



CASE STUDY | TRANSPORT AND INFRASTRUCTURE, HIGHWAYS

VINCI HIGHWAYS CZ

Integrated communication for a modern motorway infrastructure

CUSTOMER INFORMATION

VINCI HIGHWAYS CZ

VINCI Highways, a subsidiary of VINCI Concessions, is a leading concession company and operator of road mobility services. VINCI Highways designs, finances, builds, and operates highways, urban networks, bridges, tunnels, and mobility services across a network of more than 3,000 km in 14 countries. The company leverages its expertise to ensure the highest standards of performance and safety.



MAREK ČIERNY

IT Manager Via Salis Operations

What convinced us about the Commend solution was its flexibility and the ability to customize standard products to meet our requirements, as well as the extensive integration options with other systems we have implemented. In Commend Slovakia, we have found a competent and professional partner



PROJECT DETAILS

CUSTOMER

VINCI HIGHWAYS CZ

PROJECT

Highways

TECHNICAL DATA

- Commend VirtuoSIS intercom server
- 48 highway SOS call points
- 2 CD800 operator workstations
- Intercom system for the highway operator's facility
- Commend STUDIO add-on system with ComRecorder recording device and ComReporter event logging
- ComPLC software module for controlling specific functions of emergency call points
- Integration of the emergency call system into the 112 integrated rescue system via SIP trunk
- Integration of the system into the SCADA control system via the OPC UA interface
- Integration with the Hytera DMR radio communication system
- Integration with the Genetec video management system
- Integration with the IP telephony system within the operator's facility via a SIP trunk

PROJECT DESCRIPTION

The D4 Highway in the Příbram–Písek section is the first PPP (Public-Private Partnership) project in Czech Republic. As part of the project, 32 km of new highway were built, and a 16-km section was modernized and widened to two lanes in each direction. The project also included the construction of two highway service areas with complete infrastructure, as well as a new maintenance center near the village of Lety. Technologically, the highway ranks among the most modern in the Czech Republic, featuring 100% coverage by a CCTV system, high-speed weighbridges for in-motion vehicle weighing, flexible section speed measurement, intelligent traffic analysis, intelligent variable traffic signs, including the technical and network infrastructure. The concession agreement with the contractor was signed in February 2021, with construction commencing in April 2021. The highway opened and began operations in December 2024

CHALLENGE

The emergency communication system on the highway had to meet all the specific requirements of technical regulations in the Czech Republic in terms of technology and functionality—from the construction and design of highway emergency call boxes, through the requirement to operate autonomously during a power outage, to the distribution of calls based on the type of request—requests for technical assistance must be routed to the highway operator's operations center, while emergency calls are routed to the relevant regional emergency services operations center.

The future highway operator placed great emphasis on the deep integration of the supplied systems with one another as well as their integration into the umbrella SCADA system for monitoring, visualization, and control. Great emphasis was placed on ease of use for operators and, in particular, on high operational reliability.



ADVANTAGES AT ONE GLANCE

- High-quality audio communication
- Deep integration into the SCADA system
- Recording of voice communications, including the radio network
- All software components (VirtuoSIS, STUDIO, OPCServer) on a virtualized server platform with high availability

SOLUTION

As part of the project, Commend Slovakia implemented a comprehensive voice communication solution—an emergency communication system for the highway, an intercom system for the highway operator’s facility, as well as an IP telephony system for business communication. Commend, in collaboration with its partner—Photon Meissener Technologies—developed a completely new design for the highway emergency columns, with both its design and internal equipment meeting the requirement of technical regulations in the Czech Republic.

The highway emergency columns are equipped with the ET908H IP communication module and an additional EB8E4A I/O module, through which the status of cable shaft covers located along the highway, door contact statuses, and the power supply status are transmitted to the SCADA system. The emergency columns features remotely controlled lighting via a dusk sensor. Calls from the emergency columns are routed to the CD800 operator workstation or to the relevant regional emergency operations center. The emergency call system is interconnected with the DMR radio communication system and allows the operator to communicate directly from their workstation with the desired group of radio stations. WS300VCM series intercom stations are installed within the facility, either built into Commend Csthree entry/exit posts or mounted on the wall at the facility entrances.

The camera modules of the intercom stations are integrated into the site’s security camera system with Genetec VMS. The entire system is integrated into the SCADA system on the WINCC platform via the OPC UA interface.

All software components of the solution—the VirtuoSIS communication server, the Commend STUDIO application server, the Commend OPCServer for integration into the SCADA system, and the Mitel IP PBX server—are installed on a virtualized Hyper-V server platform with high availability functionality.



One of our employees will be happy to provide further information.



COMMUNICATION WITHOUT LIMITS



INTERCOM



VIDEO



IT



ACCESS



AUDIO

SECURE COMMUNICATION SYSTEMS FROM COMMEND

Can you imagine a system that millions of people rely on every day, where every word has to count? This is the world of Commend! Secure, reliable communication is our passion.

As global market leader with over 50 years' experience in developing voice technology, we have integrated not only video and interfaces to third-party equipment that complies with international norms and standards, we

created new opportunities to integrate overall solutions. Commend can combine individual systems for example video, intercom- or access control to an overall solution and enables within a situation picture an accurate capture of reality in real time. Therefore, Commend ensures and protects people, buildings and values.

Commend is the natural choice for hands-free voice communication systems all over the world.



**Long-term relationship with
both customers and suppliers**



**Project consulting for
customized solutions**



**Highest quality ensures
long product life cycle**

TRUSTED. COMMUNICATION. ALWAYS.

COMMEND products are developed and manufactured by Commend International in Salzburg, Austria. The development and manufacturing processes are certified as per EN ISO 9001:2015. To ensure information security, Commend is also the first ISO 27001-certified Intercom company.

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