SEYBOLD

Report on Publishing Systems

Atex Out April 1   3
Agile at Newsweek: Filling Atex Shoes with PCs

SINCE THE FOURTH WAVE overtook the publishing system business, there have been a lot of different attempts to modernize the publishing process using Macintoshes, PCs and various approaches to database requirements. But to many of us—especially those of us who both study the market and use these systems in our work—the ultimate challenge has been to duplicate, using standard components, the functionality and productivity of an Atex editorial system. Though some of this feeling surely can be attributed to romanticism, it can never be refuted that Atex built its systems well, from the keyboards to the workflow routines to the central architecture.

When *Newsweek*—a preeminent publication with demanding editorial needs—decided to replace its aging Atex system with a customized system from Agile Enterprise built around PCs, we took notice. The goal was a "warts and all" rendition of Atex—save/get keys, a "notes" mode . . . and no mice need apply.

The system has been phased in gradually and is producing the whole magazine on a weekly basis. So confident are the participants that it will continue to meet their needs that they have planned a formal shutting down of the Atex system for April 1.

Like any system these days, the *Newsweek* installation offers opportunities for debate on many fronts, from the database approach to the use of Xpress for pagination. We haven't tried to resolve all those issues. But we think this is an interesting story to tell.

Coris: New System   9
For Managing Content

THE NAME R.R. DONNELLEY is almost synonymous with the service business. But Donnelley's Coris subsidiary is embarking on a new effort to sell its content-management system to end users. Even more interesting, though, is that the system, called Coris Publisher, is intended to be a flexible tool for managing content to be published using a variety of media, not only print. It's built around client-server architecture, an Oracle database and the object-oriented capabilities of Oracle's InterOffice. It includes an output planning module for handling versioning, extraction, conversion of data, and so on. Workflow tools will be added in an upcoming release. Part of the Coris strategy is to provide customization with the systems it sells.

Donnelley's Coris Publisher 3.0: Enterprise-Wide Content Management

 CORIS INC., a subsidiary of R.R. Donnelley, has just released Coris Publisher 3.0. The product marks a turning point for Donnelley because it is being sold to users, rather than being kept inhouse as the basis for a service business, the traditional Donnelley approach. More significant, it reflects publishers' growing desire for a flexible tool that can help them manage their content effectively so it can be published in a variety of ways, or "repurposed."

Publishers of many kinds are beginning to view editorial and graphic work as the creation of "publishing assets" to be stored in archives or repositories, ready for repurposing. At the heart of such a vision is a database, suitable for storing raw materials of all kinds, surrounded by software providing access and conversions to all the required formats. This is the sort of system Coris has developed.

The use of databases in publishing is not new, of course. Directory publishers were among the first to recognize the value of a database; some of them have been using databases for decades. In recent years, some catalog publishers have begun expanding the scope of their databases beyond the traditional business information, such as price, catalog number and order history, to encompass product images, sales copy and page layout information as well.

But in many areas of publishing, though the concept of a neutral repository is attractive, there are few successful implementations to point to so far. To some extent, this is because publishers have lacked a strong motivation for establishing such a repository. Several factors, most notably the rise of the Web as a publishing medium, are now beginning to provide that motivation, and we are seeing activity in this area beginning to pick up.

The success of companies like Documentum and Cascade Systems, and of Quark's QPS product, have shown that there is a market for document management tools in publishing environments, and a variety of other players have joined the competition. In this article, we'll take a look at what distinguishes Coris Publisher from other approaches, and why Coris thinks it has an opportunity to be successful in an increasingly crowded market.

Defining enterprise publishing

Coris calls its product an enterprise publishing system, distinguishing this from document management systems and workgroup publishing systems. Coris differentiates these terms in this fashion:

- *Document management* doesn't involve the publishing steps of layout and composition, and high-quality images are not used.
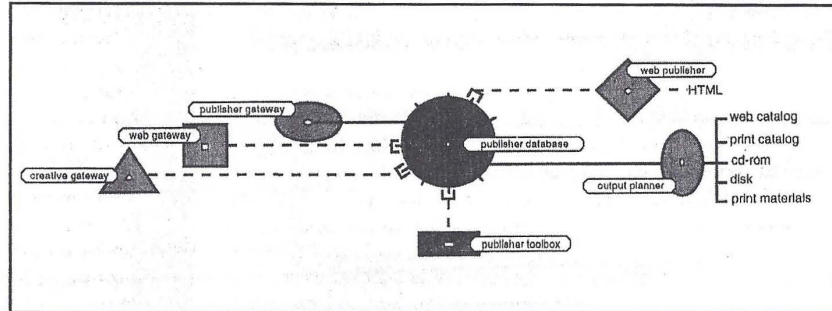
System architecture. The Coris Publisher enterprise publishing system features *(left)* three gateways for accessing the database, a central database and toolbox *(center)*, and provision for output to the Web, print, CD-ROM, etc. *(right)*.

