

WHITE PAPER



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The Dawn of the Personal Workflow Application

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Introduction

Vera is in a panic. In 10 minutes she meets with her newest client to discuss the final draft of their corporate brochure. And, as usual, she's running behind. The owner of small graphic design boutique, Vera needs to quickly confirm that her junior designer has made the brochure updates the client requested. To do this, Vera must first retrieve the original brochure file to compare it with the latest one, and then she has to locate the relevant message thread in her e-mail inbox. Complicating things is the fact that she recently cleaned her e-mail inbox, moving all her old messages into a series of subfolders. As she drills deeper into her subfolders, Vera glances at the clock and begins to sweat...

Despite huge technology advances, this scenario illustrates that productivity continues to be one of the biggest challenges facing creative professionals today.

Across the industry, creative firms are struggling with a “productivity paradox.” As a recent TrendWatch study notes, “Creating digital images, text, logos, and PDF files to satisfy clients’ expected levels of communication *is* becoming faster and easier. But, with the increasing email communication volume that many creative shops experience, it still eats up a lot of the day — and becomes time that is no longer spent designing and is extremely hard to bill.” (Design and Production 2005, Feb 2000)

As computer power and intelligence improves, it becomes increasingly feasible to optimize creative workflows. Yet software products aimed at resolving productivity bottlenecks haven't always succeeded with Creatives. On one end of the spectrum are web portals that provide a single-access point to information for project teams, but tend to do little to facilitate workflow. On the other end are large content or asset management systems (AMS) that offer a broad array of functions ranging from project and document management to client communications, but provide limited collaboration ability and cost an enormous amount of time and money to install, learn, and maintain.

All of this heralds the need for a simpler approach to the productivity paradox. It's evident that current software tools do not meet the demands of most creative shops. Why not? A big reason is that these tools try to get users to learn a newly prescribed process, instead of providing more efficient ways of executing existing processes. To this end, Creo proposes to introduce a new class of simple, low cost, low infrastructure software tools called Personal Workflow Applications (PWA). The aim of the PWA is to automate and streamline personal workflow processes so that Creatives can spend more time doing what they want to do – which is designing and creating effective content – and less time dealing with administrative issues related to their projects.



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Workflow Challenges in Today's Creative Environment

Just as desktop publishing tools revolutionized creative production in the 1990s, today the Internet and e-mail is radically changing creative, production and business processes. One of the most important changes has been the way Creatives and their clients communicate with each other. Instead of meeting face-to-face or calling on the telephone, people now send e-mails. Rather than sending a courier to deliver a proof, they attach PDFs to e-mails. These and many other changes have altered the way the business of design is conducted. Today, it is common for entire jobs to start, remain and be archived in digital form. And the Web just adds more impetus to the digitization of the creative process. Nevertheless, these technologies create many interesting and challenging issues.

E-mail overload

The success of e-mail as a personal and group communications tool has led to unprecedented volumes of e-mail. As a result, people are experiencing major problems in reading and replying to e-mail in a timely manner, with backlogs of unanswered e-mail, and in finding information in e-mail systems. A recent Gartner survey found that US employees are spending an average of about 2 hours each day reading and responding to email, with one third of that time spent on mailbox management. Gartner predicts that through 2004, enterprise mailbox volume will increase by 40% per year, potentially adding an hour per day each year to time spent on e-mail tasks. Compounding this problem is that as much as a third of all e-mail received contains redundant or non-essential information. For creative shops, this has disastrous consequences on both individual and group productivity. Not being able to effectively manage e-mail translates into lost information, reduced responsiveness, and potentially, lost business.

Multimedia projects

Today's creative environment is truly a cross-media one. The impetus for this includes: increases in Internet bandwidth, broader consumer acceptance of doing business over the Internet, and a proliferation of new software tools for digital video, multimedia, and web development. As a consequence, many creative shops previously specializing in only one medium have moved to offer turnkey solutions – often through outsourcing to contractors, freelancers or partnering with other vendors – in all areas including print, web, and video. Not only does this broaden the business scope of projects, but also the technical requirements. For example, a cross-media project may include producing a PDF file print, a HTML file for the Web, and an MPEG file for video. Obviously, these new demands increase the file volume and versions being handled, which in turn increases the amount of time Creatives spend producing, tracking, and organizing projects.

