

# 瑞士联邦大厦(伯尔尼)的现代化 电缆布线解决方案

## Modern cabling solution for the Swiss Bundeshaus in Bern



在拥有 100 多年历史的瑞士政界标志 — 瑞士联邦大厦(伯尔尼) — 信息借助于德特威勒电缆公司提供的高品质布线系统传输。

***In the Bundeshaus (Parliament Building) in Bern, symbol of Swiss political life for over 100 years, communications now travel via a high-quality system from Daetwyler Cables.***

为避免正在进行的一系列小规模维修和维护工作，瑞士国会决定对该国家标志建筑实施彻底翻新。本次针对瑞士联邦大厦的工程预算约为 100,000,000 瑞士法郎，预计在 2008 年年底完工。建筑工程的标语为“恢复旧日的荣耀”。除了对现有文化遗产的细致修复和提升外，国会事务部也希望通过安装最先进的建筑设施来节约能源和运营成本。

To avoid an ongoing sequence of small-scale repair and maintenance tasks, the Parliament opted for a total renovation of the national monument. Work on the Bundeshaus, for which there was a budget of nearly 100 million Swiss Francs, is due to be completed by the end of 2008. The motto for the building project is “Restored to its former glory”. In addition to the careful renovation, restoration and upgrading of the existing cultural heritage, the parliamentary services department would also like to cut energy and operating costs by installing the latest building services.



信息传输系统始终对瑞士联邦大厦起着至关重要的作用。即便在国会议席，科技的影响以及由此产生

的对于现代化通信基础设施的需求与过去相比也有明显提升。基于上述原因，国会事务部制定的规划包括为内阁成员、政治派别及其自身雇员创建具有高性能未来保障技术的工作站。考虑到上述要求，该部门决定采用由德特威勒电缆公司提供的综合布线解决方案。

Communications have always been very important in the Bundeshaus. Even at the seat of Parliament, the influence of technology and therefore the need for a modern communications infrastructure have increased greatly compared with earlier times. So the planning by the parliamentary services department included creating workstations with high-performance and future-proof technology for the members of the Council and the political groupings and for its own employees. It was in light of this that the department opted for cabling from Daetwyler Cables.



楼层配线间内的高品质安装  
可确保高效接入

High quality installation in  
the floor distributors  
ensures efficient access.



## 集成的 WLAN 接入点

装配于瑞士联邦大厦的光纤布线系统可以将外部的数据中心的信息引入大厦内的主机房内，而主机房又通过光纤和同轴电缆连接到六个楼层配线间。在水平配线子系统中，大厦采用了由德特威勒电缆公司提供的 *unilan*<sup>®</sup> 优选解决方案 GG45 与工作站相连 — Nationalrat 和 Ständerat 议院（上、下议院）以及国会事务部办公室的约250 个终端。它意味着在高等级的双绞线链路上可以传输各种类型的信息，其中包括语音、数据、音频、视频和有线电视，即通过操作和管理布线系统便可实现多种类型的信息服务，同时还提供了更加强大的适应性。在会议期间，内阁成员可通过 WLAN 连接和使用的所有电话（IP 电话，VoIP）和打印机、国会成员和新闻代表使用的布告板以及大量 WLAN hotspots 都将接入该网络。

### WLAN access points integrated

The fibre optic cabling fitted in the Bundeshaus links the external computer centre to a central server room. Six floor distributors are connected to this via optical fibres and coaxial cables. At the tertiary level, a *unilan*<sup>®</sup> Prime Solution GG45 from Daetwyler Cables is used to connect the workstations – about 250 terminals in the chambers of the Nationalrat and the Ständerat (Upper and Lower Chambers) and the offices of the Parliamentary Services Department. In addition, all telephones (Voice over IP, VoIP), the printers that the members of the Council can use via WLAN connections during their meetings, the notice boards for members of Parliament and press representatives and a number of WLAN hotspots are all incorporated in the network.

Gasser+Bertschy Elektro AG 安装公司已在瑞士联邦大厦内部共铺设了约 100 千米长的 *uninet*<sup>®</sup> 7150 4P 多媒体双绞线电缆。这种铜质数据电缆和 PS GG45 模块在国际市场上均列于最高端产品，使得传输链路能够达到新的最高传输等级：F<sub>A</sub>，即建立高达 1000 MHz 的数据传输网络。相关当局在评估布线系统的时下应用时，认为缆线上的这种性能预留将对未来的应用发挥重要作用。

Altogether, the installation company Gasser+Bertschy Elektro AG has fitted some 100 kilometres of *uninet*<sup>®</sup> 7150 4P multimedia cable in the Bundeshaus. This Category 7 copper data cable and the PS GG45 modules are among the most efficient on the market and have made it possible to set up a data network in the new Class F<sub>A</sub> up to 1000 MHz. When the authorities were evaluating cabling systems to operate today's applications, the high reserve capacity available for future applications played an important role.

### 适用于所有种类服务的基础设施

从技术上来说，在水平配线子系统中配备多媒体双绞线和专用有线电视面板意味着国会事务部同样可使用 LAN 电缆系统传输高达 862 MHz 的广播和电视信号，并可在需要时将这些视频信号通过多媒体双绞线传输到每个工作站，而无需另行建立同轴电缆网络。它意味着在高等级的双绞线链路上可以传输各种类型的信息，其中包括语音、数据、音频、视频和有线电视，即通过操作和管理布线系统便可实现多种类型的信息服务，同时还提供了更加强大的适应性。

已安装的 *unilan*<sup>®</sup> 系统同样可为终端设备提供远程供电（以太网供电）。由于 VoIP 电话、WLAN hotspots 或其他设备无需采用电力电缆，本系统不但可降低基础设施的复杂性，同时还可缩减运营商成本。

### *An infrastructure for all services*

Installing multimedia cables and special TV panels in the floor distributors means that the parliamentary services department can also use the LAN cabling to transmit radio and TV signals up to 862 MHz and, if necessary, distribute them to every workstation, with no need for a separate coaxial cable network. This means that there is only one network infrastructure to be operated and administered for all services, which also offers even greater flexibility.

The *unilan*<sup>®</sup> system that has been installed is also used to supply end devices with energy remotely (Power over Ethernet, PoE). Since there is no need for power cables for VoIP telephones, WLAN hotspots or other devices, this system reduces both the complexity of the infrastructure and the costs for the operator.



现代通信技术巧妙地与具有文化价值的建筑相结合。

*Modern communications technologies are subtly integrated into this building of cultural value.*



### 长期的投资保护

“德特威勒电缆公司提供的新型高性能综合布线解决方案对于实现瑞士联邦大厦的翻新目标做出了重要贡献”，瑞士国会副秘书长 Hans Peter Gerschwilier 先生说道。“由于引进了先进的布线概念，我们已能够避免大量的额外投资，例如在同轴覆盖网络方面的投资。此外，由于该布线系统存在相当大的预留空间，因此国会事务部的投资是可以得到保障的。”单独用户同样受益于已安装 *unilan*® 系统的适应性、可靠性以及增加的带宽。

### Long-term investment protection

“With its new, high-performance cabling solution, Daetwyler Cables is making an important contribution towards achieving the objectives of the renovation work in the Bundeshaus”, explained Hans Peter Gerschwilier, Deputy Secretary General of the Swiss Parliament. “Thanks to this cabling concept, we have been able to avoid a great deal of additional investment, for example for a coaxial overlay network. What’s more, the investment by the Parliamentary Services Department is protected because of the considerable reserve capacity in the cabling system.” The individual users benefit from the flexibility and reliability as well as the increased bandwidth of the *unilan*® system that has been installed.



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