
IDIMS Newsletter

TRW

Published by ESL a subsidiary of TRW

July 1984

Users and Vendors Converged in Colorado for Annual Meeting

Turnout for this year's IDIMS user's group (IUG) meeting topped that of all previous meetings. Attendance peaked at 72 people during the four-day session, April 10-12, in Breckinridge, Colo. Representatives from 21 sites and seven vendors, including ESL, were there.

"I was extremely pleased with the spirit of cooperation within the group this year," said Bob Brovey, 1984 IUG chairman.

"In particular, I would like to commend the quality of both the technical and vendor presentations. I found all of them very informative and helpful," he continued.

Presentations ranged from computer upgrade paths to seismic interpretation.

Steering Committee Formed

One accomplishment of this year's meeting was the formation of an IDIMS steering committee. Bob Brovey is acting chairman and five others are serving as spokespersons for the sites, to work with ESL on the many aspects of IDIMS development.

Explained Brovey, "The committee will work with ESL and the users to come up with priorities of common interest."

Government users are represented by Chuck Smith of the GMIS



Aaron Holzer of Digital Equipment Corp. is shown above speaking on the "VAX Architecture of the 80s" at the annual users' group meeting in April, which filled 3½ days with vendor, user, and ESL presentations. Below, Andy Failla of ESL (right) accepts a plaque of the agenda from the first meeting six years ago from Dr. James Burke of ESL (left).

facility at Norton Air Force Base (HP-based systems), Charlotte Carson-Henry of NASA Ames (VAX), and Jim White of the U.S. Government. Industry representatives are Dave Freeman of Sun Exploration (HP) and Jonathan Pershouse of Superior Oil (VAX).

The steering committee anticipates publishing the first issue of a biannual newsletter this month.

A Symbol of Continuity

During the meeting, Dr. James Burke, director of imagery data systems at ESL, presented a plaque which bears a copy of the agenda from the first users' group meeting six years ago. The plaque symbolizes the continuity of the relationship between ESL and the IDIMS community, which has grown in scope and size since then. Andy Failla, IDIMS product manager and 1984 IUG secretary-treasurer, accepted the plaque for the group.



Officers Elected for 1985

1985 IUG officers were elected on the last day of the meeting. Dave Freeman of Sun Exploration will serve as IUG chairperson and Chuck Logan of EG&G Aerial Measurements as vice chairperson. Andy Failla will again be secretary-treasurer.

Next year's meeting is tentatively scheduled for April in Breckinridge again. ●

Installations And Upgrades

VAX IDIMS Installed At Amoco Last Month

The IDIMS installed at Amoco International in Houston in June is the biggest non-upgraded system delivered to date. It's the biggest by all accounts — storage capacity, size, number of peripherals, and amount of software.

Amoco's system has 2.3 gigabytes of storage capacity. Based on DEC's VAX 11/780, it includes two image processing analysis stations and an array processor. It has the complete software package — GES, ERIS and Data Catalog, as well as IDIMS.

Upgrades to Arrive At Mobil in August

When two hardware upgrades arrive next month at Mobil Research and Development Corp. in Dallas, Mobil's system becomes the largest VAX-based IDIMS in the field, reports Vern Mastin, ESL project manager.

The upgrades will bring the total number of complete work stations on the system to five, allowing Mobil to process the large quantities of multi-dimensional data associated with seismic interpretation, using ESL-developed software. The upgraded system will have the most display work stations running on a single CPU at any IDIMS site.

"Most systems are limited in the number of work stations," commented Bob Berger, a Mobil research geophysicist. "But, IDIMS has a sophisticated display system and can support a large number of users."

One of the upgrades is the installation of two image display stations, each

with a DeAnza IP8500, a PDP 11/24, and a 300 megabyte disk. The other adds a third dual-ported display station, composed of a DeAnza IP8500, a FPS array processor, a PDP 11/24, and two 300 megabyte disks.

Mobil's system, based on a VAX 11/780, was originally installed in May 1983 and was first upgraded in December.

Union Oil's VAX IDIMS To Be Installed In January

A VAX 11/780 IDIMS will be installed in January at Union Oil's research facility in Brea, Calif.

New software capabilities, as well as a variety of innovative image output devices, will be incorporated into this system, which will be used to evaluate the applications of image processing to oil and gas exploration.

HP Upgrade Path Opens Up This Fall

An IDIMS upgrade path specifically for Hewlett-Packard users becomes available this fall. The HP3000/Series 68 is the basis of a configuration that will allow users to retain their HP product base while significantly improving the system's image processing capabilities.

Upgrading to the Series 68 reduces the cost required to achieve a given performance level. The hardware now is available from HP, and following the release of operating system MPE V, IDIMS software will function on the Series 68.