Office-oriented document management packages like PC Docs fit this category, as does Documentum when it is used (as it generally is) for managing office documents and monochrome images of scanned pages.

- *Workgroup publishing* includes products like QPS and Canto's Cumulus image archive—products that serve a relatively narrow publishing purpose, but may lack the extensibility to handle the overall publishing needs in a large organization where many of the users are not publishing professionals.
- *Enterprise publishing* requires a highly scalable system. It needs enormous capacity for all types of publishing content; it must be accessible across the organization; and it must support a variety of publishing outputs. As a practical matter, this type of capability is rarely necessary in small companies. Coris thinks 150 employees is about the minimum size for enterprise publishing. As Coris sees it, Cascade is the only other company focusing on this area.

Who needs enterprise publishing? Prime examples of firms that could benefit from an enterprise publishing system would be producers of catalogs and other marketing communications, multititle magazine publishers, some book publishers and large journal publishers. Coris plans to target business-to-business catalogs in particular at the start. (Coris mentions industrial catalogs of such things as machinery and equipment, medical and scientific supplies, electronics, auto parts, and the like.) Once it has a strong presence in that market, it will expand into others.

Coris expects large numbers of companies to begin to adopt enterprise publishing. They will be pushed in that direction by a number of factors: the need to lower production costs; the need to publish on the Web as well as on paper (and perhaps CD); the requirement for more targeted publications; the impending arrival of electronic commerce; and the need to share assets more broadly around the corporation.

Existing Coris customers include National Semiconductor; the American Medical Association; Farnell Electronics, an electronic

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> workflow creation, attaching attributes to a
> job and notification of the arrival of new jobs.

component distributor in Europe; and ABN Amro, a worldwide bank with its headquarters in the Netherlands. Stream International, a Donnelley spinoff, is also a user.

Publisher Database, the core component

Coris Publisher is a client-server product. The server component, called the Publisher Database, is built from Oracle InterOffice object management software. Coris chose Oracle InterOffice for its object-oriented approach, which is well suited to the tasks and diverse file types of publishing. Oracle's InterOffice facility will also provide Coris with some built-in features for workflow in the next release.

The Publisher Database is where all the ingredients for publishing—photos, drawing, text, layouts, tables, etc.—reside. It is also the part of the system that handles backup and, in large installations, the automatic migration of less-used material to slower forms of storage, such as recordable CDs or tape cartridges.

The Publisher Database is supplemented by other modules for such remaining tasks as user interaction and output processing. Most of the other modules are optional, and not every user will need all of them.

3 interfaces to the Publisher Database

Coris supports three different user interfaces for access to the Publisher Database: the Publisher Gateway, the Web Gateway and the Creative Gateway.

Publisher Gateway. The Publisher Gateway, the standard user interface, is designed for LANs and corporate networks. It runs on the PC and the Mac. Written in the PowerBuilder cross-platform development environment, it offers both Power Mac and Windows support.

The main function of the Publisher Gateway is to supply access to the information residing in the Publisher Database. Searches are enabled by a wide variety of criteria. Results are presented either as lists or as (in the case of images) a set of thumbnails. A tree-structured arrangement of projects and files is provided, so the operator who knows where something is in the hierarchy can navigate down through the tree and select it directly, without searching.

Once the right item is found, it can be checked out for review and modification. The Publisher Database offers file locking so that only one user has editing access to a file at a time. Additional users can have read-only access.

Automating the flow of work from one person or process to the next is a common element in document management systems. Coris Publisher currently has a rudimentary way of handling workflow, featuring the ability to send projects from one step to the next and to keep track of approvals. A more sophisticated approach, including a graphical user interface that will show workflow as a diagram, will be available with Oracle's next release of InterOffice, due out later this year. InterOffice will provide support for workflow creation, for attaching workflow attributes to a job and for notification of the arrival of new jobs.

Web Gateway (Java-based interface). The second version of the user interface has essentially the same features as the Publisher Gateway, but it is written in Java to support remote users across the Internet. This gives Coris Publisher some valuable flexibility, especially in publishing environments with outside contributors and freelancers. If they have the necessary permissions, Web Gateway users can see and do the same things as Publisher Gateway users,

Search results in Publisher Gateway. Publisher Gateway users can search for an object in the database by any of its attributes and they can see the results of a search as either a list of objects or a set of thumbnail images, as shown here.

Web Gateway interface. This interface enables remote users to navigate the Coris Publisher database hierarchy. It is almost identical to the standard Publisher Gateway interface, but it is written entirely in Java and runs under the user's Web browser (Netscape, in this example). This lets users who don't have any Coris software to access the Coris database. All they need is a Web browser and the necessary permissions.

