The 94MAY Release of ESO-MIDAS

Science Data Analysis Group

Although in principle ESO-MIDAS is released only once a year, on an exceptional basis we decided to prepare a minor release in May 1994 (94MAY version). This decision was made to provide, as soon as possible, a POSIX and ANSI-C compatible version for developers of reduction packages for VLT instruments. This release will also fully support the DEC OSF/1 systems. The 94MAY minor release will only be available through networks (i.e. ftp). No special documentation will be generated except for a new version of the ESO-MIDAS Environment document applicable to this and future MIDAS releases.

Although it contains a number of new features and upgrades of the 93NOV release, it is only recommended for sites which either require full POSIX and ANSI-C compatibility or have DEC OSF/1 systems on which 93NOV cannot be installed. The 93NOV release will still be the official and fully supported release of ESO-MIDAS for all other systems, until 94NOV becomes available. Some of the new features are described in the following section, a more detailed account can be found in the March issue of the ESO-MIDAS Courier.

1. Redirection of Input/Output

For some time the MIDAS user community has expressed the wish for an easy and robust method of communication between MIDAS and the host system. Thus, one could employ host system utilities for MIDAS reduction tasks and on the other hand, system utilities could profit from MIDAS functionality. Because we didn't want to introduce a completely new twist to the MIDAS command syntax, the input/output redirection for MIDAS commands was implemented very similar to the Unix concept using the '<' and '>' characters. Note, that this redirection is also valid for VMS/Open VMS.

2. Refurbishment of PLOT Package

The MIDAS PLOT package of the 94MAY release was rewritten in C which (hopefully) will be noticed by its improvement in performance. Also, a number of limitations are lifted. For example, the PLOT/CONTOUR command no longer has restrictions on the frame size, in particular PLOT/PERSPECTIVE is much faster, and PLOT/TABLE is now ready for 3D tables. We have given it some nice options which are also useful for 2D tables.

3. Changes in the Standard Interfaces

This 94MAY release will be the first release in which the modified type definitions of arguments in the C-routines of the Standard Interfaces are implemented. The modifications are: a change of the arguments of type 'long int' to 'int' in all SC and TC routines and a type change of the parameter 'unit' (e.g. in SCKRDC) from type 'char **' to 'int *'. At the same time ANSI-C prototype definitions of the interfaces were provided.

These modifications were necessary in order to provide a clean port of MIDAS to a CPU with a 64-bit architecture, e.g. the Alpha chip from DEC running under the OSF/1 operating system (HP, IBM and SUN are also currently working on 64-bit chips).
A notification of these changes and a more detailed technical explanation were sent to all MIDAS sites in the summer of last year to obtain feedback from the user community and objections, if any. No negative response was received, so the modifications were implemented as proposed.

Nothing has changed with respect to the Fortran implementation of the Standard Interfaces, therefore users who wrote MIDAS applications in Fortran are not affected. Also the applications written in C will not feel the impact of these modifications as long as they are running on a 32-bit machine. However, we strongly recommend to update the relevant code as soon as possible.

New in the MIDAS Environment is a standard MIDAS Graphics library. The library is meant for those who want to incorporate graphics into their Fortran or C applications that are fully compatible with graphics created by MIDAS commands. The library becomes available in the 94MAY release.

ESO's New On-Line Information System

THE ESO WEB CONSORTIUM[1]

A new information system is being set up, based on the system called the World-Wide Web. This article describes why it was set up, what is now available, and how it can be accessed.

ESO as an Information Provider

One of the specific tasks of ESO is the rationalization and distribution of information about ESO facilities. This central task of ESO relates both to external and internal users. Information may exist, but accessibility, consistency and comprehensiveness are all very important considerations which need constant attention.

ESO's information production and distribution activities include the following:

- Science Information: bibliographical – abstracts, papers, books; preprints; news; data; conferences, meetings, talks.
- Facilities: telescopes, instruments, detectors, computers, measuring machines.
- Tools: data analysis software, appli-

[1] Includes: H.-M. Adorf, M. Albrecht, P. Ballester, T. Bedding, P. Benvenuti, P. Bristow, P. Dierckx, M. Fendt, C. Madsen, J. Mendez, F. Murtagh, J. Schwarz, R. West, and W. Zeilinger. Membership open!

