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# News Items

## Telephone

The first Natel D GSM Base Station of northwestern Switzerland was set in operation at the telecommunications center of Basel-Grosspeter. It supplies three cells. Another base station for the new digital mobile telephone system will be set in operation in the next few weeks at the Basel trade fair center, the Mustermesse.

Eight further *Natel C Base Stations* were set in operation and a *National Highway tunnel* was connected to the system.

A digital microwave radio link for telephony with a 34 Mbit/s capacity was set in operation between Scuol and Samnaun. Another link at  $4 \times 2$  Mbit/s for the supply of a Natel C base station was set up between La Forclaz and Le Sépey. Furthermore, the following temporary microwave links were set up: Châtelaine-Geneva (2 Mbit/s for 6 months) for a Megacom connection; two links in Zürich  $(4 \times 2 \text{ Mbit/s for } 1^{1/2} \text{ and } 2 \text{ years,}$ respectively) for leaselines; and Zürich/Herdern-Schleinikon (34 Mbit/s, until about end 1996) for a cable restoration

## **Teleinformatics**

The *telex traffic* between Switzerland and the *Inmarsat C mobile stations* of the western Atlantic region (AOR-W) was opened recently. Herewith, all four Inmarsat regions, i.e. pratically the whole world, are accessible from Switzerland.

The leaseline control center (LCC) put in operation nine digital ( $8 \times 64$  kbit/s and  $1 \times 128$  kbit/s) and one analog *leaselines*. The 2 Mbit/s bearer line planned with AT&T on the TAT-9 cable was put in operation already in may. On this cable, Switzerland operates four 2 Mbit/s bearers.

## Radio, Television, Radiocommunications

At the *Saas-Plattjen* transmitting station the broadcast programmes DRS 1 (at 92.2 MHz), DRS 2 (at 93.3 MHz) and DRS 3 (at 104.1 MHz) were set in operation, in stereo and with Radio Data System (RDS) Signals. Previously, only the DRS 1 and 2 programmes in monophony were broadcast from this station.

Four permanent voice circuits with Cuba were switched on via the Leuk satellite earth station and an Intelsat satellite ( $325.5^{\circ}E$ ) as well as a *digital link at 64 kbit/s with Greece* via the Zürich/Herdern earth station and a Eutelsat satellite at  $10^{\circ}E$ .

The substitution by new equipment of all automatic protection circuits in the Swiss microwave link network for TV, which lasted several years, has now been completed. At the same time, a digital multichannel TV sound system was installed on all links of this network.

The following towns were newly equipped with a transmitting station for the *Citycall B paging system: Arosa, Avegno, Bassecourt, Boncourt, Cevio, Hinterrhein, Moutier, Olivone, Rasa, Sonceboz* and *Tavannes.* 

#### Miscellaneous

The old telephone exchange of *Versam* has been converted to a museum exchange, second after the one in Rifferswil am Albis. In addition to the central equipment in operating status, subscriber apparatuses and line equipment are on display. The museum is open to the public free of charge.

The *ETSI subgroup TM 4* (Digital Radio Relays) convened in Oslo. The standardisation projects for SDH (Synchronous Digital Hierarchy) Radio Relays have been complemented with technical parameters. Two programmes for antenna specifications were started in view of the frequency coordination problems to be expected in the 1 to 3 GHz range, and the effect of the provisional CCITT Recommendation on quality parameters (G.82x) was analyzed.

A conference on Audio Test and Measurement took place under the auspices of the Audio Engineering Society in Portland, Oregon (USA). Emphasis was mainly on the presentation and discussion of new measurement methods for the analysis of digital audio codecs. A new generation of codecs, using the masking characteristics of the human ear for data compression (perceptual coding), will soon be in widespread use with DCC (Digital Compact Cassette) and DAB (Digital Audio Broadcasting). It is not possible to analyze this kind of codecs with conventional methods. The *Fraunhofersche Institut* in collaboration with the *University of Erlangen* has now developped a new measuring equipment which is based on the calculation of the *Noise to Mask Ratio*, which is suitable for the qualitative analysis of these audio codecs.

The multifaculty research project Design and Production of Integrated Circuits on Gallium Arsenide has successfully been completed in close collaboration between the Zürich Federal Institute of Technology, the Industry and PTT with the intention to make this technology, which is suitable for extremely fast, lowpower digital circuits and for hyperfrequency analog circuits, available to a wider range of users. This and other projects with GaAs, most of them sponsered by the PTT, were presented at a seminar on III-V semiconductor technology at the PTT research and development division. Besides projects for optimization of the technology, circuits and components for optical transmission and for mobile communications at frequencies over 1 GHz are developed.

The 44th meeting of the *Technical Committee of the European Broadcasting Union EBU* took place in Bologna. Main theme was the unification with the Broadcasting Union of Eastern Europe OIRT, which should be completed until the end of 1992. Following this merger, the Intervision Network will be controlled from Brussels beginning 1993, together with the Eurovision Network. In the technical area, Digital Audio Broadcasting DAB, digital television and the use of broadcasting frequency bands by superposed data services were discussed among others.