



Journal Title: Telecommunication Journal

Journal Issue: Vol. 47, no. 9 (1980)

Article Title: 17 May 1980: World Telecommunication Day: "Rural Telecommunications"

Page number(s): pp. 550-551

This electronic version (PDF) was scanned by the International Telecommunication Union (ITU) Library & Archives Service from an original paper document in the ITU Library & Archives collections.

La présente version électronique (PDF) a été numérisée par le Service de la bibliothèque et des archives de l'Union internationale des télécommunications (UIT) à partir d'un document papier original des collections de ce service.

Esta versión electrónica (PDF) ha sido escaneada por el Servicio de Biblioteca y Archivos de la Unión Internacional de Telecomunicaciones (UIT) a partir de un documento impreso original de las colecciones del Servicio de Biblioteca y Archivos de la UIT.

(ITU) للاتصالات الدولي الاتحاد في والمحفوظات المكتبة قسم أجراه الضوئي بالمسح تصوير نتاج (PDF) الإلكترونية النسخة هذه والمحفوظات المكتبة قسم في المتوفرة الوثائق ضمن أصلية ورقية وثيقة من نقلاً.

此电子版（PDF版本）由国际电信联盟（ITU）图书馆和档案室利用存于该处的纸质文件扫描提供。

Настоящий электронный вариант (PDF) был подготовлен в библиотечно-архивной службе Международного союза электросвязи путем сканирования исходного документа в бумажной форме из библиотечно-архивной службы МСЭ.

date	place	title and organizer	further information from
10-12 February	New Delhi	International Symposium on Time and Frequency <i>National Physical Laboratory, New Delhi</i>	Dr. B. S. Mathur Scientist-in-charge, Time and Frequency Section, National Physical Laboratory, Hillside Road, New Delhi-110012 (India)
23-26 March	Genoa	5th International Conference on Digital Satellite Communications <i>INTELSAT, Telespazio, IIC, AEI, IEEE Region 8</i>	Telespazio SpA Corso d'Italia, 43 00198 Roma (Italy) Tel.: +39 6 84 97313 Telex: 61 06 54 tspzro
19-21 May	London	3rd International Telecommunications Energy Conference (INTELEC 81) <i>Institution of Electrical Engineers</i>	INTELEC 81 Secretariat IEE, Savoy Place London WC2R 0BL (United Kingdom)
30 May-4 June	Montreux	12th International Television Symposium and Technical Exhibition	Chr. Kobelt Swiss PTT, Viktoriastrasse 21 CH-3030 Bern (Switzerland)

17 May 1980

World Telecommunication Day

"Rural telecommunications"



Reports are now coming in to ITU headquarters on the celebration of World Telecommunication Day in the different Member countries of the Union. We publish below a résumé of a selection of these reports.

Algeria

World Telecommunication Day was marked this year in Algeria by a series of events at the Telecommunications Institute, Oran.

The programme was opened at 15h00 on 17 May by Mr. Ghomari, Director of the Institute, followed by an address by Mr. Jaeger, Resident Representative of the UNDP in Algeria. The rest of the programme included a play-back of the recorded message from the Secretary-General of ITU, a paper on social aspects of telecommunications in rural areas, five reports on rural telecommunications in Algeria, France, India, Poland and Romania, a photographic exhibition and a film show.

Bangladesh

For World Telecommunication Day this year the Bangladesh Telephone and Telegraph Board sponsored a four-page newspaper supplement on rural telecommunications and telecommunications in Bangladesh.

El Salvador

The *Administración Nacional de Telecomunicaciones* (ANTEL) of El Salvador observed World Telecommunication Day this year by

publicizing the event in the two largest circulation newspapers of the country.

The message from the Secretary-General of ITU was broadcast throughout the nation over *YSS Radio Nacional* and reached an audience estimated at half a million.

Spain

A full programme was organized in Spain this year to celebrate World Telecommunication Day. The programme was formally inaugurated on 14 May by Mr. José Luis Álvarez, Minister of Transport and Communications.

