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# **Summaries and Notices**

#### **Summaries**

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### Electronic Ancillary Equipment «Connection System 83» (VS 83)

H. Stieger, Berne

In 1978, in view of the introduction of electronic PABX and telephone exchanges a working group was authorized to procure a modern connection and distribution system requiring solderless connection and minimum space. After an unsuccessful evaluation of the available systems in the market, the working group designed an own system with the designation 'Connection System 83' or in short VS 83. Reichle and De Massari Co at Wetzikon carried this system to the standard of quantity production under contract of the PTT. The system is manufactured and sold by various firms of the Swiss telecommunication industry. The PTT carries the risk and development cost of the system. It has filed the patent rights for the VS 83 to protect against copying nationally and internationally. The general introduction of the system will start from the beginning of 1985 depending on the application area.

p. 453...466

### New Radiopaging and Mobile Telephone Services in Switzerland

F. Müller, Berne

In 1958, the car radiopaging opened the first radiopaging service in Switzerland. This service was complemented at first by the national car telephone network (Natel) and later by the frequency coded local paging networks in the cities of Berne and Zurich. Due to the rapid development of service demand a modern radiopaging concept was conceived. It is based nationally on the Eurosignal and on a new code for local service. This article describes the methods of application of both systems with their different searching and calling possibilities. It also illustrates the new mobile telephone system based on cellular design, the choice of frequency bands, the possible developments of customer demand as well as questions of tariff. The article concludes by stating the objectives of the extension of these services.

p. 467...470

# Automation of Measurements of Transmitting Antenna Diagrams with Helicopter

H.-J. Wicht, Berne

Since more than 20 years the research and development division of the PTT General Directorate has conducted measurements of radiation diagrams for broadcasting antennas at the transmitting site with helicopters. The steady progress in the antenna technology and the additional tasks were the origin of a R & D project that aimed at improving the accuracy and the speed of measurements by automation.

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# First Swiss Digital North-South Radio Relay Link for Data Transmission

M. Liniger, P. Jordi, J. Stulz, Berne and U. Gysel, Zurich

A radio relay link was taken into operation for data transmission between Zurich and Lugano. Due to redundant 1+1 System a high availability of transmission is achieved at a bit rate of 34 Mbit/s. The article portrays the basic planning criteria of the link, the equipment employed and its electrical characteristics. It outlines also the experience gathered during one year of operational trial.

### **News Items**

### Telephone

In mid-October, more than 4300 telephone subscribers obtained already the new telephone set 'Lugano'. Around 2700 subscribers are now using the new telephone set 'Paradiso'. At the same time, the PTT district offices had received 2600 orders for the cordless telephone 'Radiotel'. The first batch was delivered at the beginning of November.

The PTT intends to introduce **Notico**, a standard position catalogue for the computation of above and below ground level outdoor plant construction. It will be given to the PTT district offices for use from spring 1985 onwards.

In October, 5 new permanent satellite circuits to Bermuda came into operation via Leuk earth station. At present, 52 countries can be reached directly via the Swiss earth station.

The future requirements of the PTT for international circuits were estimated. For the period of 1985 to 1990 an average growth of 9 pc was foreseen and for the period of 1990 to 1995 a growth of 6 pc. For 1995, the planning objective is around 32,000 circuits in the European area and 8000 circuits to the overseas.

At the end of 3rd quarter of 1984, 64,453 new lines and 111,789 telephone stations came into service. Thereby, the total amounted to 3,159,510 main lines and 5,224,871 telephone stations.

### **Teleinformatics**

Since the introduction on 1 February 1984, 134,127 music telegrams have been delivered.

All countries worldwide, except Andorra and Bahrain, are participating in the **Memo-Telex service** requiring automatic direct subscriber dialling.

On 30 September 1984, the Videotex pilot trial was terminated and the Prestel exchange disconnected. Since 15 November 1979, a maximum of 206 subscribers (mostly information providers) had used the system during 38,500 hours. The pilot trial is now being gradually replaced by the operational trial according to the CEPT standard. This will probably run till the end of 1985.

At the end of 3rd quarter of 1984, the **telex lines** increased to 1045 and reached a total of 36,998.

### Radio, Televison

In Winterthur two and in Geneva one VHF Simplex relay stations have been brought into operation for radiophone mobile service without connection to the public telephone network. The total number of relay stations increased to 62 in all Switzerland.

For the operational trial of the digital local radiopaging Pocsag code system, 4 transmitters were installed at the existing locations of the analogue network in the city of Berne.

The PTT plans to extend the Natel-B network to 12 duplex frequencies so as to double the line capacity. Thereby, additional free lines will be available in Zurich network area probably at the end of 1985. Moreover, new mobile telephone stations are foreseen.