The HP product line has several advantages: reliability, maintainability, easy transfer of software, and speed of installation. IDIMS software support is complete for HP products.

In 1983, HP announced plans to discontinue standard support of the

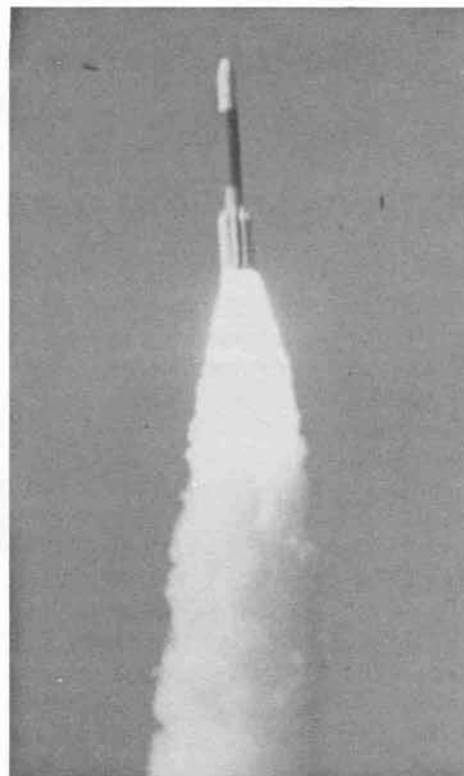
HP3000 Series III and the Series II within five years. The HP3000/68 is the best upgrade alternative when evaluated by cost, reliability, and performance measures.

Disk caching is an important benefit of the HP3000/68 computer for IDIMS users. With MPE disk caching, data is more readily available directly from main memory rather than disk. It is a solution to overcoming the long access time delay between main memory and disk storage and the long data base semaphore queuing delays caused by this gap. Disk caching is suited particularly to running IDIMS because of the excess processor capacity present and the capacity for large main memory. If users' applications are largely I/O bound, such as IDIMS — most IDIMS functions and data sources are located out on disk — disk caching will greatly improve performance.

The improved performance is illustrated by benchmarks obtained in April. Manipulating a 1024X1024 image, the HP3000/Series III took over 17 minutes on the average to perform a variety of functions. The HP3000/68, using disk caching, performed 4.6 times faster, although the VAX 11/780 did even better, performing 7.3 times faster.

ESL will release a version of MPE V and IDIMS software (Release 4.41) by October. This version of MPE V will include the standard set of modifications ESL makes to all operating systems. For users who wish to upgrade to the HP3000/68, the release can support disk caching and expanded systems tables if these hardware options are purchased from HP. In order to complete the upgrade, users will

Continued on page 4



And, we have a lift off . . . Just three days after launch from Vandenberg Air Force Base on March 1, Landsat sent down its first image, a multispectral scanner image of New York City and the surrounding area.

TM Data Returns with Landsat 5

From 705 kilometers up, Landsat 5, the backup satellite for the handicapped Landsat 4, now is keeping the watch its predecessor could not.

Launched March 1 from Vandenberg Air Force Base in California, it has been sending down images since its third day in space, when it relayed a multispectral scanner (MSS) image as it passed over the New York City area.

Its thematic mapper (TM) has been fully operational since April 6, filling the void left when power and communication failures knocked out transmission of TM data from Landsat 4 almost two years ago.

Landsat 4 still is transmitting MSS data satisfactorily, while its life is prolonged by power conservation measures. The Landsat 5 satellite

was modified to prevent the problems suffered by its predecessor.

The MSS and TM on Landsat 5 are identical to those flown on Landsat 4.

Around 280 MSS scenes and 250 TM scenes a day are received by domestic and foreign ground stations. Currently, initial processing of about 100 MSS scenes and radio-metrically and geometrically corrected processing of about 50 TM scenes are performed daily by the Image Generation Facility at Goddard Space Flight Center in Greenbelt, Md.

TM processing will be turned over to the National Oceanic and Atmospheric Administration (NOAA) this fall. All other Landsat 5 operations were transferred from NASA to NOAA immediately after launch.

Final MSS processing and distribution and TM distribution are done by EROS Data Center. Inquiries about Landsat data products may be made by calling (605)594-6151 or writing User Services Center, U.S. Geological Survey, EROS Data Center, Sioux Falls, SD 57298.

Landsat 5, called Landsat D Prime before it reached orbit, circles the globe in a sun-synchronous orbit inclined 98.2 degrees to the equator. Every 16 days, it images the same 185-kilometer-wide swath of the earth's surface under the same lighting conditions. Any part of the earth, except a small area immediately around the poles, can be imaged during its cycle.

