

Plenty in store for the IBM repository: four groups vie to offer a standard solution - including American National Standards Institute, International Standards Organization, DEC and IBM

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Plenty in store for the IBM repository

TORONTO -- When IBM Corp. announced its intention to enter the computer-aided software engineering (CASE) market last September, the move was based on a forthcoming set of products and an environment called Application Development/Cycle (AD/Cycle).

Speculation about what this environment will involve, including a concept called Repository Manager, has kept the industry buzzing.

"The big problem we have today is that IBM hasn't dropped the other shoe yet -- they told us what the framework's going to look like, but they haven't told us how it's actually going to work," said Ken Orr, a principal in the Ken Orr Institute. "And in fact, until they give us the data models we're not going to know."

Speaking at The Repository Conference sponsored here last month by Digital Consulting Inc. of Andover, Mass., Orr described IBM's software strategy as "a new generation of software," a major component of which will be something called a repository.

"There are a variety of bases on which (the repository) is a very important component in the software technology of the future," he commented. "There are plans long-term for the repository to go into the execution and operation of data processing."

Speaker George Schussel, DCI president, described a repository as a "database of meta-data (data about data) -- a database for all the things that are necessary to build programs in an application generation platform."

According to Schussel, a repository will offer the same capabilities as current databases -- reusability, concurrency, multiple availability, management -- but instead of applying them to an execution environment, the repository will operate in the development environment. It will contain things like object definitions, conceptual data models, process logic, screens and reports, and source code.

Since its inception, the CASE market has had a number of different players, each addressing a specific aspect of the software development life cycle. As the industry matured, vendors addressing analysis and design started to team up with vendors offering code generators and testing tools to provide full life cycle coverage.

Standard approach

With a repository, this kind of interfacing between different aspects of the life cycle is no longer necessary, said Schussel.

"One of the advantages to a standard repository approach is that we would be able to do something very interesting -- instead of building all these bridges, we could define a standard set of interfaces to this standard repository."

In a repository-based world, Vendor A's design tool and Vendor B's code generator will both interface with the repository instead of with each other.

The other key component of the strategy is the ability to support multiple environments. "The repository is a very global idea," said Ken Orr. "You need a repository or something as a common dictionary in this framework for building portable systems -- you need to support multiple platforms, languages, distributed databases and networks.

"Repositories are emerging to essentially integrate fragmented and redundant meta-data that has built up -- it's the database for the operating system of the future."

There are currently four groups Schussel pointed to as possible candidates for proposing a standard repository: American National Standards Institute (ANSI), International Standards Organization (ISO), Digital Equipment Corp. of Maynard, Mass. and IBM.

"My own opinion is that because of its size in the marketplace, it is quite likely that in a non-governmental world, IBM's definition for the repository model will dominate," said Schussel. "There are going to be some problems -- the main one being it is a closed market. A commitment to IBM's standards really means that you are committed to use, absolutely must use, IBM mainframes and IBM PCs."

DEC more open

DEC's ATIS (a tools integration standard) is much more open, he said, with support for all VMS environments including PC and PS/2-like devices for DOS and OS/2, and Unix on the Macintosh.

"IBM's future success depends on the success of SQL," commented Schussel. "There are going to be some interesting conflicts on the market and we're going to just have to wait and see how that whole competition scenario plays out."

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