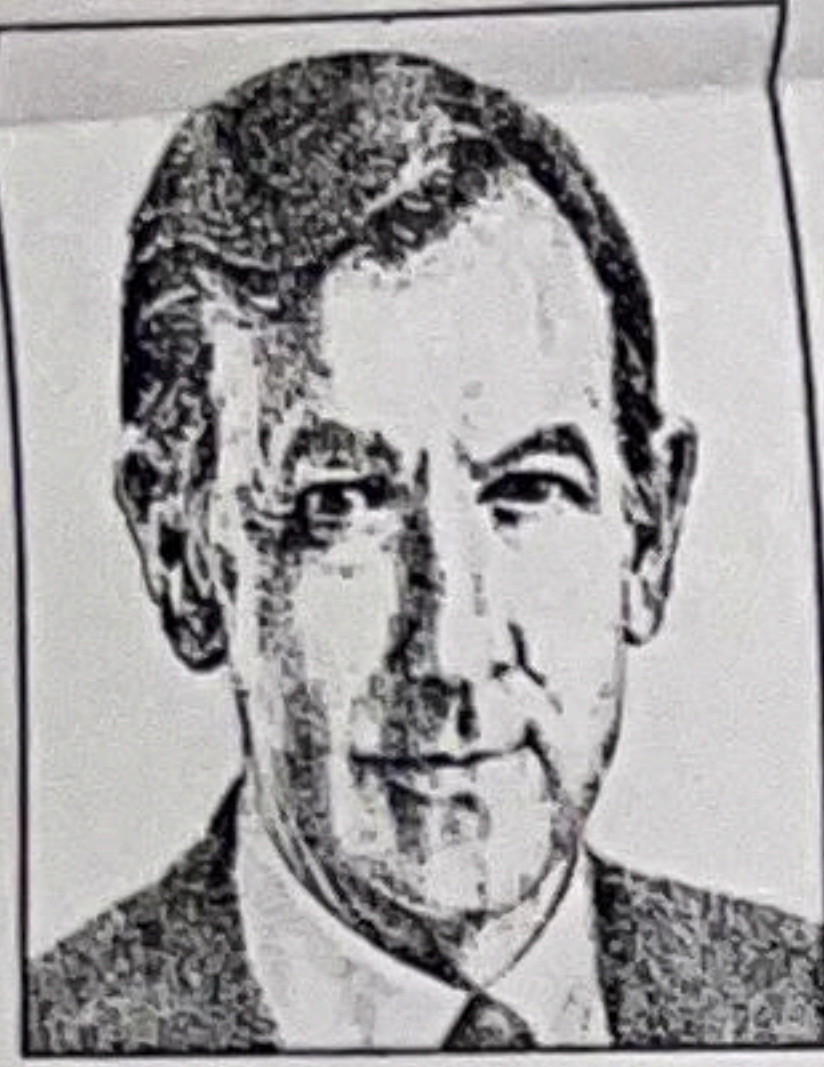


APPLIED INTELLIGENCE

Look for CASE Tools that Give More Bang for the Buck



JAMES MARTIN

Seventh in a series of articles on retooling information systems.

While corporations are rapidly adopting CASE tools to build business applications, it has become increasingly difficult to differentiate among the offerings. Many CASE tools

boast flashy graphical interfaces and claim support for the entire life cycle. Others tout code-generation capabilities, support for reverse-engineering and project-management facilities.

To match the tool to the needs of your organization, look for something that will give you the most bang for the buck. As summarized in the figure, this is achieved by tools that address the following criteria:

- a graphics-style user interface;
- support for the entire life-cycle process;
- the ability to generate 100 percent of application code;
- a single repository of design specifications;
- desktop code generation;
- multiple code generators for COBOL, C, Ada, and so on; and
- support for standards such as Structured Query Language (SQL) databases and IBM's AD/Cycle repository.

Recent studies indicate that graphics-oriented analysis and design tools head the wish list of most CASE users. Defining design specifications in a graphical form tends to be much more productive than older, text-oriented approaches.

Code-generation capabilities and support for the entire life-cycle process are

also highly desired traits for CASE tools. Users recognize that it's not enough to use CASE tools to define design specifications; for maximum productivity, the tool must automatically convert design specifications into 100 percent of the source code or object code required to run an application.

