

伯尔尼临床研究所： 最小空间内的800个线缆连接

Clinical Research in Berne: 800 links in a minimum of space

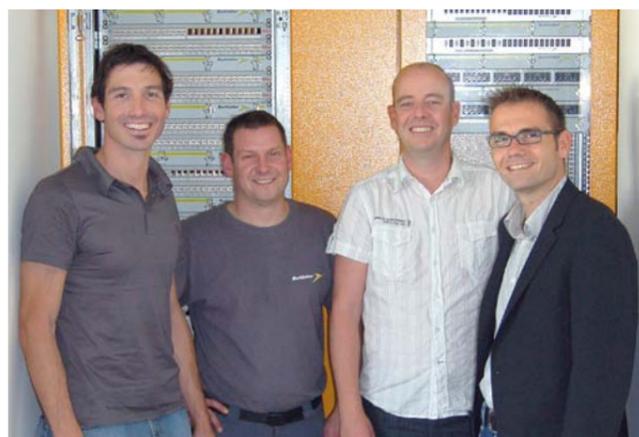
自去年年底以来，伯尔尼临床研究中心的科学家们就拥有了一套自由使用的高速通信网络。该系统解决方案在最小的空间内提供了大量的线缆连接，这一切均来自：德特威勒。

Since the end of last year scientists in Berne's Clinical Research Centre have had a high speed communications network at their disposal. The system solution, which provides a large number of connections in a minimum of space, is from a single source: Datwyler.



临床研究部门(DCR)是伯尔尼大学的一个医学研究所，被委托为伯尔尼小岛医院(Inselspital)提供最好的基础设施。几乎每个生物医疗研究领域的超过45名独立研究团队都曾受益于DCR提供的产品和服务。

The Department for Clinical Research (DCR), an institute of the Medical Faculty at the University of Berne, was commissioned to supply researchers at the Inselspital with the best possible infrastructure. Over 45 independent research groups in almost every field of biomedical research benefit from the products and services provided by the DCR.



参加该项目的人员(从左至右): Elektro Burkhalter AG的Markus Gautschi 和 Reto Steck, Heiniger Kabel AG的Patrick Lüthi, 以及德特威勒的Max Bühler。

Those involved in the project (from left): Markus Gautschi and Reto Steck, Elektro Burkhalter AG, Patrick Lüthi, Heiniger Kabel AG, and Max Bühler, Datwyler.

这就意味着当几年前Inselspital基金决定从Murtenstrasse大街上的现有建筑迁往新建筑时，任命的总承包商Berner Baumag Generalbau AG必须满足严格的标准。除了空间分配以及生物无害建筑方面实现最大灵活性之外，这还将包括不仅满足当前技术标准，而且符合未来应用的通用通信布线方案。

This meant that when the Inselspital Foundation decided to replace the existing building on Murtenstrasse with a new building a few years ago, the general contractor appointed, Berner Baumag Generalbau AG, had exacting standards to meet. In addition to maximum possible flexibility in the allocation of space and ecologically sound construction, this included universal communications cabling designed not only to current technical standards but also for future applications.

2009年8月至2010年12月，一座符合灵活空间利用理念和现代实验室概念的结构紧凑且外形美观的建筑物拔地而起。采用玻璃幕墙以及远程供暖加热，使临床研究中心成为一座低能耗建筑。德特威勒提供了稳定和高性能布线系统用于数据和语音通信(IP语音)。该系统由伯尔尼Elektro Burkhalter AG安装，电气工程顾问公司CSP Meier AG则担任现场经理。

Between August 2009 and December 2010 there emerged a compact, aesthetically pleasing building with a flexible space-utilising concept and modern laboratories. Despite its glass façade the Clinical Research Centre was constructed as a low energy building and is heated by remote heating. A stable, high-performance cabling system from Datwyler was used for data and voice communication (voice over IP). It was installed by the Berne company Elektro Burkhalter AG with electrical engineering consultants CSP Meier AG acting as site manager.

