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Summaries

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The Integrated Telecommunications System (IFS) – status at the beginning of 1986

K. E. Wuhrmann, Berne

The article describes the work conducted under the new project definition of digital exchanges since the cancellation of in-house development. The Integrated Digital Network (IDN) is designated as IFS in Switzerland. The principles of modular extensions were laid down besides the newly worked out implementation plan. The selected digital exchanges require adjustments to buildings and to their infrastructure. The operating concepts were made compatible with the three basic systems. The first sets of equipment were ordered and the tasks of their acceptances were undertaken. The article provides an overview on the results obtained during the last two years.

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Teletex service and its communications protocols

R. Stadler, Berne

The teletex service is well exemplifying the application of the basic principles of the ISO reference model. All the seven layers of the model must be treated by both communications partners in order to transmit a text. The network specified layers from 1 to 3 support the transportation and the service specified layers from 4 to 7 the terminal.

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Field strength calculation for the radio frequency planning

W. E. Debrunner, Berne

To design radio networks, the useful and the interfering field strengths have to be estimated. The conditions over rolling terrain can be described by propagation curves. In hilly and mountainous regions, however, the diffraction and reflection phenomena are more important than the dependence of the field strength on distance. Thus at VHF and UHF the amplitudes of the waves vary highly with azimuth and distance, i.e. with the topographic conditions. Therefore, it does not make much sense to describe the influence of the terrain by single parameter (as e.g. Δh). For estimation of low accuracy, larger safety margins are needed. The numerical examples given show that

a considerably narrower frequency band is required if appropriate computing methods are applied.

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Working methods for the planning and realization of telecommunications services

R. Herheuser, Berne

The paper delineates the procedural steps for the determination of require-

ments for the telecommunication equipment with the help of available requirement documentation based on the tasks assigned to the PTT telecommunication department. The experience made with the previous implementation plan is presented. The proposed procedure is illustrated by a simple example.

News Items

Telephone

The **telephone No 129, consumer information**, which is a novelty for Switzerland, has been introduced 1 April. The bulletin informs of proper and healthy nutrition, of consumer protection and rights as well as general consumer information. It also gives current and seasonal shopping information.

All **plug-in telephone sets** can be exchanged **without cost over the counter** at the subscriber service centres of the PTT regional telecommunications directorates from 1 April.

The **glass fibre cable with 565 Mbit/s equipment, the first in all Europe**, is ready for operation between **St. Gallen and Wil** (28 km without any repeater). This will be extended until 1987 to Winterthur via Frauenfeld. A coaxial cable link of a 565 Mbit/s equipment is already in operation from Winterthur to Zurich.

In the first quarter of 1986, a capacity of **11 800 new subscriber lines** with new equipment and extension were procured for the telephone exchanges.

The **telephone and data services** were established **via Eutelsat ECS-2** between Austria and Turkey on 13 March.

Teleinformatics

In 1985, new **4964 telex SP 300 sets** were employed in the telex network. About 67 pc of the sets are SP 300 in all Switzerland. 86 pc of SP 300 are equipped with message storage capability and every 9th with a line display unit.

On 12 March, the **teletex service** opened officially between the **Federal Republic of Germany and Switzerland**. **Switzerland's Telepac** (packet switching network) provides the transit links for the **traffic between Italy and Austria** as well as **Spain and Austria**.

The **10th Telepac exchange** came into operation in **St. Gallen**, the first in the eastern part of Switzerland. It serves the regional subscribers who were connected until now to the Zurich exchange.

The **bureaufax service** was extended between **Switzerland and Papua New Guinea**.

Radio, Television

The **radio relay link between Lausanne and La Dôle multipurpose station** was replaced by a **digital system** for the transmission of radio programmes.

Since mid-March, the **Italian TV programme RAI 1** has been received with a PTT equipment via Eutelsat I F-1 in **Berne**. This programme is made available on a temporary basis to Redifussion Co for redistribution via cable in Berne and its surroundings.