下瓦莱州

架设了一条
"信息超高速公路"
THE LOWER VALAIS GETS A "DATA SUPER-HIGHWAY"

瑞士瓦莱州最大的区域能源
供应商L'Energie de Sion-Region SA
正利用从德特威勒公司购买的
光纤配线架构建光纤到户网络。
L'Energie de Sion-Region SA, the biggest
regional energy supplier in the Swiss canton
of Valais, is constructing a Fibre-to-the-Home
network with fibre optic racks from Datwyler.

ESR 总部位于锡永市
ESR´s headquarters in the city of Sion.

L'Energie de Sion-Region SA (ESR) 的员工数量超过200名，是瑞士瓦莱州最大的区域能源供应商。公司始建立于1996年，其股东中多为瓦莱市民，公司除提供供电和配电服务外，也负责管理其他公司的水、气和有线网络事宜。并且，ESR还为其客户提供多媒体服务，包括100多个电视频道、交互式电视、互联网宽带和电话服务。

L'Energie de Sion-Region SA (ESR) employs a workforce of over 200 and is the largest regional energy utility in the Swiss canton of Valais. In addition to supplying and distributing electric power the company, which was founded in 1996 and counts numerous Valaisian municipalities among its shareholders, administers other companies in the water, gas and cable network sectors. Not least, ESR also provides its customers with multimedia services, including over 100 television channels, interactive TV, broadband Internet and telephony.

**"我们必须找到装配
POP的最佳方案……"**
**"WE HAD TO FIND
THE BEST ANSWER TO
EQUIPPING THE POPS…"**
Jérôme Luyet

就在不久前，客户还只能够通过同轴电缆接收多媒体服务。2008年，在对有线电视网络进行了仔细评估之后，考虑到需要迎合未来技术，ESR决定开发光纤到户（Fibre-to-the-Home）的光纤网络。这种新型FTTH网络设计用于为20个市的公司和个人提供高性能的多媒体服务—其品质更为出色，内容更为丰富，例如包括高清电视和视频点播。

Until recently customers were only able to receive multi-media services via coaxial cable. In 2008, after a careful assessment of the cable tele-vision network and mindful of the need to cater for future technology, ESR decided to develop a Fibre-to-the-Home fibre optic network. The new FTTH network has been designed to provide companies and private individuals in 20 municipalities with high-performance multimedia services – of better quality and augmented by additional offerings such as high resolution television and Video on Demand.

这项工作证明了将瓦莱"信息超高速公路"合并到现有网络中是可行的。自2000年以来，德特威勒公司已为光纤主干网络提供了大量不同类型的光缆。瓦莱州首府锡永市当前一大半市区已得到了的网络升级，甚至附近城市的市民也从FTTH主干网络中受益。

It proved possible to incorporate part of the existing network in the construction of the Valaisian "data superhighway". Since 2000 Datwyler has already supplied numerous different types of fibre optic cable for the fibre optic backbone. Thanks to the current upgrades half the city of Sion, the capital of the canton of Valais, and the neighbouring municipalities are already benefitting from a FTTH backbone network.

配有光纤接续盒、尾纤以及相关的适配器的抽屉式配线架
Drawer with splice cassettes, pigtails and associated adapters.

端口密度最高的系统
System with highest port density

光纤到家网络的光纤分点（被称为节点，或简称POP）于2011年秋季开工建造。Jérôme Luyet，ESR多媒体电缆网络及光纤到家的负责人指出："该项目最困难的部分在于需为网络创建数量庞大的POP"。"一旦做出决定，我们就必须找到装配POP的最佳方案。ESR选择了德特威勒公司提供的具有高端口密度的系统。这是一套紧凑、灵活的系统，其容量适合所有可用站点。此外，这还是一套集成型系统，适用于无源和有源组件，在单个机架中可执行大量连接，并且价格合理"。

Construction of the FTTH network's central fibre optic distribution points, known as Points of Presence, or POPs for short, began in the autumn of 2011. "The most difficult part of the project was establishing the number of POPs required for the network", says Jérôme Luyet, in charge of the multimedia cable network and FTTH at ESR. "As soon as this decision was taken we had to find the best answer to equipping the POPs. ESR opted for a Datwyler system with high port density. This is compact, flexible, and of a size which fits all the available sites. It is, more-over, an integrated system which is suitable for passive and active components and permits a huge number of possible connections in one single rack – and all at a reasonable price".

