

# A tunnel made of glass



The new ASTRA Platform Services (APS) building in the Unterfoehring Media Park near Munich.

ASTRA Platform Services GmbH (APS), a subsidiary of SES ASTRA, operates in Unterfoehring near Munich, Germany, one of Europe's most modern broadcasting centres. When spatial capacities reached their limits, APS acquired a plot of land on the opposite side of the street and decided to connect the two sites via fibre cables. For the transmission of L-band signals, APS choose equipment from the Optribution product family by DEV Systemtechnik, Friedberg, Germany.

When APS looked for replacement of distribution amplifiers no longer able to keep up with growing demands, it visited DEV's booth at the IBC trade fair in Amsterdam and discovered the then brand-new RF signal distribution system, DEV 2180. After field trials in 2005, APS decided to replace the old distribution amplifiers with new equipment accommodating up to eight modules 1:16 in one single 4 RU chassis. DEV pre-configured equipment was installed in just half an hour – the result: "excellent functionality in just one half the rack space needed before". APS therefore chose DEV when it came to equipping the new building with distribution amplifiers.

Optribution (Optical Transmission and Distribution of RF Signals) is DEV Systemtechnik's systematic approach to the ongoing development of the signal distribution infrastructure in satellite ground stations and CATV head-ends. Four different

form factors within the Optribution product line stand ready to meet the user's signal transmission demands. The choice of the best fitting Optribution product depends on the number of signals to be transported.

"The 1RU chassis with two universal slots accepts up to two signals, the 3 RU chassis with up to 20 optical slots can handle up to 40 signals. The 4 RU chassis with 16 optical slots is additionally able to distribute (1:8, 16, 32, 64) or switch (4x8, 16, 32, 4x64) incoming signals. The newly developed Outdoor Chassis offers four slots, enabling a 4+1 redundancy at the antenna. It can be installed near the antenna and converts the signals directly there," DEV explained.

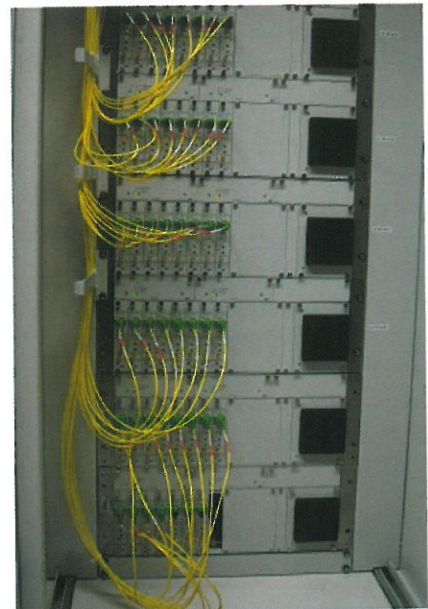
To equip the chassis, DEV offers a multitude of modules featuring high packing density and application-oriented options: four new transmitter cards with up to twelve options, four new receiver cards with up to three options, four new redundancy options and optical CWDM mux/demuxes. The newly implemented CWDM technology allows the user to transmit up to eight independent channels over just one optical fibre.

#### 48 links in 10 chassis

APS started with 32 fibre links for signal transmission between the two buildings. In Summer 2010, capacity was expanded to 48 links in total. Signal input interface in the old building is the Intelligent Optical Signal Transmission System DEV 7103,

a 3 RU chassis providing a controller and accommodating up to 12 transmitter or receiver modules. APS uses two of these chassis to convert the electrical to optical L-band signals. Link termination in the new building is done by a DEV 7104. This 4 RU chassis combines signal transmission with distribution modules such as dividers and matrix switches.

In the APS set-up, the DEV 7104 receives the optical signals, amplifies them and distributes them into the system. DEV 7103 as well as DEV 7104 allow for integration of redundancy switches, rely on redundant power supplies and can be remotely controlled and monitored via a user-friendly web interface.



Optribution with DEV 7104 in the APS rack

SES ASTRA is the leading Direct-to-Home (DTH) satellite system in Europe. The satellite fleet currently comprises 16 satellites. The ASTRA satellite system delivers services to more than 125 million DTH and cable households and transmits more than 2,500 analogue and digital television and radio channels. SES ASTRA also provides satellite-based multimedia, internet and telecommunication services to enterprises, governments and their agencies.

For further details, see [www.ses.com](http://www.ses.com) or [www.dev-systemtechnik.com](http://www.dev-systemtechnik.com)