Landsats: Drifting toward Oblivion?

U.S. "commercial" earth observing satellites may be abandoned in March, creating a gap in coverage that may last until 1991 or later

ON 31 MARCH, the United States plans to set two satellites adrift in space (Landsats 4 and 5), terminating all ground operations and cutting off the photos they provide to scientists, mapmakers, mineral prospectors, and crop forecasters.

For at least 2 years, Landsat users will have to rely on archival data or imagery from foreign earth-observing satellites such as France's SPOT Image.

By the end of 1991, the U.S. government promises, a sixth Landsat will be in orbit. But even if the promise is kept, the 2-year data gap will hurt the program's credibility. There are plans to launch other noncommercial earth research satellites in the 1990s, but they will provide different kinds of data. Ironically, the United States seems to be fading out of the earth surveillance business just as other nations are jumping in.

The apparent reason for dropping out is that Landsat's owner, the National Oceanographic and Atmospheric Administration (NOAA), cannot afford to run the operation any longer. The cost of monitoring the satellites and keeping them on track is about $20 million a year.

Last fall, when Congress enacted the 1989 budget, it knew the satellites had lived beyond their design lifetime and were staggering toward their demise. It provided NOAA with $9.4 million for Landsat housekeeping, enough to last until 31 March. But the satellites did not die. According to John Hussey of NOAA, the agency will not rob its other programs just to care for the Landsats in their decline. NOAA thinks it is time to pull the plug.

There are other, good bureaucratic reasons why Landsat is in trouble. NOAA is primarily concerned with weather and oceans, not land. It took in Landsat as a foster child in 1979, as the Carter Administration weaned the program away from its true parent, the National Aeronautics and Space Administration (NASA). The Reagan Administration endorsed this action and made it part of its own effort to "commercialize" space surveillance, and, more significantly, to cut the federal budget. NOAA, being in the Commerce Department, was the logical one to handle this new commercial venture. Unfortunately, Landsat never quite made the transition and remained a foster child at NOAA.

NOAA's budget is pinched this year. It faces the prospect of laying off personnel in the weather service. One of the two main weather satellites (GOES west) died in January, forcing a repositioning of the survivor. A replacement is due to be launched in 2 years, but already the manufacturer reports a cost overrun of $40 million. NOAA is in no mood to tighten its belt for Landsat.

NOAA sent out warnings early this year, appealing to other agencies to come to the rescue. Among the Landsat users that might help are NASA, Defense, Interior, and Agriculture. Hussey reports that no generous rescue offer has arrived as yet, sounding the death knell for Landsats 4 and 5.

One last hope is that the appropriations committees in Congress or the contractor that manages Landsat, the Earth Observation Satellite Company of Lanham, Maryland (EOSAT), will step in.

The commercial market for earth observation data may become viable "early in the next century. . . ."

EOSAT is a joint venture formed of two satellite manufacturers: Hughes Aircraft and the General Electric Company. It was created solely as a vehicle to commercialize Landsat and distribute data to users. One of EOSAT's first acts, still resented by scientists, was to quadruple the price of each Landsat "scene." Under the commercialization agreement, EOSAT was given ownership of data while the government retained ownership of the satellites themselves. The government also pays for their operation. In addition to revenues from data sales, EOSAT receives fees of $600,000 a year from each of 13 foreign ground stations.

Critics have said that EOSAT reflects the interests of its huge parent companies more than the lowly data handlers it serves, and that it spends more energy lobbying for new Landsats in space (government-financed, of course) than promoting the network on the ground. One way for EOSAT to establish good faith today, critics say, would be to use some of its own money to prolong the life of Landsat 5. That does not appear likely to happen. Instead, EOSAT officials talk of getting Congress to ask NOAA to perform the rescue. The old system is "robust" and could work until 1991, says EOSAT vice president Peter Norris. The decision to pull the plug is "outlandish" and illogical. But he says it would be "out of order" for EOSAT to pay operational costs.

However, Capitol Hill staffers seem disinclined to do that, although they have in the past. One Landsat fan of earlier years says: "Congress has already appropriated hundreds of millions of dollars for this program; we've come to the end of our rope."

If Landsats 4 and 5 are set adrift, this may be taken as a public admission that the Landsat commercialization policy of the 1980s is moribund. Indeed, three studies commissioned by Congress seem to have reached the conclusion that the policy needs to be rethought. The best of the studies, written by The Analytic Sciences Corporation of Reading, Massachusetts, concludes: "Projected market revenues will not support a fully viable commercial Civil Earth Remote Sensing System during the 1990s." Perhaps the market will become viable "early in the next century," it says.

What policy will follow? Some would move to a more cooperative international system in which governments reduce administrative costs by sharing them, perhaps by creating a joint space surveillance agency modeled on Intelsat, the communications satellite agency. EOSAT would have a reduced role, if any.

NOAA has already taken a step in this direction. "Exploratory discussions," as Hussey calls them, have begun with the French space agency to consider the possibility of a joint Landsat-SPOT venture in the 1990s. A report is due in June.

Meanwhile, the researchers who make use of Landsat data, and who never saw anything in the commercialization drive but chaos, are bracing for something worse.

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