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Dark Fibre PC Network-Public Internet Access Points in 5 Hospital

Author

Jan Pejchal /ICT Manager, Masaryk Hospital in Usti nad Labem

Regional Health Corp.

Martin Zeman, Martin Hostas

Usti nad Labem, Czech Republic

martin.zeman@kzcr.eu

Masaryk Hospital in Usti nad Labem Regional Health Corporation ("Krajska zdravotni, a.s.") consists of 5 hospitals with a long tradition and history - Masaryk Hospital in Usti nad Labem, Decin Hospital, Teplice Hospital, Most Hospital and Chomutov Hospital. The organisation was established in September 2007 to merge these 4 district hospitals and 1 regional (Masaryk) hospital under one roof creating the biggest healthcare provider in the Czech Republic. Masaryk hospital in Usti nad Labem was one of the biggest and most modern healthcare institutions in the country. The founder and the only owner of this joint-stock company is the region of Usti. The hospitals of the Regional Health Corporation (RHC) have 3350 beds and employ nearly 6500 employees (838 doctors and 2673 nurses). Their area covers about 820 000 citizens.

RHC provides a wide spectrum of healthcare within its clinics and departments including a specialised unit. It also participates in pre-graduate and postgraduate education. The RHC Centre of Information Systems operates its own regional optical network on the basis of dark fibre technology. It has a backbone transmittance of 10Gbps interconnecting its hospitals and also provides an indirect connection to a national research network (CESNET2+) that connects a large number of institutions in the region, with the connectivity of 10GE over DWDM. Masaryk hospital operates as a data and communication RHC centre and is the first Czech filmless hospital, with its' PACS utilised by all RHC hospitals.

The most significant step of ICT in supporting the transformation of hospitals into one company was to create a regional optical network. This provided hospitals with parameters that enable access to geographically remote working sites, allowing them to merge into one organisation, with one information and telecommunication infrastructure.

In September 2006, Masaryk Hospital in Usti nad Labem started a big project called "Public Internet in the Usti Region hospital network", co-financed by EU structural funds. This project was completed in August 2007. Masaryk Hospital is The National Research Network CESNET2+ provider (10 Gbps access to CESNET2+ on DWDM). Clients of CESNET2

can access the research network through a RHC regional network. The Usti Region EMS offices are also interconnected through this network. The RHC hospital dark fibre network provides services of a federative identity management Shibboleth and participates on an international roaming system for teachers, students and researchers EduRoam.

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The unique characteristics of this solution come out of conceptual approach of building regional information and telecommunication infrastructure for digitalisation of healthcare (e-health) based on best practices in the field and also open and prospective technologies and services (i.e. dark fibre, MPLS VPN networks, EduRoam, Shibboleth). The solution provided immediate benefit during the establishment of RHC (merge of 5 hospitals) and increased accessibility of The Usti Region EMS to the infrastructure (Integrated Emergency System) while it was being restructured. This solution is also a great example of multi-source financing in the field of healthcare.

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Krankenhaus-IT Journal

Krankenhaus-IT Journal is the leading German healthcare IT publication published 6 times per year.

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