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## Summaries

p. 92...106

### Stereophony

H. Acker, Berne

This article first deals with the various theories of human directional hearing. Then directional hearing is confronted with the theory of stereophony.

In a subsequent article the problems of stereophonic practice in the studios, the transmission of stereophonic signals from the studio to the transmitter, the transmitting and receiving plant, and the further developments of stereophony will be entered into.

p. 107...115

### The Small-size Computer as an Engineer's Aid

R. P. Lorétan, Colchester (U. K.)

Two applications of the small-size computer are described: numerical calculations, and control functions in a PCM measuring system. On the basis of these examples the author illustrates the advantages and disadvantages of the small-size computer against wired control units on the one hand and large processors on the other.

p. 116...122

### Equipment for Telephone Traffic Analyses

J.-F. Savoy, Berne

The author explains the reasons that have led to the development of such equipment. He describes the design and functions of a destination recorder and shows how the recorded data is computer processed by means of programming tapes punched separately for each individual case.

p. 123...127

### International Telephone Subscriber Dialling

J. Muri (Berne), H. Bühler (Basle) and A. Graf (Chur)

Swiss PTT's aim in introducing International Subscriber Dialling is to improve the quality of service to customers and at the same time effectively meet staff recruitment difficulties. All telephone exchanges are gradually being equipped with this facility, so that by the end of this decade customers will be able to dial 95% of their international calls direct. Expectations have been confirmed by first experience gained in the Basle and Chur regions.

p. 128...130

### Costing and Economic Provision of Services

E. Schelb, Berne

In order to be able to provide its services on a sound economic basis, Swiss PTT regularly carries out cost comparisons and calculations of profits. Many of the figures required for this can be drawn from the organization's costing system. The author comments on the data available and shows how it is collected and evaluated.

## News Items

### Posts

The Swiss PTT General Directorate is introducing a **new system of internal communication** for the **postal service**. This system will enable **urgent messages** to be sent by circular telegram to 470 post offices which, in turn, will notify another 1300 offices. In this way, 1800 offices handling 90% of the postal traffic can be informed of precautionary measures, acceptance stoppages, etc. within an hour.

### Telephone

**Rapperswil (055) and Aarau (064) are the first two network groups now fully equipped for International Subscriber Dialling.** Work in the exchanges was completed on 20 December 1972.

At the end of 1972, **International Subscriber Dialling** was available to 1.7 million (75,5%) Swiss subscribers in **523 (54%) of the 970 exchanges.**

In the first 10 months of 1972, **ISD calls** rose by 10,5% over the previous year and amounted to **76% of total international calls from Switzerland.**

**A record growth of 191,362 telephones** was noted last year, while **main stations increased by 110,911**, thus approaching the 1970 high. At the end of 1972, telephone density in Switzerland was 55.5 and main station density 33.9 per 100 inhabitants.

**Only 4 exchanges with about 8000 connections** were not yet converted to **period pulse metering** at the beginning of this year.

## Telegraph, Telex

**A record growth of 2,100 telex connections** (14.2% over 1971) was noted in Switzerland last year.

In October 1972, **international automatic telex calls from Switzerland** for the first time rose **over 3 million chargeable minutes.**

In 1972 **the charges for 1,142 out of 34 million international call minutes** had to be **refunded** because of **technical faults or insufficient transmission quality.** The ratio, 1 minute in every 30,000, was 2.5 times better than in 1971.

## Radio, Television

For the Eurovision broadcasts of the 1973 Lauberhorn skiing events 6 TV cameras were provided together with **demountable cabinet-type equipment and cabling from colour TV reporting cars**, which was used for the first time.

In December 1972 a **shortwave radio telephone link** using Lincompex facilities was opened between **Berne and Islamabad (Pakistan).**

The PTT Research and Development Division is examining the **influence of precipitation zones on microwave sections operated at frequencies over 10 GHz.** For this purpose «passive weather radar» has been installed on a hill-top near Berne. In regular intervals this equipment records scattered radiation caused by rainfall on the Basle-Jungfrauoch microwave link.

## Miscellaneous

**A last-minute transfer of the site of the Lauberhorn skiing events** for lack of snow also affected PTT technicians who had to rush most of their telecommunication material to new positions and re-install the facilities for radio, television and the Press.

In January 1973 the first external customer, **the Division for Communication Troops of the Federal Military Department**, was connected to the **APL computing service** provided by the PTT Electronic Computing Centre.

The **Federal Reactor Research Institute** at Würenlingen and the electronic computing centre of the **Swiss Polytechnic Institute** in Zurich will be linked by a second **2.56 Mbit/s data channel** using microwave paths up to 1976 and cables later.