News Items

Telephone

A Telecom PTT solar-operated public telephone was presented to the press in St. Gallen. A tubular steel mast, two solar panels, and fixed-installation Natel-C equipment were set up on the roof of a Tobtel-90 telephone booth equipped with a Telca Duet pay station. Together with two accumulators, the solar panels with a capacity of 53 watts each supply the power to the entire infrastructure (connection, paystation, card reader and 10-watt lighting). The booth can be used on large-scale events at remote sites or on motorways, where otherwise extensive wire-linked cable connections would be required.

The European ATM pilot operation between Dublin and Brussels was recently officially opened. The event was transmitted to eleven European cities via video conference link in the ATM pilot network. Interesting multimedia ATM applications were presented in both Dublin and Brussels.

Teleinformatics

48 links were set up by the leased circuits service centre (LCSC), four of them overseas. In addition, a 2-Mbit/s leased line from Geneva to London and two 2-Mbit/s leased-line bearers from Geneva to Tel Aviv and Geneva to London went into operation.

Radio, Television, Radiocommunications

The following fixed microwave radio links became operative: the SDH (Synchronous Digital Hierarchy) trunk network connection between Lucerne-Sonnmatt and St. Gallen-Langgasse, STM-1/4–6,8 GHz (1 + 1), for the transmission of either STM-1 (155 Mbit/s) or 140 Mbit/s; as a feeder for the Natel base stations between the Laufenburg exchange and Laufenburg in Germany (4 × 2 Mbit/s), from the Gland exchange to Pointe-de-Messery in France (4 × 2 Mbit/s), from Gondo to the multipurpose installation in Simplon Village (16 × 2 Mbit/s), and between the Simplon Village exchange and the multipurpose installation in Simplon Village

(16 × 2 Mbit/s); as a VHF modulation feeder between Pizzo Matro and Paudo (4 × 1 Mbit/s) and from Gola di Lago to Tamaro (2 × 2 Mbit/s); as a feeder for a stepped unit Lugano Cinque Vie to Novaggio (16 × 1 Mbit/s); and to connect the Baden exchange and Geissberg stations (16 × 2 Mbit/s).

An IDR (Intermediate Data Rate) link with *Costa Rica* was set up via the *Intelsat satellite 325.5° east* (Atlantic Ocean) as well as an IDR connection with *Bolivia* via the satellite at *335.5° east* (also Atlantic Ocean); an IDR link with *Japan* and three additional SCPC-type (Single Channel per Carrier) voice circuits with the *Maldives* were set up *via the satellite at 60° east* (Indian Ocean).

A further 34 Natel D GSM base stations and two Natel C base stations went into operation.

The Trin Tunnel FM radio transmitter is now fully operative. It transmits the DRS-1 mono programme on the 91.0-MHz frequency. It also operates police and maintenance services. The Ermatingen FM radio station with DRS-3 programmes on the 104.2-MHz frequency is also fully operative; likewise, the FM radio station in Wattwil, which brings programmes broadcast on DRS 1 stereo (88.0 MHz), DRS 2 stereo (97.3 MHz) and DRS 3 stereo (104.8 MHz) to places from Bütschwil to Wattwil and Ebnat-Kappel. The Rodersdorf FM radio station is also fully operative. It brings to the village of the same name programmes broadcast on DRS 1 stereo (91.0 MHz), DRS 2 stereo (95.3 MHz) and DRS 3 stereo (105.8 MHz).

Radio installations in the Vue-des-Alpes and Hauts-Geneveys tunnels also went into operation. They are equipped for the Canton's traffic information radio and also broadcast the RSR-1 FM radio programme, together with the ARI and RDS traffic information radio systems and the RTN local radio programme.

In what is for the time being *the final expansion phase of the fourth-channel network, the following transmitters and transformers for transmission of the S-PLUS television programme,* to be known from 1 March 1995 on as 'Swit-

zerland 4', will go into operation: Amden (Channel 55), Brienz (Channel 69), Elm (Channel 36), Engi/Glarus (Channel 35), Geissholz (Channel 58), Glarus (Channel 21), Haslen/Glarus (Channel 24), Sool (Channel 52), Willigen (Channel 57), and Ziegelbrücke (Channel 68).

Miscellaneous

At the 21st General Meeting of the European Telecommunications Standards Institute (ETSI) in Nice (France) discussions on Intellectual Property Rights (IPR), which had been going on for five years, were concluded. A new interim policy was approved and enters into force immediately.