In his speech the Minister highlighted three significant actions which would have a beneficial effect on rural telecommunications in Spain. These were:

- The Ministerial Transport and Communications Order of 31 October 1978 concerning meeting the demand for the telephone service in remote and rural areas, which provides for the implementation of plans for introducing the service into very sparsely-populated areas. The plans prepared by the *Compañía Telefónica Nacional de España* for Asturias and Galicia are already in execution.
- The Royal Decree of 29 February 1980 on the establishment of rural agencies for providing combined postal, telegraph and telephone services.
- The work in progress on extending the coverage of *Radiotelevisión Española* to areas hitherto outside the range of television coverage or where reception is defective.

The Minister underlined the necessity for a sense of solidarity between those who were already telephone subscribers and those, often in rural areas, who were still waiting for the service. In particular existing subscribers should accept realistic tariffs which would allow for financing extensions to the network.

Later the same day the Minister opened a philatelic exhibition on the theme "Telecommunications". Other functions included:

- exhibition of radiocommunication systems, radio amateur station *EA4URE/UTI*, Red Cross station and Civil defence station,
- demonstration of the public message-switching service, interconnection of Spanish telecommunication networks (telex, special data transmission and telephone networks).

The exhibitions were open to the public daily until 17 May.

Also organized on 14 May was a Technical Day devoted to rural telecommunications, presided over by the Sub-Secretary of Transport and Communications.

The day finished with a dinner presided by the Minister at which prizes were awarded to the winners of a competition for the press, radio and television for information published on telecommunications throughout the year.

On 17 May another technical day was organized at the Buitrago earth station and at the installations of *Radio Televisión Española* in Prado del Rey (Madrid).

Suriname

In Suriname this year a number of articles on rural telecommunications were published in newspapers. Also the importance of rural telecommunications was mentioned in several radio news broadcasts on 16 and 17 May. During the evening of 17 May, similar information was read on the Suriname television news programme and, after the news, in the programme "Suriname on its way" special attention was given to World Telecommunication Day by showing the ITU Secretary-General's filmed message with a translated version.

At the Training Centre, during the morning of 17 May, a small celebration was held with Training Centre staff, ITU staff and counterparts.

United States—Hawaii

The House of Representatives and the Senate of the State of Hawaii have officially recognized World Telecommunication Day by adopting on 11 April 1980 House Resolution No. 516 and House Concurrent Resolution No. 145.

The Resolutions recalled Hawaii's special reliance on telecommunications resulting from its geographical location and the fact that telecommunications could replace the need for transportation to a considerable degree, thus decreasing energy consumption.

World Telecommunication Day 1981

"Telecommunications and health" is the theme which has been chosen for next year's World Telecommunication Day.

The World Health Organization (WHO) will join with the ITU in its campaign to encourage the celebration of this event throughout the world on 17 May 1981.



