

EROS Study Group

2nd Meeting

March 15, 1979

EROS
Organization file
- DOYLE/HEMPHILL
- File: Overstreet
Committee
IC 4-19

Attendees:

William B. Overstreet, Chairman
William R. Hemphill, Deputy Chief, EROS
Linda Stanley, AD
Hillary Oden, CD

Tony England, GD (for Gordon Easton)
Gene Thorley, LIA
Roy Mullen, TD (for Lowell Starr)
Les Laird, WRD

Overstreet

Requested that members of the Study Group designate an alternate representative for their Division/Office.

Hemphill

Briefing on the EROS Program: Mr. Hemphill's presentation was keyed to handouts as outlined below.

I. Organization

The basic operational components of the EROS Program are: Office of the Chief, which has both management and research responsibilities; EROS Data Center, which performs research, as well as technology transfer and training functions, and has four branches--Data Production, Computer Services, Systems Development, and Applications. Under the Applications Branch, there is an Applications Assistance Facility located in Bay St. Louis. EROS also has an Applications Assistance Facility contract with the University of Alaska in Fairbanks, and with the American Geodetic School in the Canal Zone. The Canal Zone facility is primarily involved in data dissemination to certain Latin American countries.

II. Funding

From 1964 through 1967 (fiscal years), funding was provided solely by NASA. Following issuance of Under Secretary Luce's EROS "creation" memo in 1967, a portion of the EROS budget for FY 1968 was provided from Survey funds. In FY 1969, \$200,000 was appropriated by Congress for the EROS Program. By design, as EROS funding has increased, NASA's contribution has decreased. In FY 1979, no funds were made available by NASA.

The significant drop in budget authority between FY 1973 and 1974 has two explanations. In 1972, OMB directed that a cost/benefit study on Landsat data be undertaken in FY 1973, thus the higher budget figure. (This was done with some reluctance by EROS because it was the first year of data gathering and too soon for a reasonable evaluation.) Secondly, OMB decided that in FY '74, EROS funding, in part, should come from an increase in prices for data.

The increase in funding in FY 1976 reflects appropriations for the development and initiation of EDIPS.

The EROS program budget authority is a part of the overall Survey total, rather than a separate Departmental item.

Funds from the sale of remote sensing data are retained by EDC and used as capital to buy more materials for data reproduction and dissemination.

III. FY 1979 EROS Budget Distribution

Since 1974, budget appropriations have not increased sufficiently to accommodate inflation. In addition, there have been substantial expenses related to the acquisition of data production equipment. For these reasons, less money has been available for research.

In FY 1978, \$397,000 was transferred to other divisions and bureaus for research activities. Such grants are usually with the proviso that the bureau/division provide something approaching matching funds because EROS has found that this approach generally results in a better product.

In FY 1973, \$3 1/2 million was spent for research activities, while in FY 1979, the figure had decreased to \$936,000. EROS feels strongly that not enough money is available for basic research. The overall program is out of balance in favor of Landsat data acquisition.

EROS recoups approximately 80 to 90 percent of its direct costs for data reproduction through sales.

Training approaches being a self-sufficient activity in the sense that direct costs for training such as salaries, materials, etc. are recouped through charges applied to training courses. Mr. Thorley pointed out, however, that there are other "expenses" involved which are less apparent. Successful training means knowledgeable instructors (scientists) communicating the most current information available, which can only be derived from a broad-based research program. Thus, research is especially important--there can be no technology to transfer without a significant research effort.

Data sales is another budget area which is for all practical purposes self-sufficient. The costs of data are determined by the Secretary who has delegated that responsibility to the Assistant Secretary. Increases in prices have little effect on the volume of sales to serious users, who would probably be receptive to as much as a five-fold increase because the costs are low compared to its value to them. Price increases do precipitate a drop in sales to the casual user, however. While States are not big users of remote-sensing data, price would be a factor to them.

EDC has the capacity to produce approximately \$20 million worth of data, but the facility is currently under utilized.

IV. EROS Program Office Project Research: FY 1978

This item provides a sampling of the types of research projects undertaken by the Reston staff and EROS-sponsored projects in other bureaus and divisions.

V. Training Program

Item V provides a breakdown of FY 1979 training activities, including workshops and courses, educational aids, university involvement, information exchange, cooperative demonstration projects, Data Analysis Laboratory Operation, basic and applied research and development, and special assignments.