Annotating a file in Acrobat. This is the Acrobat interface for adding annotations to a PDF file. Coris's Creative Gateway feature will transfer these annotations to the Xpress page. The Xpress operator creates a draft document, saves it as PDF, and sends it out for approval. The reviewers add their comments as annotations and return the document.

Display of annotations with Xpress. Coris's Creative Gateway provides support for the display of Acrobat annotations on an Xpress page. This capability allows the Xpress operator to review and implement the suggestions and corrections made by the people who reviewed the PDF document.
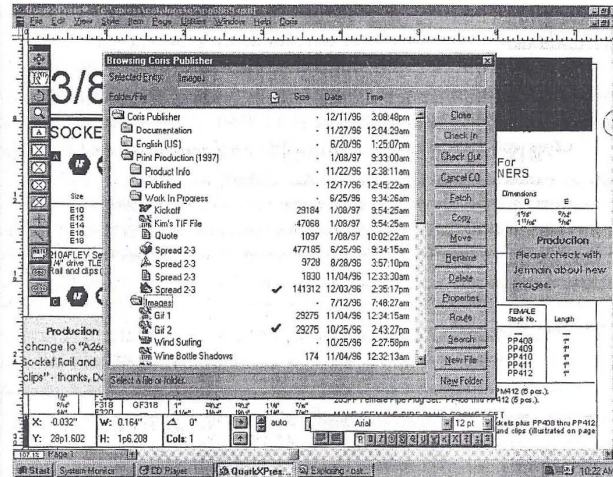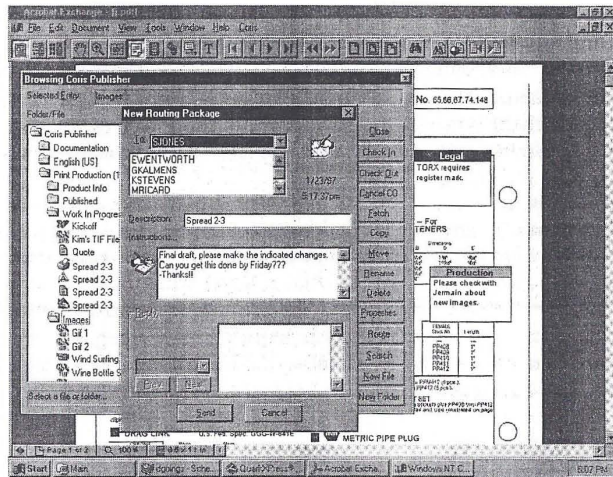
but the interface is implemented, through Java, within the remote user's Web browser.

The development of the Web Gateway was initially funded by Sun. Sun wanted to underwrite some creative Java applications to show what the language could do, and Coris's project was one of them. We find it impressive.

The hierarchical navigation window is almost identical to the one on the Publisher Gateway, but nodes are expanded and lists of available files are changed through Java programs that interact with the Publisher Database. A row of buttons across the bottom of the screen handles tasks including searching, creating new folders, checking things in and out, downloading, copying and deleting. These, too, are implemented via Java routines.

Creative Gateway (Quark interface). While Coris Publisher is designed to support multiple media, it has many features specifically intended to benefit publishing on paper. One of these is the Creative Gateway, the interface with Xpress. It is based on Coris-developed Xtensions.

The Creative Gateway provides a way for feedback on draft material to be available to the Quark operator without generating lots of paper copies. Draft pages sent out as PDF files can be annotated by the recipient through the annotation layer in Acrobat. Several people may receive PDFs at the same time and add comments. When the annotated PDFs are returned, the Creative Gateway software compiles the annotations so that the Quark operator sees them in the context of the Quark page. The page can then be modified accordingly. This is a clever approach, one that we think would be appreciated in a variety of publishing environments.

Other modules

On the output side, there are two modules: the Output Planner and the Web Publisher. The Output Planner comes standard with Coris Publisher; the Web Publisher is an extra-cost option.

Output Planner. The Output Planner is the main output tool for Coris Publisher. This module handles the special tasks usually associated with publishing from a database: versioning, extraction of current data, converting to multiple formats, and so on.

For certain products (directories, legal material, some industrial catalogs, some kinds of documentation), automatic pagination software is the efficient way to make pages, either for printing or for dissemination as PDF files. Coris provides tools to help set up the appropriate filtering for Xyvision pagination software (which is what Donnelley has used internally for much of its database-publishing work). The same kinds of processes could be used with other pagination software. The pagination software itself is not part of Coris Publisher.

