effectively and to enter the 21st century with new technologies such as the IP based Release 4 architecture. We provide our customers maximum efficiency with our integrated solutions, which perfectly meet all requirements for wireless train communication and ERTMS systems. With the migration to Release 4 technology, Kapsch CarrierCom offers operators the most advanced technology that is currently available on the market. We will stay on this successful path by continuing to drive new developments," explains Jean-Michel Evanghelou, Kapsch CarrierCom's Head of Railway Solutions.

#### **Technical specification of the 3GPP Release 4 Core Network architecture**

Kapsch CarrierCom has promoted the discussion for the use and implementation of Release 4 platforms into existing and new GSM-R networks in numerous meetings of the ETSI Technical Committee for Railway Telecommunications. Concerns about impact of the introduction of R4 on ASCI functionalities such as Voice Group Call Service (VGCS), Voice Broadcast Service (VBS) and eMLPPs were eliminated. The compatibility with interfaces to existing GSM-R networks and external PLMNs was also considered, tested for technical feasibility and the ability to maintain service and quality requirements was examined.

Until now, the basic structure of a GSM-R network was based on the release 99 version of the core network, which was regulated by the 3GPP and ETSI technical specifications. Technical developments in the GSM environment have led to the introduction of the advanced IP based release 4 technology into core networks and this has been field-proven on an international level during the past years. These developments are now also available for GSM-R networks worldwide. The ETSI GSM-R technical specification for release 4 Core Network architecture is a further step in the modernization of GSM-R networks and provides several advantages compared to the release 99 technology.

### **Kapsch CarrierCom's innovative GSM-R core technology**

Kapsch CarrierCom takes on a pioneer role with the IP based R4 technology for the MSC and HLR in GSM-R networks. This technology, offered by Kapsch CarrierCom, contains a Mobile Switching Center Server (MSCS), Home Location Register (HLR) and Media Gateways. Advantages of R4 are also reflected in the railway's efficiency. For example, the capacity to support high traffic volume increases, while the railway's operating costs are reduced. Kapsch CarrierCom's new R4 technology satisfies the requirements of the 3GPP version BICN architecture. The Call Server (MSCS) and Media Gateway (MGW) distributed system architecture provides advantages for both voice and data traffic (CSD), which also increases the system's performance. The physical separation and the open interfaces are a central aspect of the 3GPP BICN standard. This technology relies on the latest packet switching equipment instead of traditional circuit switches, which provides the necessary flexibility for future network developments.

### **About Kapsch CarrierCom AG**

With new innovative concepts and technical solutions, Kapsch CarrierCom as the GSM-R world leader, makes a significant contribution to meet the increasing demands of mobility. Kapsch CarrierCom expanded its customer base during the past years and its technology is present in multiple markets around the world. Among these are France, Germany, the United Kingdom, Spain, Poland, the Czech Republic, Lithuania, Turkey, Algeria, India and China. The close collaboration with leading railway operators, such as ÖBB, strengthens the company's innovation, as new and individual solutions are constantly being created based on customer needs.

Kapsch CarrierCom is a global manufacturer and independent system integrator of telecommunications solutions for railway operators and providers of fixed, mobile, transportation and access networks. In addition to applications and services for next generation networks and innovative OSS/BSS solutions Kapsch CarrierCom provides an end-to-end service spectrum: from consulting, design and product development, installation and integration, to maintenance and support, as well as the operation of complete networks. Kapsch CarrierCom develops and sells products such as its own service delivery framework with convergent centrex, fraud management systems, as well as the business & service assurance system DataXtender. Among others, Kapsch CarrierCom's customer list includes service providers such as Bouygues Telecom (France), Chunghwa Telecom (Taiwan) and the companies of the Telekom Austria Group. Railway operators in important markets such as France also rely on Kapsch CarrierCom as does the operator of the largest GSM-R network in the world in Germany. Kapsch CarrierCom is part of the Kapsch Group and has its headquarters in Vienna. Additional information can be found on the Kapsch website [www.kapschcarrier.com](http://www.kapschcarrier.com) | [www.kapsch.net](http://www.kapsch.net).

#### **For further information please contact:**

Hans-Georg Mayer  
Head of Products & Solutions PR, press officer  
Kapsch AG  
Am Europlatz 2, 1120 Vienna, Austria  
Phone: +43 50 811 3664  
E-Mail: [hans-georg.mayer@kapsch.net](mailto:hans-georg.mayer@kapsch.net)  
[www.kapsch.net](http://www.kapsch.net)

Verena Bibaritsch  
Marketing & Communications  
Kapsch CarrierCom AG  
Am Europlatz 5, 1120 Vienna, Austria  
Phone: +43 50811 3601  
E-Mail: [verena.bibaritsch@kapsch.net](mailto:verena.bibaritsch@kapsch.net)  
[www.kapschcarrier.com](http://www.kapschcarrier.com)