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## Summaries

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### Swissnet and wide band network

K. E. Wuhrmann, Berne

In the next years the evolution in telecommunications will be strongly determined by the introduction of new services. Thus more efficient networks, above all wider band networks, must be created and the corresponding communications installations. In Switzerland the PTT are building a digital transmission network called Swissnet which is the forerunner of the narrow band and later wide band integrates service network ISDN. The author explains the intentions of the telecommunications service and gives information regarding the technical possibilities and realization headlines of a system whose setting up has already begun in stages and will be in operation nationwide at the end of the 90's.

p. 490

### Emergency telephone calls TeleAlarm S8

R. von Allmen, Berne

TeleAlarm S8 is an emergency apparatus for persons living alone and working alone. In an emergency four programmed telephone numbers are automatically dialed by pressing a button on a mini transmitter. The called person listens to a message immediately after the receiver is picked up which also contains the telephone number of the person calling for help. By a return call within 45 seconds the receiving of the emergency call is confirmed. This allows the necessary steps to be taken for help. The author describes the functioning of TeleAlarm S8 in detail.

p. 499

### Telematic access network with universal processor terminal

R. Burri, Berne

The era of the general use of «electronic» information services has already started. Corresponding specialized communication networks have mostly grown out of the development of a service. A uniformly conceived access network between user and potential offerer of service can facilitate the operation of different systems. A commonly suitable access network set up with programmable communication processors is an economically efficient alternative to special networks for private organizations as well as for the PTT.

p. 507

### Recent bituminous flat roof systems

J.-D. Vital, Berne

Newer materials for the flat roof sector enable better and durable constructions to be developed. Two recent systems, the «older» UK roof and the DUO roof, are presented in detail with their advantages and disadvantages as well as application problems. A uniformity of characterization of the polymer bitumen webs is recommended with a few examples.

p. 514

### Three-dimensional integration, concept for multifunctional IC's

U. König, Ulm

The improvement of packing density of integrated semi-conductor construction elements is still the trend of the semi-conductor technic. So far this had been achieved by a reduction of the structural dimensions. It would be tempting to develop the third dimension. If one proceeds, for example, from a conventional chip of 1 cm<sup>2</sup> surface with numerous transistors and tries to superimpose the elements then the same number of elements can be placed in one cube of 1 mm that is to say on only one hundredth of the initial chip surface. These perspectives were in the past the driving motives of 3-D work but they demand a critical examination taking into account technological limitations such as output and dissipation of heat.

## News Items

### Telephone

The number of those awaiting telephone connections has increased in the first half of 1988 about 1800 to 6364 above all due to non available interior installations to those interested and also the lack of wiring.

12 new modern inquiry places have been installed in Chur in the process of decentralizing inquiries service no. 111.

The Chur telecommunications administration has opened a customer advisory service in Disentis/Mustér.

The development of Natel C in greater Zürich (phase 1) has been terminated. All 33 planned base stations with 45 cells and

662 channels are now in operation. Of the 106 planned base stations of the expansion phase 2, began functioning the end of October 1988, the remaining will be in operation by the end of the year.

In October a total of 70 satellite communication circuits were newly connected including three with Iraq and 67 with USA.

A 140 Mbit/s directional beam has been installed between Lausanne and the Leuk satellite ground station, it replaces a temporary 34 Mbit/s connection.

## Teleinformatics

On October 10th the one millionth music telegramme was delivered in Näfels GL. These congratulatory telegrammes were introduced in Switzerland in 1984. They constitute about one quarter of all congratulatory telegrammes.

The Aarau telegraph office was able to move into its new premises in the Aarau main post office after five years of temporary arrangements. At the same time the Aarau information and advisory office received more room.

## Radio, Television, Radiocommunication

New FM transmitters were put in operation on the Arosar Weissshorn (for DRS 3), in Ziefen (for DRS 1, Aarau/Solothurn regional news), in Hombrechtikon (for DRS 1, Inner Switzerland regional news) as well as on St. Chrischona (for the south west regional radio communication).

The Walenstadtberg television converter for the three national programmes were put into final operation.

Converters for the diffusion of foreign television programmes in the mountainous regions were put into operation in the Unterengadin and Wallis. In the Unterengadin the transmitter chain (Zernez, Lavin, Tarasp, Sent, Martina) operated from Telerätia now transmits a fourth foreign station, Austria 2. In Wallis three converters have been made available for the Val d'Annivers in Chandolin, Grimentz and Zinal.

The local call has now been connected in Lugano and Chur. Thus there are now 101 installations in operation in the whole of Switzerland.

Radiotelephony for the post auto service was installed for the scheduled routes Bern—Aarberg and Kreuzlingen.