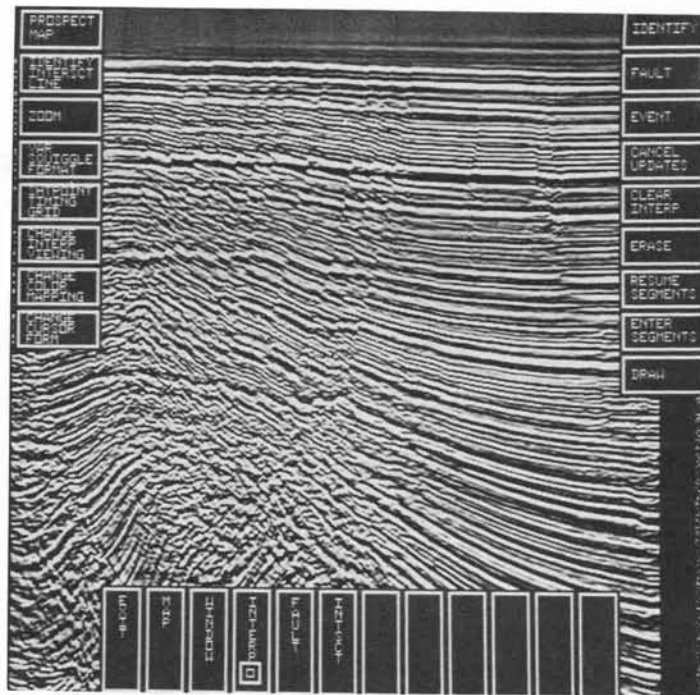
As its name implies, the satellite is the fifth in the NASA earth resources series. Landsat 1 was launched on July 23, 1972, Landsat 2 on Jan. 22, 1975, Landsat 3 on March 5, 1978, and Landsat 4 on July 16, 1982. •

A Tool for Seismic Interpretation

This seismic image is an example of the preliminary version of the interactive seismic interpretation system for oil and gas exploration that ESL is developing for Mobil Research and Development Corp. The image is a cross sectional slice generated from seismic data showing geological subsurface features. The menu overlay is part of the package's innovative user interface.

System hardware is based on Mobil's existing VAX/IDIMS, and the software uses Gould/DeAnza's Library of Image Processing Software (LIPS), as well as IDIMS. The interactive parts of the package will run locally on the display system, using the PDP-11 controller, to minimize the users' impact on the CPU.

"IDIMS and the VAX base have processing and graphics capabilities which lend themselves to some aspects of seismic interpretation," said Bob Borger of Mobil. "IDIMS is superior for use with seismic data because of its graphics and interactive capabilities, its ability to manipulate and handle large data sets, and the number of users it can support."



Seismic interpretation is an example of a more specialized application than those for which IDIMS typically has been used. Said Jan Fabini, user development manager, "This system may open up doors for other kinds of more specialized processing related to IDIMS." •

HP Upgrade Path

Continued from page 2

also need to change affected peripherals to accept HP-IB interfaces, as well as resolve other minor hardware issues. All IDIMS software will function on the Series 68 using MPE V.

Other possible variations on the Series 68 upgrade include the addition of shared disks and utilization of the new model HP1000/A900. For those users who already have an ESL array processor, the existing HP1000/E could be interfaced to the disk controllers, which may be upgraded from 7925 to 7935, offering 404 megabytes of memory. Task control communication would be handled through a standard serial interface, such as the HP-IB. This configuration may require a minimum of software development, primarily for file access control handling and task control communications on the

mainframe. The next phase of such an upgrade would feature the new HP1000/A900 replacing the Series E and ASAP hardware. The A900 could run applications functions directly or could serve as a host for an array processor, such as the Analogic AP500. The features of the A900 include the capacity for 24 megabytes of RAM memory, 24-bit program address space, and a disk transfer rate faster than that of the Series 68. The implementation of this system would require more support than is currently available.

The GMIS facility at Norton Air Force Base already runs IDIMS on a HP base other than the Series II or III. This month a Series 44 and a 64 were installed. GMIS intends to upgrade the 64 to a 68, running the two mainframes in tandem using an HP/DSN link. As soon as MPE V becomes available through ESL, they will be able to complete

this unique HP configuration, adding several custom-written software functions.

To discuss HP/IDIMS system upgrade configurations, contact Chip Norris, HP sales representative, in Palo Alto, Calif., at (415)857-8110. IDIMS users who want to look more closely at HP upgrade paths should contact Rob Hall, IDIMS marketing, at (408)743-6156. •

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Published by ESL Incorporated, a subsidiary of TRW Inc., for members of the IDIMS Users Group.

Do you have news about your system, site, or application that you would like to share with other IDIMS users? If so, please contact Andy Failla at ESL, (408) 743-6152.