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## Summaries

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### Recording of Traffic Data and Calculation of Tariffs for the Telepac Network

H. Steinger, Berne

The Telepac, the Swiss public data network, is based on packet switching technique. The article states the assumptions for estimation of tariffs. A description is given for rating the required functions and flows. The article contains also the tariff structure and provides an overview of network generated double rate information as well as on further processing up to the preparation of an invoice. On the request of subscribers traffic reports are prepared and herewith mentioned. The reports contain a detailed record of each individual connection or an itemized summary with the called subaddresses.

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### The First Optical Transmission Link for the Communications Network of Swiss Federal Railways

R. Wilhelm, Lucerne, and H. Bodirsky, Zurich

The Swiss Federal Railways is modernizing its telecommunications network and extending its route Lucerne-Zug to double track. Therefore, it is looking for a rational solution to keep up communications during construction work. After evaluation, the decision was made to employ optical cable and especially wide-band amplifiers. The optical cable is characterized by its small weight, wide bandwidth and low attenuation. It can be reused without much difficulty which will be necessary for the extension to double track. The amplifiers and converters were designed and employed to transmit in analogue form the digital information for further reuse of the existing carrier equipment. It will serve for experiment and measurement as well as to gather experience. The initial results are very encouraging. The glass fibre cable is completely immune to electrical interference that occurs along the railway line.

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### Automatic Switch-Over of Supergroups (Second Part)

J.-P. Boegli, E. Plüss, Berne, and H. Fischer, D. Wild, Zurich

The dedicated leased circuits in the trunk routes constitute the backbone of private

customer networks that require a high availability. Such circuits of the highly meshed analogue public telephone network are routed through the supergroup (312 to 552 kHz, CCITT Rec.G.233) with assigned priority. These circuits lead on to amplifier centres over remotely controllable switching matrices. A central computer supervises the states of all the supergroups with assigned priority. In case of failure of the pilot signal (fre-

quency at 547.920 kHz), the computer automatically commands instantaneous switch-over from the affected to a free supergroup according to a predetermined plan. The author describes the main characteristics of the central computer, the command network and the remote switching centres. Special emphasis is put on hardware and software to assure high reliability of the system.

## News Items

### Telephone

The PTT ordered at each of the firms, Siemens Albis Co and Standard Telephone and Radio Co, **one digital telephone transit exchange for the integrated telecommunications system**. This spring a contract will be signed with Hasler Co for a third transit exchange.

The PTT gave an order to Siemens-Albis Co for an extension of the capacity to 6700 circuits at the **intercontinental exchange EWSD** (electronic automatic digital dial system) in **Zurich-Herdern**.

The PTT acquired telephone circuits to Egypt (60), Saudi Arabia (60), Sri Lanka (6), Indonesia (4), Singapore (17), Kenya (7), Thailand (1), through **participation in the Sea-Me-We project** (South East Asia — Middle East — Western Europe) and it will buy the irrevocable use and transit rights for circuits between the Swiss border and Marseille.

**ISD service** was extended to **Maldives** and **Norfolk** from 1<sup>st</sup> April 1984.

The **Swiss telephone network** consisted of 111 511 (+4160) interoffice circuits, 78 989 (+2680) junction circuits, 49 224 (+2186) trunk circuits and 16 683 (+1303) international circuits at the end of 1983.

### Teleinformatics

The **music telegram** (with birthday melody) has been in great demand since its introduction on 1<sup>st</sup> February 1984.

Manual telex service was opened with **Wallis and Futuna Islands** in the Pacific Ocean on 1<sup>st</sup> March 1984.

The **Memo-telex**, a public automatic store and forward telex service, has been extended further to 37 European and Asian countries since 1<sup>st</sup> March 1984.

Thus, the number of participant countries increased to 110.

Since 1<sup>st</sup> March the **PTT** has taken over completely the **automatic telex service between Switzerland and the USA**. Until that date this service was partly run by Radio-Suisse Ltd. The PTT took also over the traffic with Belize, Guatemala, Guyana and Trinidad at the same time.

The acceptance tests of the 1<sup>st</sup> stage of the **Comtex system** (text switching) have been successfully completed in accordance with the schedule.

The first **videotex exchange** corresponding to the new CEPT standard was put into operation at **Berne-Ittigen centre** on 5 March.

### Radio, Television

The PTT is constructing a combined **radiopaging exchange for local, car and Eurosignal**. The local radiopaging will be gradually furnished with POCSAG code from 1985 onwards as successor to the present analogue system. Further, the car radiopaging will be extended or superseded in the long-term by Eurosignal from autumn 1984.

### Miscellaneous

The **volume of PTT business** increased last year by 3.6 pc, 3.4 pc in the **postal service** and 3.8 pc in **telecommunications service**. The highest rates of increase in telecommunications service were the domestic telex traffic (13.5 pc), the international telephone traffic (6.2 pc) as well as in domestic local (5.7 pc) and trunk (4.6 pc) telephone traffic.

In 1983, the PTT inspected **247 operating radio and 11 amateur radio equipment**, of which 112 and 3 were recalled. From the tested **787 radio equipment in 27 MHz band** (mainly CB) only 19 (2.4 pc) did not meet the existing specifications.