swisscom

Press Release

# Swisscom wins CERN's contract for mobile telephony services

**Swisscom has deployed a new mobile network for the European Organization for Nuclear Research (CERN) following the award of a multi-year contract.**

Over the next years, Swisscom will be handling mobile voice and data transmission for CERN in Geneva. The network is used by roughly 6,000 CERN employees and guest researchers. Within a period of six months, Swisscom has set up a network using 14 outdoor antennae and 46 indoor locations. It provides mobile telephony services for the CERN site both on the surface and in the underground infrastructure. The more than 50 kilometres of tunnels and caverns is also host to the world's largest and most powerful particle physics accelerator, namely the Large Hadron Collider (LHC), with a circumference of 27 kilometres.

**Accelerated power of innovation**

Swisscom and CERN share a long history of cooperation. In 1992, Swisscom set up the first Corporate Mobile Network (CMN) for CERN, which has since become the standard for Swisscom business customers. After a long interval, Swisscom has once again been awarded a contract by CERN for mobile telephony services. Christian Petit, Head of Enterprise Customers, says, "To us, having the opportunity to work with CERN once more means far more than winning back a customer. This collaboration constitutes a real challenge and accelerates our own power of innovation."

**A challenging environment**

The Large Hadron Collider is one of the longest tunnel systems in Europe with mobile communication coverage. The circular structure is a true physical challenge. To guarantee interference-free transmission, measures had to be taken to ensure that the multiple mobile signals and the radio frequency systems do not interfere with one another. CERN, therefore, turned to a mix of technologies consisting of 2G, 3G, 4G handled by the Swisscom network and the CERN-owned trunked radio systems TETRA and TETRAPOL for emergency and safety communications. Any personnel in the underground facilities, be it researchers or operational staff, relies on voice and data transmission

handled by the Swisscom network to communicate. Hence, the requirement for a stable and reliable network with high availability is essential. However, the timeframe in which the network had to be installed in the underground facilities was very short. From March 2015, any intervention could have delayed the schedule of the restart of the LHC. Consequently, work had to be properly planned and authorized. As Rodrigo Sierra Moral, Project Manager of the Communication Systems group of the CERN IT department, explains, “We were facing a significant technological and logistical challenge. However, together with the committed experts at Swisscom we succeeded in respecting the strict schedule.”

www.swisscom.ch/enterprise

home.web.cern.ch

Berne, 21 October 2015