



PRESS RELEASE

Digital GSM-R System Will Allow to Stop Trains Remotely As Well

Prague, 22 March 2017 – The companies TTC Marconi and Správa železniční dopravní cesty (SŽDC) successfully demonstrated a new function of the traffic control terminal and the GSM-R network: **Stopping Trains Remotely**, the so-called **General STOP**. A presentation for the press and specialists from the Czech Republic and abroad took place at Sadská railway station (near the city of Nymburk) today.

The General STOP function has been in use in Czech Republic only on railway lines equipped with the analog Railway Line Radio system (TRS). In case of impending danger, it allows a train dispatcher or the head traffic controller to stop all trains in range of the respective base radio station.

Thanks to this useful tool, many human lives could be saved and extensive physical damage could be avoided. That is why SŽDC as the railway infrastructure manager was looking for possibilities to incorporate the General STOP function into the GSM-R digital radio system as well. It is similar to the cell phone system being in use in public networks, but adapted in a special way for the railway milieu and is gradually introduced on important railway lines throughout the Czech Republic.

The result is a special function called **GSM-R STOP** which increases the overall flexibility of employees ensuring railway traffic organisation and control in a given line section. In case of emergency on the line (e.g. an object on tracks, a fallen tree), these employees can react by pushing a button on the control terminal and thus physically stop running of all trains connected to the GSM-R radio system in a chosen section. All trains in this area including those not being equipped with the GSM-R STOP function will receive voice information about a crisis situation in their immediate vicinity in a form of automatic notification.

An important step towards the whole intent's implementation was the construction launch of the STOP functionality within the GSM-R network last September. The construction is under way



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both in main halls at the Traffic Control Centres in Prague and Přerov and in railway offices and technological installations. This concerns approximately 200 locations throughout the Czech Republic. This operation worth almost CZK 25 Mio is funded from national resources. SŽDC acts as an investor; the general designer is the company TTC Marconi. The works' completion is scheduled for this September.

"In a quite short period, we were able to integrate an abundance of disparate technologies on the road from the traffic control terminal up to the train brakes. I am pleased that safety on the railway is even better now. I believe that the new function will allow to prevent tragedies in the future", says **Mr. Richard Hartmann**, Executive Director of **TTC Marconi**.

GSM-R STOP: There is a digital mobile radio system along railway corridors. Up to now it has been a technology enabling voice calls between a station dispatcher and a locomotive driver and communication with the ETCS train control system. The GSM-R STOP function brings a new dimension into the Czech milieu by increasing safety on railway lines. The head traffic controller or the station dispatcher can not only inform the locomotive driver remotely by voice call but he has also the possibility to stop the train. In practice this is a new function of the traffic control terminal and the GSM-R network which is integrated with other control systems on the railway. There are many other technologies between the station dispatcher and the train brakes (transfer and radio network, radio receivers, locomotive systems allowing emergency braking) which had to be correctly integrated so that the train can stop immediately (within several seconds) when the station dispatcher pushes the button.

TTC Marconi is an independent producer of a new generation of communication networks in the CEE region (Central and Eastern Europe). At the same time it acts as a renowned system integrator in the field of communication infrastructure. Its biggest customers are producers of telecommunications infrastructure, corporations using network infrastructure of critical importance, the state and local administration as well as telecommunications operators.

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