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## Experimental Installation for Computer Input and Output of Digitized Sound Signals

A. Kündig, Berne/H. Müller, Georgia (USA)/J. G. Vejlsttrup, Zollikofen

An installation designed and built by Swiss PTT Research and Development enables digitized sound signals to be fed into an IBM 370-168 computer at the PTT Data Processing Centre, where they are stored for simulation and statistical purposes. The article outlines development work on this installation and describes some of the applications.

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## Swiss PTT Modems for Data Transmission

H. R. Maurer, Berne

Swiss PTT has for some years been renting to customers the modems for medium-speed data transmission (200/600/1200 and 1200/2400 bit/s) over the public switched network. In view of the steady demand for such equipment, the decision to maintain the policy of providing standardized PTT apparatus throughout the PSTN has proved satisfactory as regards both operation and economy.

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## New Method of Junction Circuit Calculation in Local Networks

A. Cornaz, Berne

Recent experience in the calculation of traffic distribution for meshed networks of some size has led Swiss PTT to abandon the twin-factor method for a more modern one, already used by the Swedish Administration. The author outlines the new method and comments on its application.

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## History of the Pupin Coil

R. Goldschmidt, Pully

A brief history of the loading coil, invented by the Yugoslavian-born American Michael Pupin, is followed by an outline of its application in the Swiss telecommunication network from the early days to the present.

## News Items

### Telephone

From April to August a **table of rates** showing the new charges for **inland calls** from the about 600 local networks will be sent to some 3.2 million Swiss customers.

Following Geneva, Neuchâtel, La Chaux-de-Fonds, Basle and Lugano the **Zurich and St. Gall** network groups have opened the new **3-digit information and service call numbers**, which are gradually replacing the 2-digit numbers throughout Switzerland.

Since 15 March Swiss customers can dial a **rates-of-exchange bulletin** issued once or twice daily by three major banks. It is available over **No. 160** from network groups Zurich, Geneva, Neuchâtel, La Chaux-de-Fonds, Basle and Lugano. Subscribers in other parts of the country will for the time being have to dial the Zurich, Geneva or Lugano prefix in addition.

In the first quarter of 1975 **international subscriber dialling** was made available in a further 16 Swiss exchanges serving 19,501 customers.

A new **district exchange** for 14,000 lines having come into operation at **Zurich-Fussli-strasse**, the city's local network is now **ISD-equipped** throughout.

Switzerland's first **mini coaxial cable system**, which enables 24 supergroups to be accommodated in the baseband, has been installed at Basle.

Swiss PTT is testing the first two experimental lengths of a new **2.6/9.5 mm, 12-tube coaxial cable** intended for 60 MHz trunk operation from 1978.

### Telegraph, Telex

**Gentex service between Switzerland and Turkey** was opened on 6 March. Direct links to the ATECO telegram switching system at Zurich will also be established shortly from **Eire** (7 April), the **USSR** (14 April), **Sweden** and **Jugoslavia**.

On 1 April **binary charging** was introduced in the **telegram service** to Europe and some North African countries. For each telegram there will be a basic charge of 7.50 SFr. and a charge per word of —.30 SFr. Press telegrams to the above countries are no longer accepted.

**Automatic telex service** has been opened between **Switzerland and Iran**. **Semi-automatic service to Turkey** has been available since 1 March over 5 direct lines between Zurich and Istanbul.

Facsimile transmission tests have been conducted with the latest model of the **Plessey Remotecopier**.

### Radio, Television

In March an **experimental 12 GHz microwave feeder for CATV systems** came into operation in central Switzerland. At present it relays Germany II (ZDF), a second channel being used to observe propagation.

The **Swiss television network** has been enlarged by 9 transposers in 5 different locations.

A **remote-control system** for the **Swiss shortwave radiotelephone service with aircraft** has come into operation between the Berne overseas terminal and the Châtonnaye receiving station. It is used for complete control of two SSB receivers and connection of 16 different receiving aerials.

### Miscellaneous

Last year 716 **telephone operators**, the smallest number since 1966, left the PTT.

The **pneumatic ticket carrier system** of the Basle international manual office has been equipped with **automatic date and time printers**. This facility, which is already in use at Berne, will be made available to all manual offices.

### PTT Business in 1974

The volume of business increased by 2.6%, which is 0.3% less than in the previous year. The average growth in telecommunications was 3.6%, that is 2.5% less than in 1973. Postal business rose by 1.1%, but failed to fully recover the 1973 loss of 1.5%.

On the postal side, unaddressed printed papers, postbus passengers, giro transactions and newspapers rose substantially. Parcels and addressed letter-post items increased only slightly. Money orders and COD items dropped again heavily as a result of the tendency towards giro.

In telecommunications, both telephone and telex were marked by substantial growth rates, but telegrams dropped again.

The following items were handled per head of population: 174 letters and postcards, 166 newspapers and periodicals, 21 parcels, and giro transactions to the amount of 128,000 francs.

Telephone subscribers made an average 817 calls, viz. 469 local, 327 trunk and 21 international. Telex calls per station averaged 1440 (543 inland and 897 international). Some 61 telegrams were handled per 100 population.