The 12th Meeting of the ETSI TM4 subgroup (Radio Relay Systems) took place in Chester (UK). 21 topics were treated. Various standards with regard to SDH broadband systems were partially concluded; others are in an advanced stage of discussion. Proposals for specific bytes for Sub-STM-1 were approved by the TM3 group. Amongst other topics still to be treated are TDMA point-to-multipoint systems (Time Division Multiple Access, range 3 to 11 GHz) and CDMA (Code Division Multiple Access, bands in the 1- to 3-GHz range), standard testing procedures for conformance testing and new standard specifications for microwave antennas in the 3- to 60-GHz range.

The European Public Telecommunications Network Operators' Association (ETNO) held its general meeting in Lausanne, chaired by Swiss Telecom PTT. Now that Estonia and Poland have joined, the Organization numbers 33 members. Hungarian Telecom was elected to succeed Swiss Telecom PTT on the Committee. In 1995 the General Meeting will be chaired by France Télécom and the Committee by British Telecom. Three new working groups, in which Telecom PTT wishes to play an active part, were set up: 'TMN', the 'European Information Society' and the 'World Trade Organization'.

A new Telecom PTT office building was officially opened at Poststrasse 6 in Ostermundigen. The new building contains 350 modern work places, oc-

cupied by sections of the network's and private customers' departments as well as the entire Informatics Main Division of Telecom PTT. Since it was formed in 1989, Informatics Telecom was spread out over ten different locations in Bern. All employees are now under one roof. Gross floor space totals 11 200 m², two thirds of the cubic content of the building are underground. Building costs amounted to around 85 million Swiss francs.

Research and Development

An information superhighway for 10 Gbit/s

Headed by AT&T-Bell Laboratories, six partners have joined forces with the intention of working together for an initial period of two years on a field trial for a fiber optic network with a high transmission rate of 10 Gbit/s. These are – beside Bell Labs – Bellcore, Rockwell, Southern Bell Technology Resources, Tektronix, and Washington University in St. Louis. 14 million US dollars are to be spent in these two years, with 60 % coming from the quasi-governmental ARPA (Advanced Research Products Agency). The core of the network will be Sonet OC-192, an optical synchronous network of the next generation, which is operated in asynchronous transfer mode (ATM) and configured as a ring. The network will have four times the capacity of the currently fastest commercial-use ATM network. The network will be 'selfhealing', that is to say, it will reconfigure itself in the event of disturbances.

Cryptofax – newly invented in Japan

For some time now there has been no question that the most powerful impulses in communications technology today come from Europe. Now there is news that two Japanese manufacturers of office equipment have developed a cryptofax for the transmission of confidential messages. To function, both sender and recipient require a 'personal' chip card, but it is otherwise a completely normal G3 fax machine, which can read the encryption code from the respective chip cards. Siemens showed this a few years ago already, and so this machine is something of a 'straggler' on the Japanese market, which did not pay it much attention up till now. Neither is the price unusually low: the machine itself is to cost around $ 2500, plus $ 180 for each key card. Siemens has already been offering this solution for some time as an enhancement to its PBX equipment.

Image-Recorder with 1 millilux sensitivity

An ultrasensitive image-recorder, which delivers pictures even under just starlight, has been developed by Hamamatsu, Olympus and the Japanese broadcasting company NHK. The new image-recorder is 1000 times more sensitive than good CCDs, which reach around 1 lux sensitivity. The image-recorder is 7 cm in diameter and 8 cm long. It weighs around 500 g. Its most important use will probably be in surveillance systems.

IBM Microelectronics seeking a multimedia partner

The US technical journal 'EE Times' which, with its good contacts in the US industry, always has its ear to the ground, has again come up with something interesting: Mike Attardo, who heads the semi-conductor sphere at IBM, is seeking a partner with whom to build specific products in the multimedia field, such as MPEG coders or video and data compression chips. IBM Microelectronics has only been active in the free market for two years but has shown itself to be a 'whizz-kid'. It now wants to expand its business, particularly with high-volume products in the telecommunications and entertainment electronics fields and in the sphere of multimedia technology. But partners here are few and far between. Three months ago, Siemens, too, found itself a companion in California (ITT, Inc.). Anyone with something to offer entered into a partnership long ago.