



What's up, OpenDoc?

With viewers shipping on Power Macintosh systems, the debut of Cyberdog, and ClarisWorks announced as a container application, OpenDoc technology has created important opportunities for developers. Here's a look at those opportunities, and a glimpse into the future.



OpenDoc is an open, multiplatform architecture for component software (self-contained, reusable software modules). It is supported by CI Labs, a nonprofit association of more than 300 industry leaders, including Apple and IBM. Hundreds of

developers have announced they will be shipping an OpenDoc product this year. This includes ClarisWorks as an OpenDoc container application.

Why are developers adopting OpenDoc? Why should *you*?

You may know some of the

reasons already. How OpenDoc speeds and simplifies development, and reduces costs. How it lets developers program for multiple operating systems.

Gives users dramatically increased functionality. Or how CI Labs supports developers with test

suites, a validation program, and other services.

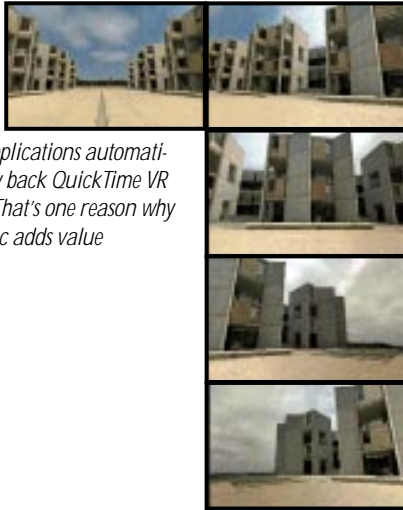
Now, add to such reasons the exclusive new business opportunities OpenDoc brings to developers—small and large alike. Significant opportunities you can take advantage of right now. Today.



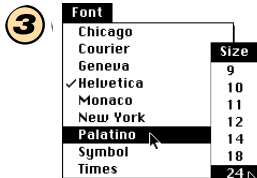


Capitalize on viewers.

1 Viewers for Apple technologies enhance how users work with OpenDoc container applications—such as ClarisWorks. Since ClarisWorks supports OpenDoc, users automatically receive the benefits of embedded components. In this scenario, a ClarisWorks user is simultaneously viewing a QuickTime VR movie, using an embedded text editor, and conducting a meeting via QuickTime Conferencing. (Apple will also provide viewers for QuickTime, QuickDraw 3D, 2D Images, and Text-to-Speech.)



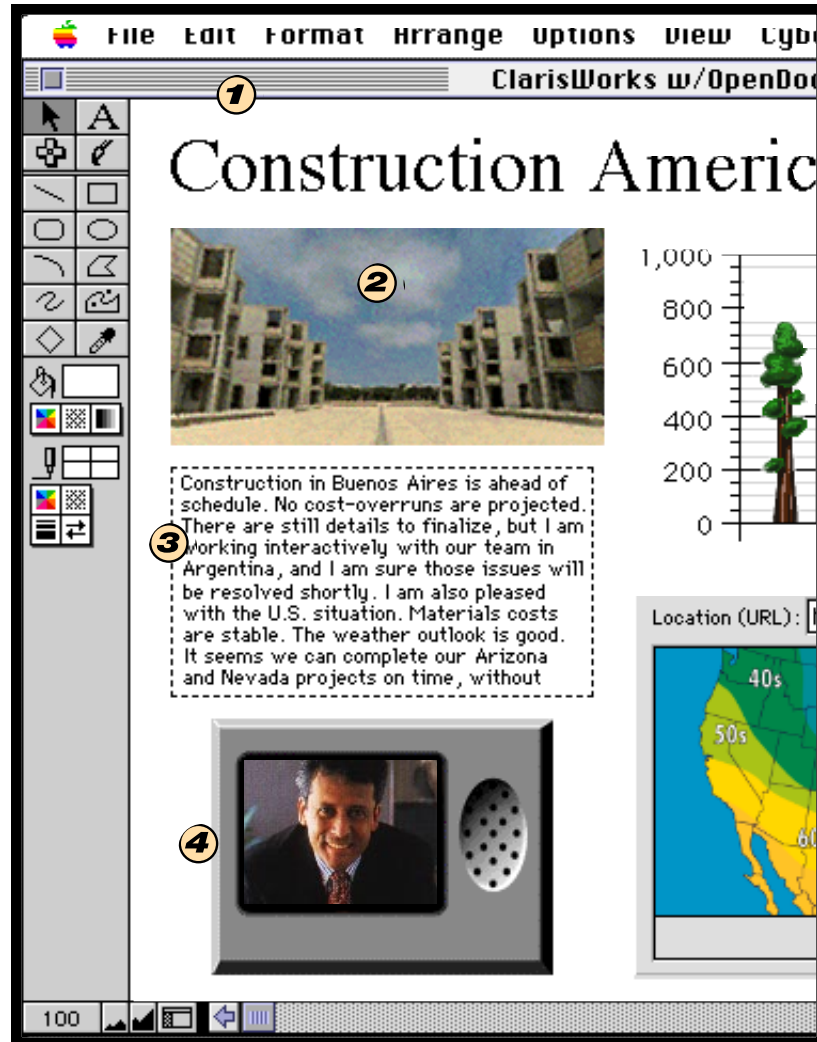
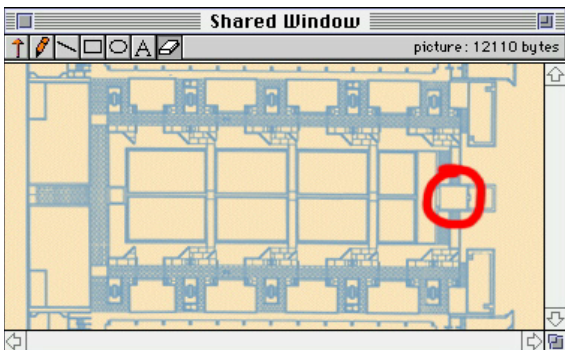
2 OpenDoc container applications automatically know how to play back QuickTime VR movies—like this one. That's one reason why incorporating OpenDoc adds value to your applications.



