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## Summaries

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### Frequency-Reuse by Polarization Diversity on Satellite Links

Ch. Zufferey, Berne

When a satellite link is limited by the number of available frequencies, it is proposed to increase capacity by using twice the same frequency cross-polarized. The resulting depolarization loss between the same channels will, in the final analysis, determine whether or not this is a workable solution. The decoupling depends strongly on the antenna system used and also on the effects of the transmission medium on wave polarization. The article lists the various phenomena likely to disturb the functioning of systems based on the principle of frequency reuse and discusses the advantages and drawbacks of circular vs linear polarization. It shows that though the erection of such systems is now only a question of equipment costs, the propagation data necessary for a minimum-cost realization are inadequate today. Measurements planned for the coming years, especially those with the OTS and Intelsat V satellites, are designed to fill this gap.

p. 151...156

### Date and Time Printers for Automatically Controlled Pneumatic Ticket Carrier Systems

H. Gribi, Berne

Considerable savings in operator time have been achieved by adding date and time printers to the automatically controlled pneumatic ticket carrier systems in Switzerland's international manual offices. Some economic and technical aspects of using printers are examined in detail.

p. 157...166

### Fundamentals and Aids for the Service and Maintenance of the Integrated PCM-Telecommunications System (IFS) (end)

K. E. Wuhrmann, Berne

After a description of the functions of the IFS-system service, the regional center is introduced, described and justified. Considerations going into the work division among the various program-controlled peripherals and the maintenance concept for IFS centres are described. Details about a few of the aids used facilitate the understanding. The last part is devoted to service functions and their practical realization. The man-machine communication system is treated in some detail. Discussion of the functions which are to be taken over by the PTT-service

personnel, service possibilities and requirements in IFS centres close the article.

p. 167...172

### The Function of the Price Examination Office of PTT Telecommunications

E. Müller, Berne

The price examination office is a neutral arm of Telecommunications indepen-

dent of the purchasing departments. It assesses the fairness of the price of technical equipment and installation work. It ensures competitive bidding, checks the suppliers' offers by means of calculations, comparisons and estimates, and attempts to keep price rises within reasonable limits by fixing price adjustment and sliding-price formulas. The article examines the legal basis, work procedures and duties.

## Telephone

The new, **three-digit information and emergency service numbers** will shortly be available throughout the Telephone Regions of **Sitten** (from 8 April), **Lucerne**, **Rapperswil SG**, **Winterthur** (from 20 May) and **Lausanne** (from 18 November).

**Satellite circuits to Hong Kong (1) and Tokyo (2)** were opened in January and February respectively.

**Four additional satellite circuits** between **Zurich** and **Kuwait** were connected via Leuk earth station on 28 February.

The **Berne-Beirut radio link** was closed on 1 February and **automatic telephone service to Lebanon** became available on 1 March.

Three circuits routed in the new **Columbus sea cable** were opened between **Switzerland and Venezuela** on 20 February.

## Telegraph, Telex

**Facsimile transmission tests** are being conducted between **Switzerland** and the **United Kingdom** with a view to opening a public service. Similar tests, with satisfactory results, have been made between **Berne and Hong Kong**.

The last blank on the Swiss subscribers' **telex** map of Europe was filled on 8 February, when the PTT opened **service to Albania**.

## Radio, Television

The **national car radiophone network (Natel)**, after one month's experimental operation involving 200 subscribers in the

Zurich area (050), was officially opened on 5 April.

In 1977, **radio transmitting licences** increased by 22.4 pc to 59,980, and licensed transceivers rose by 20.2 pc to 133,271.

**Community aerial systems** last year increased by 241 to 1438 with 680,000 existing connections and an ultimate capacity of 1.1 million.

Last year's routine inspection of **outdoor aeriels** covered 2110 out of 3100 new installations. Of these, 496 (23.5 pc) did not meet the relevant safety requirements.

On the occasion of the **Lauberhorn international skiing events**, one of Swiss Television's colour outside broadcast and recording units was for the first time transported to a location by mountain railway.

At the **1978 world ski championships in Garmisch-Partenkirchen**, detachable equipment from OB units was used which has been specially built for locations without road access.

The last vehicle of Swiss Television's **outside broadcast fleet** was converted to **colour** at the end of 1977.

## Miscellaneous

**Demand for postal and telecommunication services** rose last year by an average of 3.5 pc (posts +3 pc, telecomms +3.8 pc) and was well above the forecast growth of 1.2 pc. As a result, the PTT's accounts showed an **overall profit of 341 million francs** (7 pc of turnover) instead of the budgeted 276 million francs. In view of this encouraging development and the fair prospects for the next few years, all telecommunication charges will be reviewed.