面向未来的解决方案 Future-proof solution

“用户想要一个采用6A类电缆和相应高性能RJ45连接技术的通用通信布线系统，以满足未来的10G以太网应用，” Elektro Burkhalter的远程信息服务项目经理Markus Gautschi提出了客户的要求。该结构化网络还必须很容易扩展，并成为公司的完整系统解决方案。

“The customer wanted universal communications cabling with category 6_A cables and correspondingly high-performance RJ45 connection technology which could transmit future 10 gigabit Ethernet applications”, says Markus Gautschi, Elektro Burkhalter's Telematics Project Manager. The structured network also had to be easily expandable and come as a complete system solution from one company.

最后决定采用unilan® 布线方案，该方案采用uninet® 7702 4P类型双绞线和来自德特威勒的keystone屏蔽连接技术。后者基于RJ45模块，该模块无需工具(免工具)就可连接，根据Snapin(嵌入式管理单元)原则，可以连接到配线架和数据插座。连接所用的插座和配线架也是unilan®系列的一部分。“根据我们的经验，这是一个良好的开放式系统，易于操作，并且拥有非常好的性价比。”远程信息服务项目经理强调说。

The decision was made to go for unilan® cabling with symmetrical data cables of type uninet® 7702 4P and screened Keystone connection technology from Datwyler. The latter is based on RJ45 modules which can be connected without a specialised tool (toolless) and are attached to patch panels and data sockets on the Snap-in principle. The connecting sockets and patch panels are part of the unilan® portfolio as well. “This is a good open system which in our experience is easy to work on and also has a very favourable price-performance ratio”, stresses the Telematics Project Manager.





伯尔尼的新临床研究大楼
The new Clinical Research building in Bern.

**4个月内完成800个连接
800 links in four months**

2010年8月至11月，Elektro Burkhalter团队完成了新大楼9层楼(包括3层地下室)的布线工作。用了大约30公里的数据电缆，他们创建了约800个连接，并将其连接到了500个连接插座和45个配线架。所有材料均由Köniz的Heiniger Kabel AG公司EDP部门采购。目前，Optoversal®光缆从第一层地下室的服务器机房(同时连接Inselspital网络)连接到位于一层和四层的两个楼层配线间。

Between August and November 2010 Elektro Burkhalter's teams cabled nine floors in the new building, including three basements. Using approximately 30 kilometres of data cable they created around 800 links and lined them up with 500 connecting sockets and around 45 patch panels. All the material was supplied by Heiniger Kabel AG, EDP Networks Division, in Köniz.



高性能布线的一站式解决方案
One-stop solution for high-performance cabling.

从那里开始，铜缆以星形结构垂直地或沿着天花板铺设到工作室和实验室。同时在实验室内创建了布线集合点(CP)，以连接到实验室工作台。在特殊试验区域，数据线则连接到有盖的防水插座。

Optoversal® fibre optic cables now run from the server room in the first basement, which at the same time connects to the Inselspital network, into two floor distributors on the building's first and fourth floor. From there the copper cabling is routed to the workrooms and laboratories vertically and along the ceilings in a star-shaped configuration. Consolidation points were also created in the labs to access the lab benches. In special laboratory areas the data lines were connected to waterproof sockets with covers.

“我们的时间很紧张，并且该建筑物在极小的空间内采用了许多技术，”Markus Gautschi说，但借助于德特威勒系统解决方案的快速安装(有时30名技术人员在同一时间安装)、与其他内部和建筑技术团队的良好协调以及Heiniger Kabel卓越的货物交付保障，该项目的结构化的以太网网络得以及时的交付使用。从11月份开始，该系统已经逐步投入运行，因为设备已经转移到新建筑内，并进行了安装。

“We were very pressed for time, and the building has a lot of technology in an extremely small space”, says Markus Gautschi, but thanks to the rapid installation of the Daetwyler system solution – sometimes with 30 skilled personnel at the same time –, good coordination with the other domestic and building technology teams, and Heiniger Kabel's exceptionally high delivery performance, the structured Ethernet network was handed over on time. The system has come into operation gradually since November as equipment has been brought in and installed in the new building.

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