This letter is being written using a text editor embedded in ClarisWorks. You can embed such components in your own applications, or sell them to your customers as upgrades.

Construction in Buenos Aires is ahead of schedule. No cost-overruns are projected. There are still details to finalize, but I am working **interactively** with our team in Argentina, and I am sure those issues will be resolved shortly. I am also pleased with the U.S. situation. Materials costs are stable. The weather outlook is good. It seems we can complete our Arizona and Nevada projects on time, without exceeding budget estimates.

4 With QuickTime Conferencing, users can hold meetings on their desktop. They can overcome the constraints of distance through face-to-face conversations (as shown on screen), or by using the white-boarding capabilities shown below. ClarisWorks is compatible with QuickTime Conferencing and other key Apple technologies—because it supports OpenDoc.



Apple is using OpenDoc to bring new technologies directly to your customers. And when you incorporate OpenDoc into your applications, you can provide basic support for those technologies without revising your current software.

For example, your customers will find OpenDoc installed on Macintosh systems. Each OpenDoc-enabled system will ship with key OpenDoc components. Those components are containers (basic text and drawing editors), and a set of viewers for key Apple technologies. Including QuickTime, QuickDraw 3D, 2D Images, Text-to-Speech, and QuickTime VR.

The installed base of Macintosh users can quickly download viewers via the Internet. Or receive them through system software upgrades. And Apple will make these viewers available to you, so you

can ship them with your own products.

Apple will continue this broad distribution of OpenDoc viewers for new technologies. And, in the future, you'll see viewers that support other Internet component architectures.

Where are your opportunities? You can provide users with Apple's latest API functionality, adding additional capabilities to the core functionality of your software. Without having to re-code your applications. Here's an example. Say your application is a word processor. You can add value to it by allowing users to view QuickDraw 3D images from within their word processing documents.

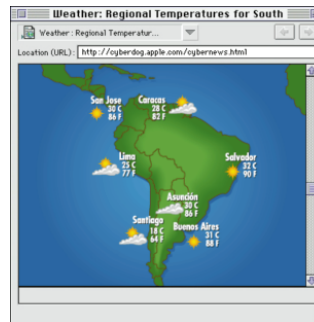
And there's no need to revise your current software every time Apple updates an API. Simply architect your application as an OpenDoc container.



Profit from Cyberdog.

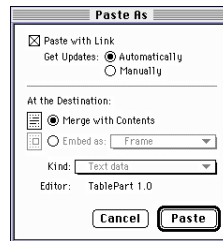
The screenshot shows an OpenDoc window with a title bar that says 'Cyberdog Mail/News'. The main content area is titled 'Americas, Inc.' and contains several components: a small map of South America, a bar chart with two groups labeled 'North' and 'South', and a URL field containing 'http://cyberdog.apple.com/cybernews/'. A trash icon is visible in the bottom right corner.

1 Cyberdog brings live links and views of the Internet into OpenDoc container applications. Here, a ClarisWorks user tracks materials costs derived from an SQL database. And, using an embedded web browser and CyberButton, monitors weather information throughout the Western Hemisphere. To this user, it appears that ClarisWorks provides native support for SQL access and the Internet.