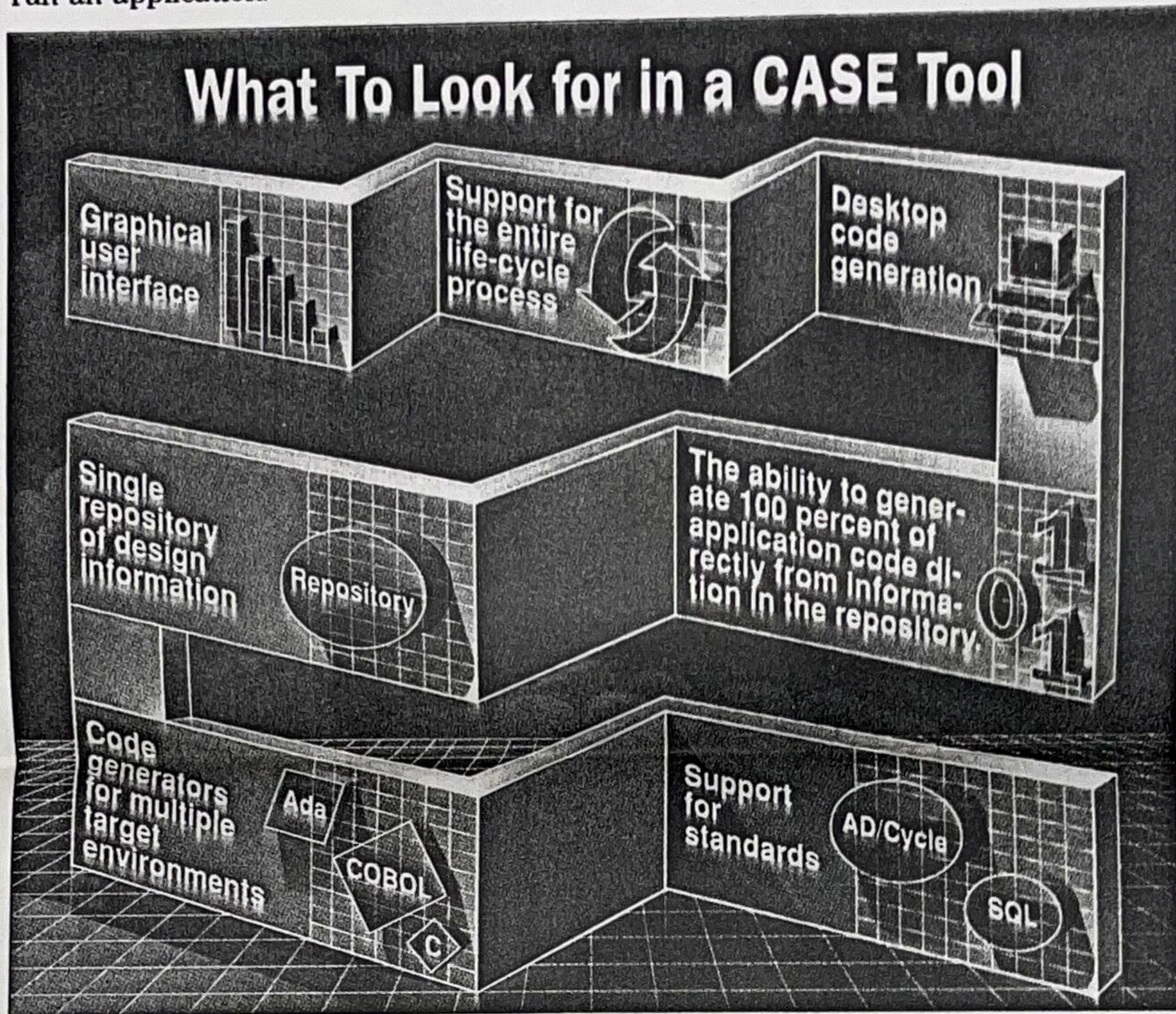
Another feature coveted in a CASE tool is the ability to maintain a single repository of design information. As discussed in previous columns, many non-integrated CASE tools use a bridge to an external code generator to produce the source code for an application. This results in the creation of two potentially

tools avoid this problem. The ability to generate 100 percent of the code for an application from design specifications on the desktop is another attribute of CASE tools that is rising in importance among users. This ability eliminates the need for a mainframe code generator, which typically costs from \$200,000 to \$300,000. In addition, these tools can be used to develop prototype applications on the PC that can then be shown to the user and iterated rapidly to develop production systems.

It's also important to look for tools that are capable of generating code in multiple source languages, not just COBOL. It's likely that an increasing number of CASE tool vendors will offer integrated tools that can generate C code.

Finally, compliance with standards is another important element in the selection of CASE tools. Users should consider whether CASE offerings support industry-standard SQL for shared database access, AD/Cycle for shared access to design information, common graphical user interfaces to ensure a consistent look and feel for all applications, and compliance with communication standards, including SNA in the IBM environment and TCP/IP and OSI protocols in all environments.

Next week I will discuss additional features to look for in order to get the maximum return from an investment in CASE technology. ■



John Avakian

Only a small number of integrated CASE (I-CASE) tools on the market today meet this requirement. Most products still require programmers to convert design specifications into source code by hand. This is an expensive, labor-intensive and error-prone process that can be eliminated entirely through the use of I-CASE tools.

incompatible design-information repositories—one associated with the front-end CASE tool and the other with the external code generator.

Manual programming is typically required to maintain consistency between the two repositories. Through the use of a single repository to accumulate design information and generate code, I-CASE

The concepts embodied in this article are described in the CASE volume in The James Martin Report Series. For more information on this volume, call (617) 639-1958. For information on seminars, contact (in the United States and Canada) Technology Transfer Institute, 741 10th St., Santa Monica, Calif. 90402 (213) 394-8305. In Europe, contact Savant, 2 New St., Carnforth, Lancs., LA5 9BX United Kingdom (0524) 734 505.

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