每个机架（又称光纤配线架ODF）允许将19英寸的机柜中的2,880条光纤连接到两个机架单元中的任意一个上。可将LC/APC耦合器上的（最多）144条光纤连接到一个抽屉式配线架中。无源光纤配线架也采用了先进的跳线理线设计并采用了能控制光纤弯曲半径的理线架设备，提供了最佳的光纤管理。

Each of these racks – also called optical distribution frames (ODFs) – allows up to 2,880 optical fibres in 19-inch drawers to be connected to each of two rack units. Up to 144 fibre optics on LC/APC couplers can be lined up in one drawer. The passive ODFs also have sophisticated patch cable management and bend radius control de-vices for optimum fibre management.

位于城市中心的"城市中心"配线点所使用的ODF
**ODFs at the "Heart of the City"
distribution point in the city centre.**

ODF下方的电缆理线盒
Cable divider box below the ODF.

André Progin
瑞士罗曼德区域销售经理
德特威勒布线解决方案公司
**Area Sales Manager Suisse Romande
Dätwyler Cabling Solutions AG
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为后期扩展提供了大量备用容量
Plenty of spare capacity for future expansion

截至2012年5月底，第一批机架已安装至各个入网点，可在锡永市及其周边城市中进行光缆连接。第一批安装到位且配备齐全的光纤配线点，被称为"城市中心"，位于锡永市中心。配线点设有4个大尺寸无源机架，目前为城市中心的用户提供约6,000条光纤链路。此外，其还能够进一步提供约12,000条光纤链路，在将来，随着用户数量增加，可根据需要接入光纤，无需额外增设光纤配线架。公司还针对有源组件在机架中构建了大量光纤连接，同样为后期网络扩展提供大量备用容量。

By the end of May 2012 the first racks had been installed at the various POPs, and connection of the fibre optic cables could begin, both in Sion itself and the various neighbouring municipalities. The first fully installed and equipped fibre optic distribution point, beautifully named "Heart of the City", is in Sion city centre. The distribution point houses four large passive racks, currently with around 6,000 fibre optic connections for city centre subscribers. In addition it provides space for approximately 12,000 further connections, which in future – as subscribers numbers grow – can be brought into service as required without the need to add additional ODFs. Thousands of connections have also already been completed in the racks for active components, and these too provide generous spare capacity for future network expansion.

ESR的David Follonier负责在锡永市及其周边一些地区建造安装POP。他组织材料采购及进货验收，并协调各方工作。ESR技术人员则负责安装。技术人员负责构建ODF，敷设电缆管道并接入许多不同的配线和主干电缆。POP由不间断电源保障系统提供能源供应。此外还安装了通风与空调系统，为有源组件散热。

At ESR David Follonier is in charge of constructing and equipping the POPs in Sion and some of the surrounding localities. He organises materials procurement and the acceptance of incoming goods, and coordinates the work of the various parties involved. The installations themselves are effected by ESR technicians. They construct the ODFs, set up the cable ducts and insert the many different distribution and backbone cables. The POPs have secured energy supplies. A ventilation and air conditioning system was also installed to dissipate the heat of the active components.

ESR将光缆组装和接续任务分派给了专业公司。
ESR tasked a specialist company with the assembly and splicing of the fibre optic cables.

ESR正在多个相邻地区快速推进POP构建。预计2015年之前将完成ODF安装及光缆连接。
ESR is pressing ahead rapidly with the construction of POPs in the various neighbouring localities. Installation of the ODFs and connection of the fibre optic cables is scheduled for completion by 2015.

可将最多12根护管
（每根护管配有12条光纤）连接到每个机柜模块
**Up to 12 loose tubes with 12 optical
fibres per tube are routed to each drawer module.**