Because the requests for training exceed the capabilities of EDC by about 5:1, EROS is anxious to develop cooperative efforts with universities. The Program currently has four such programs, with universities, but hopes to increase this to six or eight in FY 1980.

VI. Summary of Analysis Sessions for CY 1978--Data Analysis Laboratory, Applications Branch

The Data Analysis Branch is currently operating on two shifts a day. Item VI provides a summary of data users.

VII. FY 79 EDC Contracts

In contrast to past years, the EROS Program office has only one contract-- support for the Michigan Remote Sensing symposium.

The Data Analysis Laboratory is funded in part from user costs (\$150/hour CPU time), but it is not self-supporting. The laboratory is considered a research tool.

Landsat data represents only about 20 percent of the total data archived at EDC; the balance is aircraft data. The size of the Burroughs Corporation computer reflects the increased capacity required to store and retrieve the large number of aircraft images.

Other bureaus, notably BLM and BuRec, are acquiring their own data analysis facilities.

Technicolor Graphics, Inc. has been the successful bidder to date to provide personnel services at EDC, and EROS is pleased with the results. The original contract was let in 1973 and was recompeted in 1976. There were no other bidders in the 1976 recompetition.

Samples of remote-sensing frames were displayed: one processed by the "dip and dunk" method and one processed through the new EDIPS, which is a much improved product. EDC was ready to initiate EDIPS last July, but Goddard had difficulties in getting underway and was not operational until February 1979. Continued problems at NASA have prevented maximum utilization to date.

The installation of an antenna at EDC combined with the use of a domestic communication satellite link between EDC and Goddard will enable data to be ready for distribution in 10-14 days from the time of acquisition compared to the current time frame of 4-6 weeks. This is particularly important where data are perishable.

VIII. Statistics

Landsat data represent 60 to 65 percent of sales, but only 20 percent of the data base holdings. Prices are higher for Landsat data.

Mr. Hemphill will provide the group with a list of EDC products available for sale and a price schedule.

With regard to the Landsat user profile, the percentage for industry is currently relatively low (21%) because industry has acquired most of the Landsat data they need. There should be a significant increase in industry usage when TM data become available.

The percentages for foreign users (35 percent) represent products sold to users with a foreign address. About 75 percent of all Landsat imagery sold is of foreign areas.

NASA used to give away data to certain users (e.g., CIA). This is no longer the case and these agencies will now have to buy data through EDC.

The EROS program office will provide a list of research reports prepared by the program which include open-file reports, scientific journals, professional papers, and proceedings of symposiums.

General Discussion

Coordinators - With regard to EROS coordinators within the divisions and other bureaus of the Department, their effectiveness relates to (1) the drive of the individual and (2) the coordinator's position within his organization. There have been cases where the coordinator was a highly motivated individual, but his effectiveness was limited by his role in the organization. The reverse has also been true.

Geologic Division probably has the most extensive program involving the use of remote-sensing data. Conservation Division has not been involved, perhaps because of lack of available personnel to develop participation. WRD and Topo fall somewhere in between these two examples.

Problem Areas -

- . The objectives of the EROS program have been impacted, understandably, by the Survey's priorities--budget, personnel, etc.

There has been some criticism from other bureaus that EROS is the handmaiden of the Geological Survey.

Lack of clout of division/bureau coordinators

The extent of the use of space technology by the Survey and by the Department is difficult to pinpoint because it is a research tool and an answer is not readily available.

Advantages to referring to the EROS program as a Departmental program are to avoid charges of the program being the Survey's handmaiden and more importantly for budget purposes. As part of the Survey budget, EROS programs may sometimes be given relatively low priority.

Mr. Hemphill offered two suggestions for the group's consideration:

- (1) A visit to the EROS Data Center by the Study Group would further understanding of the EROS Program
- (2) Consideration should be given to integrating the EROS program with NOAA/NESS and, in this regard, a visit to NESS headquarters in Suitland, Maryland, would be useful.

Mr. Overstreet indicated that the study group is free to consider all organizational structures and attachments in its deliberations, including integration with NESS/DNR.

Mr. Overstreet asked that arrangements be made for a briefing on the Landsat systems (including Landsat D) with appropriate commentary on their uses, significance for the future, etc.

The next meeting will be Tuesday, March 20, 1979, 1:30 p.m., 6-A-412.

Action Items:

Study Group members to designate alternates.

EROS Program to provide:

- . Breakdown of available remote-sensing products and price schedule
- . List of research reports (for current fiscal year)
- . Briefing on Landsat Systems (current and future)