There is no way to access the data in a collection directly from another program or to automatically update the information in a collection from another program. Access to and from collections is limited to load and dump commands, which are very crude and must be done from within Double Helix. Double Helix data is stored as a heap, so it would be difficult to get around these restrictions by accessing the data directly from the disk file.

The package. Documentation consists of the Helix User's Guide and the Double Helix Supplement and Revisions to the Helix User's Guide. The Supplement has an excellent index. I had never used Helix, so I found it slightly confusing to have the manual split like this, but not overwhelmingly so.

Additional materials make it easy to get started. There is a Quick Start Manual for those who want to jump right in without wading through volumes of manuals. There is also a Resource/Work Disk Manual and resource disk for those who want a tutorial. Another helpful resource is a toll-free help line. I talked with some simple questions, and the person I talked with was knowledgeable and helpful. This is by far the best help line I have called.

Versions. Version 1 is for a single user on a single machine. This means that only one custom set of menus is possible. The retail price is $495.

Version 1 Plus is available as an upgrade to Version 1. Version 1 Plus allows for multiple custom sets of menus as well as multiple machines. The retail price is $100 per node or machine.

Version 2 is due to be released soon, and will be available to all Version 1 users as a free upgrade. The retail price for single-machine users will be $495. The multi-machine Version 2 will cost $695 for three nodes.

There is also a runtime version that works only in custom mode. The designer cannot generate as many copies of a runtime application as desired for a flat fee of $500 per six-month period. This seems like quite a bargain for database designers.

Summary. Double Helix is easy to use, flexible, and powerful. The user interface is outstanding. As long as what you want to do falls within the very considerable range provided in Double Helix, it is an excellent program. The borders are so tight, however, that it is difficult or impossible to integrate Double Helix with other programs to accomplish a task outside its range.

---

DISTRIBUTED SYSTEMS SPECIALISTS

Tomorrow's Computing Technology is Today's Challenge

at

IDA

Some of the nation's most exciting developments in software technology, supercomputer architecture, AI, and expert systems are under scrutiny right now at the Institute for Defense Analyses. IDA is a Federally Funded Research and Development Center serving the Office of Secretary of Defense, the Joint Chiefs of Staff, Defense Agencies, and other Federal sponsors.

IDA's Computer and Software Engineering Division (CSED) is seeking professional staff members with an in-depth theoretical and practical background in the area of Distributed Systems. Tasks include efforts aimed at designing and prototyping systems, evaluating/assessing alternative strategies or designs, and advising major DoD programs on the suitability of various technologies or on the need for research in the field.

Specific desired interests and skills include:

- Operating systems — including clock synchronization, efficient IPC and RPC, centralized and distributed scheduling, and resource allocation
- Data base systems — including access control, distribution transparency, data redundancy, concurrency control, security
- Communication protocols
- Reliability and survivability — including issues related to

transaction logging, rollback and recovery, process migration, and system reconfiguration

Specialists in other areas of Computer Science are also sought: Artificial Intelligence and Expert Systems, Software Engineers, Computer Security Scientists and Programming Language Experts.

We offer career opportunities at many levels of experience. You may be a highly experienced individual able to lead IDA projects and programs... or a recent MS/PhD graduate. You can expect a competitive salary, excellent benefits, and a superior professional environment. Equally important, you can expect a role on the leading edge of the state of the art in computing. If this kind of future appeals to you, we urge you to investigate a career with IDA. Please forward your resume to:

Mr. Thomas J. Shirhall
Manager of Professional Staffing
Institute for Defense Analyses
1801 N. Beauregard Street
Alexandria, VA 22311

An equal opportunity employer. U.S. Citizenship is required.

IDA