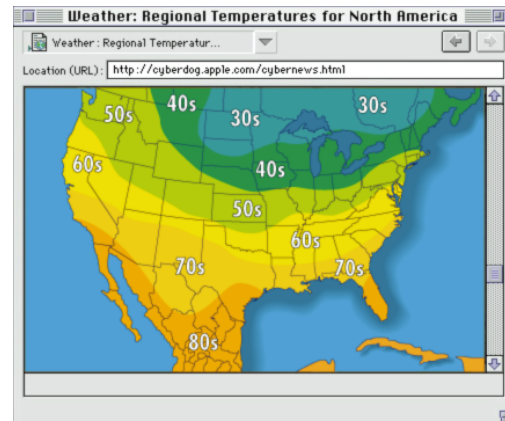
2 This is a CyberButton. It calls another web page—in this instance, a weather map of South America—so the user can view up-to-the-minute information. You can create your own unique ways of calling Cyberdog, including pop-ups and radio buttons.

3 Two components are at work here. First, an SQL access component queries data from a network server. Queries can be dragged and dropped directly onto the table. Second, a custom charting component analyzes the data. Because of the linking ability of OpenDoc, the chart is automatically updated when the SQL data changes. These are just two examples of the many types of components you can create to complement Cyberdog.



	Region	Materials	Costs
1	North	Lumber	750,000
2	North	Steel	470,000
3	North	Brick	1,000,000
4	North	Concrete	330,000

4 The Cyberdog web browser has been embedded within ClarisWorks. Whenever the user opens this document, Cyberdog will reconnect to the Internet, and load the most current weather map of North America. Your applications can support the Internet simply by supporting OpenDoc. You can even develop a replacement to the web browser (or any other Cyberdog component) that supports your own extensions to HTML.



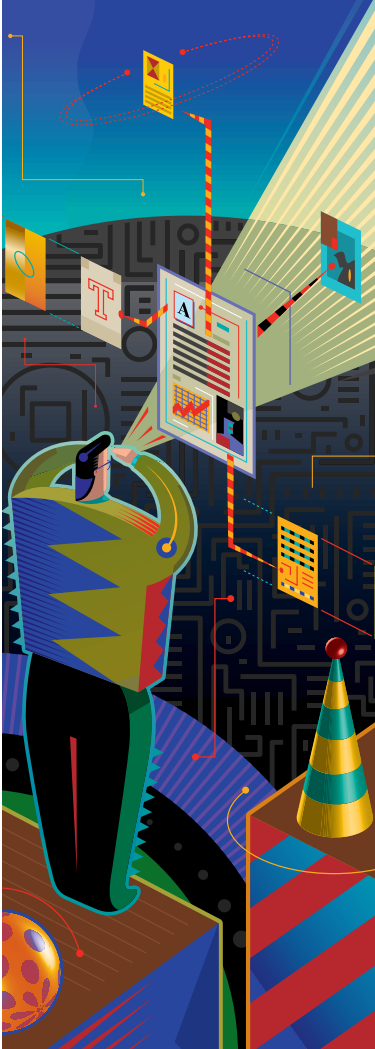
Looking for Internet development opportunities? Want to add connectivity to existing applications? Cyberdog is an integrated suite of tools that provides an efficient, economical solution.

Created entirely with OpenDoc, Cyberdog is innovative technology that harnesses the power of the Internet, and of component software. Cyberdog integrates network services into the Mac OS, bringing live links and views of the Internet to any document. It makes the Internet as easy to use as a Macintosh computer.

Apple designed Cyberdog to create a ready market for you. You can ship it with your products. And you can replace or enhance every one of the Cyberdog components.

Apple encourages you to develop replacement web or Gopher browsers, Notebooks, Logs, or other Cyberdog components. Or, you can choose to offer Cyberdog users totally new functionality. A videoconferencing component, perhaps, or real-time "chat" capabilities. Other opportunities include developing tools to analyze and manipulate raw data from the Internet.

All application developers can realize benefits from Cyberdog. For instance, by simply adding OpenDoc support to your existing applications, you also get Cyberdog. Which gives you Internet connectivity, without re-coding your software.



What's up next?

More OpenDoc opportunities are on the way. Apple is making a long-term commitment to provide OpenDoc viewers to you and your customers. And to support you through regular updates to APIs. But the big news is the next generation of the Macintosh operating system.

OpenDoc—along with Cyberdog—will be integrated into the new Mac OS 8. So users from within any OpenDoc application will be able to browse the Internet, and enjoy cross-platform, Internet-based mail capabilities. They can drag and drop added functionality directly into any of their applications. And more.

This should give you some idea of Apple's commitment to OpenDoc. It may also spark a few ideas for new or enhanced applications. And underscore the fact that the time to adopt OpenDoc is now.



Hundreds of developers are already taking advantage of the opportunities made possible by OpenDoc. Don't wait to join them.

To get started, just e-mail us at: opendoc@apple.com.

Or visit the OpenDoc homepage on the Internet:

<http://opendoc.apple.com>



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