Summaries and Notices

Summaries

p. 442...450

The Synchronous Digital Hierarchy, Basis and Application

H. J. Bosshard, Berne

The concept of the Synchronous Digital Hierarchy (SDH) today encounters the interest of the network operators and suppliers worldwide. Based on essential advantages with regard to high transmission capacity and flexibility of the network management which, for example, facilitate the introduction of future wide band services, the SDH will replace the present Plesiochronous Digital Hierarchy (PDH) more and more in the next years. In this article the author gives a general overview of the concept, function components and typical application examples of the Synchronous Digital Hierarchy. Furthermore the state of the international standardization is described here with regard the relevant recommendations.

p. 451...457

TelcaStar – A System for Public Pay Telephones

A. Nyffenegger, Gümligen

The new TelcaStar System for public pay telephones offers to the user more comfort and to the management a solution which is more favourable with regards to cost. The new pay telephones accept all coins from Fr. —.10 to Fr. 5.— and the tax card. In addition they are equipped for future solutions for paying without cash. With the introduction of the remote servicing and management systems (MEMO), the telecommunications administrations are able to organise the operation and maintenance for the pay telephones in a more economic way. The linking of the MEMO systems enables a central servicing for the whole of Switzerland. The system was tested in 1988 and has been put into operation in all telecommunication administrations since the beginning of 1990.

p. 458...465

Nonlinear Dynamics – First Venture in Industrial Research

Ch. Mohrdieck, Ulm

If there were nonlinear problems in science and technology in the past they were frequently labeled 'singular' and one often limited oneself with their solution to linear approximations. Occasions such as the application of nonlinear calculation rules or liquid convections are examined today with the help of a comparatively young discipline, the nonlinear dynamics. The author describes this science on the basis of examples such as the production of simple complex structures or the use of fractals for data compression. The nonlinear dynamics also enables the production of switches which are more tolerant towards error and which through redundancy and 'self organisation' are able themselves to avoid an interruption to a certain degree.

News Items

Telephone

In October, **10 further Natel C base stations** of the phase 3 were put into operation.

The old **wireless subscriber installation** was replaced at the Berggasthaus Säntis with a new one in the 1.5 GHz range and at the same time a second subscriber number was connected.

The following connections were made in the **Intelsat Network** with **Canada** in October: a permanent duplex connection with a transmission capacity of 64 kbit/s via the Geneva/Vernier earth station (Intelsat/307° E) and 15 speech circuits via the Leuk 2 satellite earth station (Intelsat/335.5° E). In the Eutelsat network the following new speech circuits were switched on in October: with **Spain** (Madrid) 30 (TDMA) via the Geneva/Vernier earth station and 24 (TDMA) via the Zürich/Herdern earth station (Eutelsat/16° E), and also 4 with **Cyprus** (TDMA) via the Leuk 4 satellite earth station (Eutelsat/16° E).

Teleinformatics

The first **Switzerland-USA leased line** from Basle to Chicago with a transmission rate from 256 kbit/s over the transatlantic glass fibre cable **PTAT-1** was handed over to clients by the PTT in September. For a month previous measurements of the transmission quality and availability took place which produced very good results. The PTAT-1 lines are extended, for the present, from the landing point in Brean, England, via the England route – UK-NL-12 cable – Netherlands – Germany to Switzerland. A further extension via the UK-F3 cable, France was put into operation in October.

Radio, Television, Radiocommunications

There has been a new daily broadcast from 16.15 to 17.00 UTC to Eastern Europe in the PTT plan for **short wave broadcasting** since 30 September. The contents of the programme – in German, French and English – is on themes of the target region with relation to Switzerland.

The newly constructed **Ranflüh** and **Landiswil television-transformer stations** were put into operation on 1 October. They supply the Rüderswil, Grünenmatt, Heimisbach, Obergoldbach and Landiswil regions with the three national programmes in the UHF (FM) range. A new **television transposer** is also in operation in **Elm**. A new 28 metre high construction was recently put into operation which improves the television supply in Elm and the hamlet of **Toeniberg** for the television reception. It replaces, after a five month building time, the former antennae carrier. The **Camedo** and **Roveredo television-transposers** were definitely put into operation on 15 October. They serve Borgnone, Camedo, Moneto, Palagnedra and Verdasio as well as Carasole, respectively, on the channels 48/23 (TSI), 53/35 (DRS) and 58/40 (TSR).

The private **television programme «Teleclub»** – transferred in September from the telecommunications satellite Eutelsat I F-4 to the ASTRA – can be transmitted again from the Zürich/Herdern 1 satellite earth station to the ASTRA on 19.2° E. During the renovation work on the earth station, the Up-Link was accomplished during approximately two weeks via a transportable satellite earth station.

The possibility of **alphanumeric data transmission** has now also been introduced with the country wide **Ortsruf B** (local call) paging system. When the person called is equipped with the corresponding receiver, texts with up to 80 characters can now be transmitted. Up to now the tone call and the transmission of number series were possible.

Miscellaneous

The **International Maritime Satellite Organisation** (Inmarsat) has now **60 member countries** since the acceptance of Monaco, Rumania and Yugoslavia; among them is also Switzerland.

The first course of studies begins in **Chur** at the newly founded **Telecom Department of the School of Engineering HTL** on 5 November with 21 students.