For other products, more creative layouts are required and automatic pagination isn't appropriate. But the Output Planner does automate some processes for these pages, including preflight checking and spread extraction. For material destined for the Web,

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Coris Publisher Pricing

Coris Publisher solutions start at around $150,000 and can reach $700,000 or more, depending on the size and complexity of the customization. The basic pricing, which includes licenses and customization, is as follows:

Product	Price
Coris Publisher, with 16 users (Publisher Gateway, Publisher Database and Output Planner)	$94,500
Additional Publisher Gateway users	$5,000 for each 8 users
To add the Web Gateway (server and 16 users)	$30,000
Additional Web Gateway users	$5,000 for each 8 users
To add the Creative Gateway (Quark Xtensions, 8 users)	$10,000
Additional Creative Gateway users	$5,000 for each 8 users
Publisher Toolbox	$25,000
Web Publisher	not yet priced

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Coris Publisher has unique advantages in its handling of remote users via the Web and its tools for collecting annotations and bringing them to the page.

the Output Planner handles HTML generation for automatic Web site updates.

These processes are driven by attributes stored in the database. The Output Planner manages, tracks and reports on the status of all of them.

A big piece of what the Output Planner does involves filtering and conversion steps. Programming, either by Coris or by the user, is required to set up or modify many kinds of conversions. In the demonstration we saw, OmniMark was used as the conversion tool in the Output Planner. Coris may decide, however, to switch to a different approach, such as providing a Perl programming facility.

Web Publisher for catalogs. Web Publisher is a special-purpose module for the automatic update of catalogs on the World Wide Web. Unlike the more general HTML conversion capabilities of the Output Planner, Web Publisher is catalog specific. Coris developed it for National Semiconductor, whose online product catalog was one of the early success stories of Web publishing.

Once the process is properly set up, an entire Web catalog can be regenerated automatically, from the latest data in the database, as often as desired.

Publisher Toolbox. This optional module provides an Application Programming Interface through which the user—or an integrator—can create programs that interact with the Publisher Database. It might be employed, for example, to tie existing business systems into a catalog-publishing process residing in Coris Publisher.

A Look at Coris

The name Coris, which may be unfamiliar to many readers, is the product of several reorganizations at R.R. Donnelley. It dates from 1995, when Donnelley's Database Technology Services group and its Mobium design-services group were combined into a single operation called Coris. The database publishing software dates back farther than that, having started under the name PowerBase three years ago. It has been in production use for about two and a half years, Coris says.

PowerBase 1.0 was the database publishing engine that drove the Xeikon printers within Donnelley's Digital Division. A year and a half ago, PowerBase 2.0 was released as the first Donnelley product to be put to non-Donnelley use. For the first time, it was supplied to a half dozen or so of Donnelley's customers for use in its service business.

In the next phase of the reorganization, late in 1996, the design-services group was broken off again, once more becoming a separate organization. The database group then shifted its focus from services to software products. At about this time, version 3.0 of the publishing software was readied with a new name, Coris Publisher 3.0, and a new marketing thrust.

In the past, Donnelley had provided database hosting, data input, management and output services for database-publishing clients. With Coris Publisher, the software is being viewed as a product available for general distribution in the market. In the future, Coris will offer services only when Coris publishing solutions are running at the customer site or when Coris is hosting the database. The focus will be squarely on selling and supporting Coris publishing software and associated services.

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Conclusions

Coris has put together a system that provides an attractive combination of tools for maintaining a neutral-format archive (providing outputs in multiple media), while still giving good support to paper publishing. While database approaches to help with Web publishing are numerous, most of them don't provide help with traditional publishing on paper (which turns out to be the more difficult task, in many cases).

The initial focus on catalogs makes sense, given Donnelley's history of service to catalog publishers and the relatively limited installed base of catalog systems to date. We think Coris will be able to win over some clients that are also considering more catalog-focused solutions, such as the Pindar Catalog Management System and CatTrax. Coris's strength in both the database and traditional paper-publishing areas is an important asset, and Coris Publisher has some unique advantages in its handling of remote users via the Web and its tools for collecting annotations and bringing them to the page.

The Donnelley issue. On the other hand, the path for Coris may not be easy. The company is trying to transform itself into a software vendor, and to do so it must overcome its history as a service provider. If Coris continues as a Donnelley subsidiary, the patience and understanding of the corporate parent will be an issue to worry about, especially given Donnelley's recent spate of bad financial results. On the other hand, if it is spun off, it will have the same difficulties as any small company trying to weather the initial period of operation while attempting to crack open a major market.

The market, meanwhile, seems ready for growth, but perhaps not rapid growth. Publishers know that they want to move in the direction of databases, document management and reuse of content, but they find it hard to move fast because of the major restructuring of workflow (and, sometimes, changes to the printed product as well) that the new methods entail. So we see moderate but steady growth ahead in the market for systems like this one, and we think Coris can play an important role in that growth if it can manage to stick with it.

George Alexander

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