Poster design for
World Telecommunication Day 1981

Ideas and Achievements

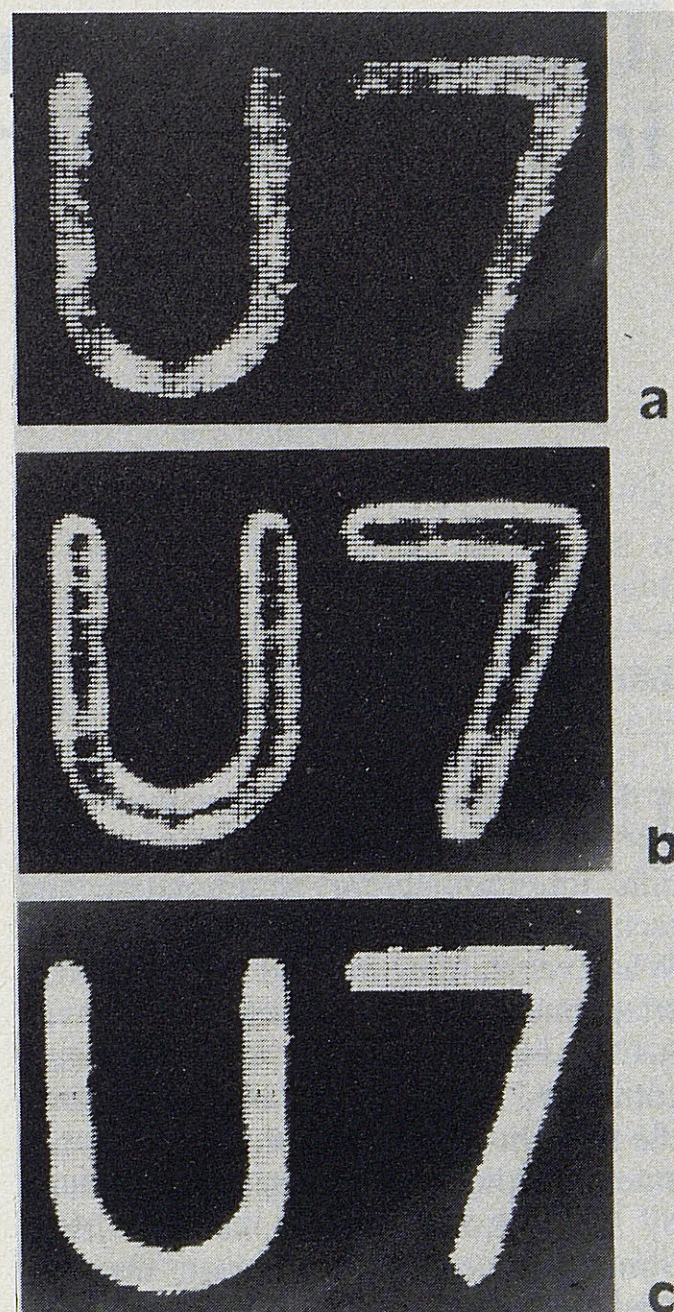
Machines on the way towards a new capability: visual perception

AUTOMATIC image processing is on the way to being endowed with the human faculty of visual perception. The limits of automatic processing are reached where low-contrast images or distorted alphanumerics need to be reliably processed in a minimum of time.

These limitations are being tackled at a Siemens AG research laboratory, where a technique has been developed that assures the reliable processing of low-contrast objects and the reliable recognition of seriously distorted alphanumerics while at the same time reducing the volume of data to be processed through representation of the image information in the form of binary bits. This solution was largely found by making a close study of the physiology of vision: human beings are perceivers of "edges", such perception being based on the observation of changes in intensity such as transitions between light and dark. This edge-orientated visual perception can be interpreted mathematically as a multi-dimensional image differentiation and represented by analog shift registers in charge-coupled-device (CCD) technology. Using appropriately fast microelectronic devices, even real-time processing is possible. For its laboratory model Siemens uses a clock rate of 1 MHz, representing a processing rate of a million analog matrix dots per second.

Practical applications are expected to be found for this technique in industrial automation, where a universal solution for the technical re-creation of human visual perception is being approached without extremely task-specific elementary problems having to be solved. Now that automation has in recent years relieved human operatives of a multitude of monotonous manual chores, the time seems to be near when automation will additionally be endowed with the capability of visual perception.

The analog image processing system developed at Siemens reconstructs a monochrome half-tone pattern as a purely binary monochrome image. To this end the object is first shot with a CCD matrix camera or scanned with a diode array. The analog voltages proportional to the



Low-contrast and even distorted alphanumerics and patterns are satisfactorily reconstructed with the aid of a technique developed at Siemens:

a) shows two half-tone alphanumerics recorded by a 122×190 -element CCD camera,

b) shows the edges of the alphanumerics emphasized through weighted differentiation and processing in a subsequent analog real-time signal processor,

c) shows the refilled inter-edge regions

image brightness are continuously shifted through a 5×5 -cell analog matrix memory. The stored information is differentiated in all four directions of the plane so that any maculae on the surfaces of the object will be de-emphasized and edges will be emphasized.

The resulting image representing the light and dark edges of the object is then shifted anew through an analog matrix memory while an edge detector evaluates the stored information in all directions of the plane.

In the last stage of analog image processing the edge-type image is reconstructed as a complete monochrome image by refilling the inter-edge regions. The resulting binary representation of the image information drastically reduces the volume of data to be processed, thereby opening the way to numerous applications in advanced computerized image processing.—Siemens.