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# Satellite Footprint

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## CH-Ch-ch-ch- Changes

There have been many changes in the sky since my last column. Canada lost control of one of its satellites. PBS moved to its new satellite and started its move to compressed digital video distribution. Two Spanish language channels are going digital. Europlus is starting to charge for reception. Details on these stories and others are below.

## Anik problems

Canadian communications were dealt a major blow the afternoon of January 20, 1994. Telsat Canada, which operates the Anik satellites, was doing some routine adjustments to Anik E1 and E2 (107.3 and 111.1 degrees West) when E1 started to spin out of control. Telsat engineers were able to switch to the backup control systems and bring E1 under control. Two hours later Anik E2 spun out of control, too. The engineers tried to switch to the backup control system but this time the backup controls failed. It was determined later that both satellites were hit by an unusually strong electromagnetic storm, causing a build-up of static electricity that discharged into the circuits controlling the satellites.

The loss of satellite service on E2 meant that for a couple of days not only television programming but phone service and data transmission to Canada were interrupted. Telsat moved as many services as they could from E2 to E1, and for several months they used a number of US domestic satellites to transmit the services that couldn't fit on Anik E1. This caused many of us a few weeks of searching as we tried to find out where the services we use were relocated.

The engineers in Canada have devised a plan to make Anik E2 usable again. The Anik satellites (and indeed most geostationary satellites) are kept pointing at the correct part of the earth by the effects of 3 sets of electrically powered gyroscopes (think back to your junior high school science classes). The control circuits that failed on Anik E2 were the ones that controlled the gyroscopes on the satellite. In addition to the gyroscopes, each satellite has rockets that are used to make major

adjustments and to move the satellite to different spots in the Clarke Belt.

The Telsat engineers plan to use these rockets to stop the spinning and keep the satellite pointing at the correct part of the earth. This is called station keeping. The amount of station-keeping fuel that is available on a satellite is the major factor in how long it can be used. Anik E2 is a relatively new satellite and was expected to be usable for at least ten more years. Using station-keeping fuel to point the satellite is expected to reduce its life by about three years, according to the engineers at Telsat Canada.

In April, Telsat Canada purchased the old Telstar 301 satellite and moved it to virtually the same location as Anik E2. The satellite was renamed Anik D1. D1 (T301) doesn't have much station-keeping fuel left, so this move is a temporary effort to provide additional satellite channels while Telsat engineers are slowing Anik E2's spin and getting ready to point it. They expect to have Anik E2 back in operation by the end of the summer.

## More Digital Services

On June 15, 1994 Univisión and Galavisión (two Spanish language networks available in the United States) will stop broadcasting in the clear and start using a form of digital compression to transmit both program services on one transponder. This will save both services money in satellite charges, but will prevent most of us from receiving these channels. They will be using a digitization method different from the one used by PBS and SCOLA, so you will need a separate decoder if you are going to receive either of these services. The decoder costs around \$1900. Contact Univisión or Galavisión if you want more information about the decoder. Supplies of the decoder from Univisión and Galavisión are limited, so you will probably have to find another supplier if you wish to continue using these services.

*[Editor's Note: See in this issue the "LLTI Highlights" section on "Satellite TV from Latin America," p. 103.]*

## Europlus charges

Europlus, the direct-to-home service from Italy and Germany available in the eastern half of the United States, has started charging for their service. The Italian programming is available for \$100 for reception through December 31, 1994. German programming is available at the cost of \$45 per quarter. If you get both services, you only pay \$170 for service until the end of the year. There is a \$25 registration fee on top of the subscription fees. You will get a card to place into your Europlus receiver. This card will also permit you to access the

Europlus Pay Per View offerings including special movies, sporting events and other specials. For more information, contact: Europlus Club Management, Inc. at P.O. Box CB 10999, Nassau, Bahamas. Their phone number is 809-362-5380.

## **Satellite Information on the Internet**

If you have access to the World Wide Web (WWW) via the program Mosaic (available through ftp from the University of Illinois Urbana Champaign), you can download the monthly schedule for Deutsche Welle. This service of Deutsche Welle is available at the WWW address: <http://www.rz.unikarlsruhe.de/misc/germnews>. In the future, transcripts of the programs will also be available from this Web site. Other Web sites that you may wish to check are the satellite pages for the U.S. and Europe. They are at the following Web addresses: <http://itre.uncecs.edu/misc/sat.html> and <http://xan.esrin.esa.it:2602/satellite.html>. When you connect to the WWW satellite page at the [itre.uncecs.edu](http://itre.uncecs.edu) address, you can make a connection to the WWW pages with the Deutsche Welle schedule and the European satellite WWW page.

In addition to the Web information, SCOLA has set up a Gopher site for information about their schedule, plans, and electronic copies of their newsletter. Point your Gopher software to this address: [bluejay.creighton.edu](http://bluejay.creighton.edu) and select Campus News, then SCOLA.

*[Editor's Note: For further information on the World Wide Web and Mosaic, see in this issue, "Internet and Foreign Language Instruction: A Report from Behind the Front Lines, Part 2: Navigational Tools," by Jane E. Backer, p. 59.]*

## **SCOLA update**

Currently SCOLA is planning on converting to digital transmission by the end of the summer of 1994. They will move to Telstar 401 and join PBS and the other members of the "educational neighborhood" on this satellite. In addition to the news channel, SCOLA will start their second, cultural channel when they move to T401. In order to receive SCOLA after the move (there will be a month-long period when they will be transmitting both on T401 and their present satellite ASC1), you will need to obtain a Digicipher Integrated Receiver Descrambler (IRD). In addition you must have a KU-Band-capable satellite dish with a LNB that is phase stable (see my column in the Winter 1994 *IALL Journal*, pp. 88-89, for more details about the equipment needs, or contact SCOLA directly). SCOLA is still estimating the cost of the receiver at \$1200. You will have to spend about \$100 more in about a year to upgrade the receiver when PBS and SCOLA upgrade

their transmission to the Digicipher 2 standard.

SCOLA will share Telstar 401's KU-Band transponder 9 with PBS's data signals. SCOLA's future plans include two more channels on the same transponder. Details of these channels are available from SCOLA by mail or electronically via their Gopher service.

To follow up on Pete Smith's article on satellite radio in the Winter 1994 issue of the *IALL Journal*, p. 89 – 90, there is a satellite-delivered radio network that is very useful for language instruction. The World Radio Network (WRN) transmits programming from all over the world in the language(s) of the country of origin. Their offices are in London, and they transmit programming from countries such as South Korea, Israel, France, Bosnia, Sweden, the Vatican, Russia, Ireland, Finland, Australia, the Netherlands, and Austria. In the U.S., WRN is available as a subcarrier of SCOLA. Tune your audio receiver to 6.20 Mhz to receive this service. SCOLA has not yet decided how they will provide WRN when they go to digital transmission later this year. ■

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