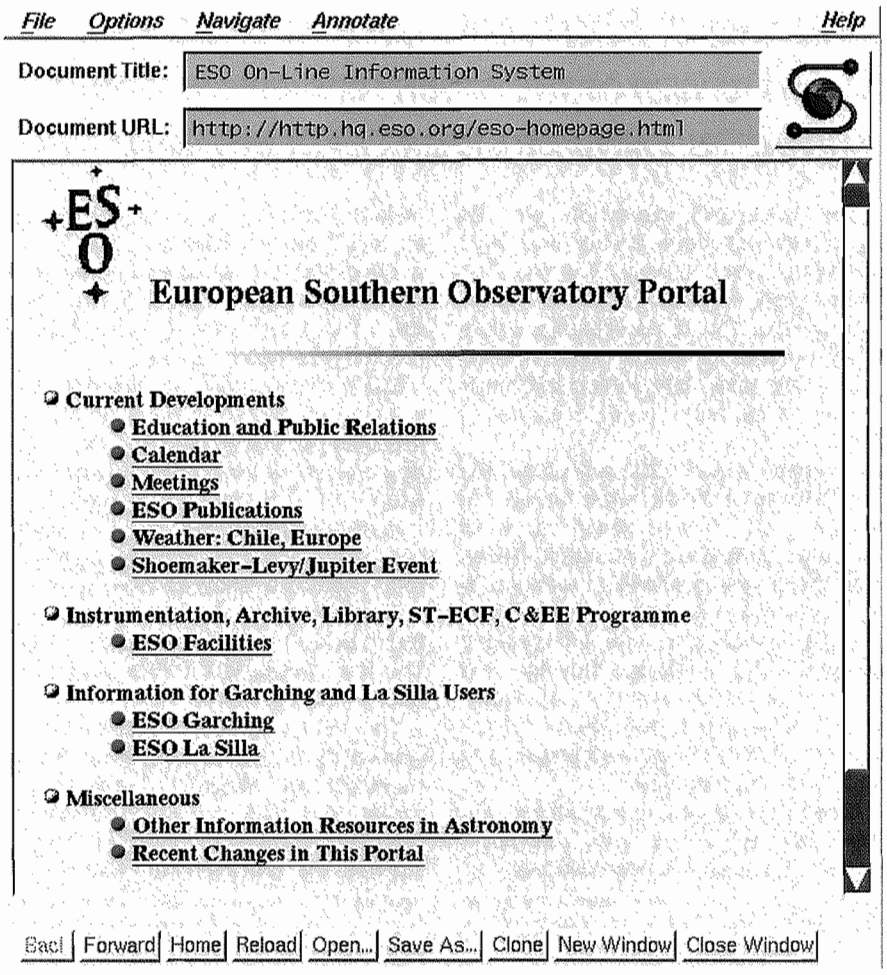
cations software, electronic mail, network services, word processing, desktop publishing, presentation software.

Information on such topics exists, but it is mostly spread around, not well organized, inhomogeneous, irregularly updated, and difficult to access. ESO has an obligation to provide such information to its user community. Additionally, the life of internal and external ESO users should be made as productive as possible, through the use of the best available, modern information-handling tools.

A number of people from the Space Telescope – European Coordinating Facility (ST-ECF), ESO's new Data Management Division (DMD), and from ESO's Science Division, have been putting together a scheme for collecting and presenting ESO-wide information. Earlier work was also carried out at La Silla.

The preferred technical infrastructure is the multi-platform, public toolset associated with the Internet's World-Wide Web. The information system being built up is not yet complete. However, what is currently available shows, already, what can be done.

ESO information is geographically distributed. The information system prototyped allows instrument information to be maintained at La Silla, and to be effortlessly integrated into an overall presentation structure in Garching. The coming roof-to-roof 2 Mb link between La Silla and Garching will obviate any bandwidth-related difficulties.



The ESO Portal homepage on a Unix workstation, mid-May 1994.

The Internet and the World-Wide Web

The number of Internet users has been growing ever faster, and currently stands at 20 million. A simplistic extrapolation shows an Internet connection for every human being on earth by the year 2002.

An additional trend in the past year or two has been the wide use of reliable, userfriendly, freely available tools for distributed free-text searching, and for resource finding. Examples of such tools include the World-Wide Web (WWW, or Web) browsers such as Mosaic and Lynx. The number of users of Mosaic stands now at 2 million, and (as of one or two months ago) is the fastest-growing Internet application. Web browsers are available on a range of common platforms – Unix, Macintosh, VMS, Windows, and PC. For hardware with limited graphics – e.g. VT100 terminals, or when dialing up ESO via modem from home – line mode operation can be used (e.g. Lynx).

The ESO Portal is based on the Web. It was set up following the successful experience of Web-based information servers in the ST-ECF and the Archive Group in ESO. Internal Unix users automatically access this ESO Portal when they execute the command xmosaic. For external users, the URL (address) is http://http.hq.eso.org/eso-home page.html.

To read further about the World-Wide Web, Adorf (1994) provides an introduction.

ESO Portal Contents

The following are a number of topics which can now be accessed in the ESO Portal:

- All press releases issued by ESO in 1994 are accessible, including the accompanying images. The images are displayed, by clicking within the article at the appropriate place.
- Up-to-the-minute information on such topics as the Shoemaker-Levy/Jupiter event is available.
- A major current drive is to have comprehensive instrument information available. This builds on the earlier work of making such information available, and prototyping a Web server, which was carried out at La Silla.
- Meteorological satellite images of Chile are continually uploaded to the Portal.
- Seminar and Lunch-Talk information is made available as soon as it is on hand.
- Extensive practical information is available with regard to ESO computing topics.
- A link to other network-based astronomical resources is available – around 700 sites.
- A small but growing number of ESO preprints are now accessible on the ESO Web.

Work on the ESO Portal began only recently, but it has grown fast. It is not yet at the level which we would like it to be, and to achieve this goal, your help is needed.

Feedback on the contents of the ESO Portal is welcome at all times. So also are comments on presentation and layout.

Reference

H.-M. Adorf, "Electronic access to HST information. II. The World-Wide Web", *ST-ECF Newsletter*, No. 21, April 1994, pp. 31–34.