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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 *Muster-messe*.

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 × 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 × 2 Mbit/s for 1½ and 2 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. practically the whole world, are accessible from Switzerland.

The leaseline control center (LCC) put in operation nine digital (8 × 64 kbit/s and 1 × 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°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°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 developed 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, low-power digital circuits and for hyperfrequency analog circuits, available to a wider range of users. This and other projects with GaAs, most of them sponsored 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 Intervention 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.