Archetype's New Document Engine Provides Object-Oriented Tools For Fast Development Of Publishing Applications' Portable, Multi-user Documents Now Possible

BOSTON, MA, Feb. 18, 1992 —Archetype, Inc., of Waltham, MA, a developer of publishing productivity software, today introduced the Archetype Document Engine, an object-oriented development environment for NeXT Computers that enables developers and users to quickly build modular, expandable publishing applications. Archetype introduced its Document Engine (DE) here at Seybold Seminars '92, which runs through Feb. 21.

Archetype president Paul Trevithick said today that Archetype will offer a pre-release version of the DE's application programmers interface (API) for a nominal handling charge to anyone interested in developing applications. Developers may obtain a copy of the API by contacting Paul Trevithick at (617) 890-7544 or by FAX: (617) 890-3661. A DE Developers Kit, including a Beta version of the DE and a DE-based page layout application for NeXT computers, will be available in June for $ (-).

Tightly Integrated Applications

The Archetype Document Engine provides a toolkit of ready-to-use objects'the fundamental building blocks of object-oriented programs'that can be dynamically linked to form fully-featured publishing applications. Any application created using DE is compatible with other DE applications.

For instance, a report from a DE-based word processing application can be used as is by a DE desktop publishing application without modification, even when used on a different hardware platform. The report from the word processor looks exactly the same on the desktop publishing system, right down to the same line breaks, formatting, and type faces. The DE enables users to edit and revise documents from any DE application system.

This high degree of document interchange is currently unavailable with other software systems today. "Just as the hardware industry began with a flood of proprietary architectures and operating systems, the software industry today is highly fragmented and inefficient," Tevithick said. "Each massive, monolithic application today custom written and proprietary. Users are presented with

complex applications containing hundreds of features, yet these applications are still not flexible enough to meet the needs of vertical markets," he noted.
"We are moving toward a day when users or in-house development groups will create their own applications from libraries of pre-written, fully-functional objects," Trevithick stressed. "Like snapping Lego blocks together, the developer will build mission-critical applications from reusable objects. Rather than focusing on coding and procedures, these programmers will focus on what they want their applications to do," he added.

Multi-user Documents

DE applications can provide multi-user access to a single document. For instance, a newspaper page can be handled by a DE application as a single document that contains three stories (three Text objects), two photos (two Picture objects), and an advertisement (one Group object). DE’s multi-user capability allows each object that comprises the page to be worked on simultaneously by different users.

DE publishing applications can even support multiple users working on different parts of the same page. The DE provides a locking mechanism for objects akin to file locking in a network operating system.

Faster, More Efficient Development

One of the key benefits to object-oriented programming is reusable code. For instance, an object called a Circle will draw circles as part of any program. The programmer simply links the Circle object to the rest of the program and it becomes a integral part of that program.

Object-oriented programs are easier to maintain than programs written in conventional procedural languages, such as C, Basic, and Pascal. When a program needs to be updated or expanded, it’s a fairly simply matter to add new objects and classes. Objects can be written and tested without recompiling an entire program, thereby reducing development and maintenance time.

"Unlike the massive development effort required to create monolithic applications such as Lotus 1,2,3 or Pagemaker, object-oriented programs require far fewer programmers," Trevithick said. "Many small companies will be able to produce modular applications that run on top of the Archetype Document Engine. And because they run on the same engine, they can cooperate among each other.

That means users will be able to buy the application tools they need now and add others later as the need arises," he noted.

How Does The Document Engine Work?

The Archetype Document Engine provides developers with a foundation of document-oriented objects which can be used to build publishing related applications, including page layout, workflow managers, database publishing, forms managers, word processing, signature imposition, and page dummying. The Document Engine consists of three primary object classes: Document, Viewport, and Engine. These classes of objects provide access through messaging to other subobjects. For instance, within the Document object class there are several subobjects, including Polygons, Circles, Bezier Curves, Pages, Groups, Rules, and Pictures. Developers can extend the document engine with additional classes.

Each object embodies a set of instructions and other information necessary to carry out specific tasks upon command. An object is activated when a message is passed to it from a controlling object, such as the Document object.

Developers can use the Document Engine's existing objects or create their own to achieve even greater functionality. In addition, developers can also use the NextStep object-oriented development environment to rapidly build graphical user interfaces (GUI) for any type of application. NextStep dramatically reduces the time required to create a GUI for a Document Engine application.

Because the Document Engine, in effect, is an operating system extension for NeXT computers it is transparent to the NeXT user. A DE-based application would have the look and feel of a NeXT application.

Archetype, Inc.

Archetype, Inc. specializes in productivity software for computer publishing users. In addition to the Document Engine, Archetype also offers InterSep, an image management environment and PostScript productivity enhancer, as well as Archetype Designer 3.1, a widely used ad make-up program that fills the gap between long-document systems such as QuarkXPress and PageMaker, and illustration programs such as Corel Draw! and Arts & Letters.

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