

**Zeitschrift:** Technische Mitteilungen / Schweizerische Post-, Telefon- und Telegrafienbetriebe = Bulletin technique / Entreprise des postes, téléphones et télégraphes suisses = Bollettino tecnico / Azienda delle poste, dei telefoni e dei telegrafi svizzeri

**Herausgeber:** Schweizerische Post-, Telefon- und Telegrafienbetriebe

**Band:** 60 (1982)

**Heft:** 1

**Rubrik:** Summaries and notices

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**Download PDF:** 14.05.2025

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## Summaries

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### Data Over Voice (DOV)

J.-P. Boegli, Berne

The designation of data-over-voice (DOV) denotes the process by which additional digital data is transmitted through the uppermost band of the analogue transmission system. The data-over-voice equipment is described in this article. It allows to transmit 2048 kbit/s above the 2700 telephone channels of a 12 MHz coaxial cable link between Basle and Zurich. The procedure for putting the equipment into operation is briefly treated and the significance of such a data-over-voice link in the Swiss digital network is explained.

p. 15...32

### Assumptions and Fundamentals of Data Packet Switching

M. Schaeren, Berne

The modern data communications in the sense of information exchange among machines grew from a simple to a very comprehensive and complex network during the last years. At present international committees are working on universal standards and recommendations for interconnecting data networks independent of manufacturers and users. The packet switching follows these regulations so as to provide public data communications service. This public packet service can be well used as an efficient and cost-effective data transport medium. Details on the PTT packet network Telepac will be published in the next issue.

p. 33...36

### Synchronous Baseband Switch for Digital Radio Links

P. Thoma, Berne

A switch was developed for change-over to digital radio links. Several experimental configurations were tested. The electronic switch is made of ECL microelectronics for 34 Mbit/s. This device allows change-over without bit-error in 1 + 1 redundant digital links. This is accomplished by synchronizing the change-over switching frequency with the data clock pulse. The prerequisite for correct functioning of this switch is the timely recognition of appropriate change-over criteria before errors appear in the link. The received power level was used as a change-over criterion in a successful test on an experimental link.

p. 37...39

### Introduction of the three-digit Telephone Service Numbers

H. Nägeli, Berne

This article describes the gradual introduction of the two- and three-digit as well as the final three-digit service numbers completed in 1981. Due to automation of the Swiss public telephone network it became more and more necessary to offer service numbers so as to get access to the PTT services. Also, the information service personnel had to be relieved through mechanization of giving always the same information. Furthermore, it became possible to offer service numbers to third parties for their needs.

p. 40...45

### Man-Machine Communications by Means of Speech Signals

H. Mangold and K.-D. Schenkel, Ulm

The authors describe the state-of-the-art of automatic recognition and synthesis of speech. After outlining the principles of digital speech processing they discuss the questions of synthesis and semi-synthesis of speech. Further, they

treat the problems of automatic recognition of speech the solution of which will lead eventually to the dialogue with the computer. The article concludes with future perspectives.

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### New Technologies and New Broadcasting Services

F. Müller-Römer, München

In this paper the author reviews the new technologies which are relevant to the present definition of broadcasting. He identifies the new technologies such as satellite-broadcasting, broadband cable networks, teletext, video disc and recorder as well as new digital techniques in audio and video receivers. He projects the development trends for the next 10 to 15 years. Several of these technical innovations are in the developmental stage and some of them are already in the experimental phase. Also, one can even recognize now the corresponding equipment which will find widespread use in the future. Finally, the author discusses the implications of these new technologies on the programmes, media as well as on the institutions.

## News Items

### Telephone

In the cantonal hospital of Lucerne an **operational trial** has been started since October with **84 telephone sets** operating with a **credit card reader**. A central computer records the charges for the calls. This trial will last till the end of April 1982.

Additional **telephone circuits** were switched on in October and November, 170 with European countries over cable and 47 with overseas countries over satellite.

Swiss subscribers used **ISD facilities** on 99 pc of their international calls during the months of July and August.

### Teleinformatics

With the transfer of **5 USA channels** to the PTT's Ateco system the takeover of the **telegram service** of the Radio-Suisse Ltd was completed on 2 November 1981. Ateco (Automatic telegram switching

with computer) system reached 10 years of operational life in May 1981.

On 30 October 1981 the extended public **automatic message switching system (SAM-B)** was put into operation. It is already connected to more than 500 telex terminals.

On 2 November 1981 Radio-Suisse Ltd established a **direct operational telex link** with Batelco Nassau.

### Radio, Television

Since 5 November 1981 the **RSR** (Swiss French programme) of the Swiss Broadcasting Corporation has been transmitting daily a **night radio service** between midnight and 6 o'clock in the morning over its 1st and 2nd VHF/FM networks and over the 2nd programme of the wire broadcast service.

In 1981, 159 candidates from **licensed radio and television installation firms** appeared at the examination for the certification in technical supervision. 93 (58.5 pc) of all candidates were successful.