More applications, platforms, and systems

Over the last few years, the number and variety of desktop applications, platforms, and systems used in a typical creative project has grown exponentially. On the surface, these new tools have made Creatives more independent and expanded business opportunities for the enterprise. Yet they also present a new set of challenges: an explosive rise in technology and support costs, demand for specific skills and knowledge, and the need to handle unprecedented volumes of data.

As the demand for cross-media projects grow, more design shops are supplementing the core “Big Three” desktop applications – Quark, Illustrator, and Photoshop – with sophisticated multimedia



applications like Director and Flash and digital video applications like Final Cut Pro in hopes of capturing additional business. Add to this the multitude of applications for project and asset management and you begin to get a clearer picture of how expensive and crowded the desktop is and the added pressure Creatives face in keeping skills up to date. This is one reason why design shops rely so much on freelancers – for expertise.

Cross-platform issues are a constant challenge for Creative shops as well. Because most Creatives use Macs and the majority of the world uses Windows, files are constantly moving between platforms. Despite all of the tools available to make this cross-platform process seamless, problems still occur, and more time has to be spent on dealing with platform issues.

New asset management systems are making inroads into Creative shops, but are generally limited to the larger agencies and in-house design departments because of high startup and maintenance costs. They also require a significant time investment from the user to learn new workflow processes and structure.

Frequent file exchange

In any creative workflow, there is a handoff of a file to some other person – either it's posted to a website or FTP server, attached to an e-mail, or placed on a network drive. This handoff can be cyclical in that the file goes through some kind of review process. During this process, the file may be revised several times, and translated into multiple file formats, depending on the destination (e.g. print, web, video, etc.). As a result, details of the conversations around these files need to be tracked more carefully, as more files are used and they become harder to keep track of and control.

Another challenge in exchanging files has to do with their sheer size. Creatives routinely work with large image files. Bandwidth connections to the Internet vary widely, which reduces the reliability of sharing large files. And even though FTP systems are a relatively stable way of exchanging large files, they still require a significant investment in hardware and software infrastructure. For these reasons, many smaller shops continue to use e-mail attachments as the primary method of file exchange, even for remote color proofing. Nevertheless, studies shows that up to half of all e-mail attachments fail to reach their intended recipients because:

- Recipients don't have the proper software to read the file
- Files are not properly formatted for the recipient's computer platform
- Files are too large and crash low bandwidth connections or are automatically removed due to server file size limitations
- File attachments are automatically removed by virus protection programs

Globally distributed teams and clients

Technologies such as the Internet and e-mail allow creative teams to be distributed globally, but they also create unique challenges. For Creatives, one of the most difficult challenges is working productively with sources both inside and outside the traditional enterprise boundaries. For example, workers and clients outside the enterprise (including freelance, contract, and remote staff) place additional pressures on the technology resources of the creative shop. Multiple layers of network and FTP access, secure zones for



clients, robust Internet connections – all of these technical issues are major expenses of time and money in any creative project.

Dynamic projects

Creative projects involve unstructured, free-form interactions and dynamic change, and so must the applications that help manage them. But many software tools rely on the user entering large amounts of data about the project in advance and during the execution phase. Rarely is it possible for the small creative shop to set a consistent workflow at the beginning of a project. Flexibility and speed are keys components of being successful. As TrendWatch notes, most creative shops are small businesses with less than 10 employees, and workflow is “whatever it takes to complete the job on deadline and get it to the client. Most creative businesses are job shops where almost every job is different.” (Feb 2000)

Ad hoc processes

The need to be flexible and fast during projects explains why so many Creatives prefer ad-hoc workflow processes and systems. An example of this is the simple file naming conventions design firms use as their strategy for storing and retrieving files. A TrendWatch study found that 81% of magazine publishers polled cite file-naming conventions as their primary asset management strategy. Creatives use this ad hoc process not only because it is inexpensive, but also because it works. However, as file volumes increase and jobs are increasingly re-used, Creatives are feeling more pressure to streamline file management processes.

Workflow Options in Today’s Creative Environment

There are many software “solutions” aimed at solving the productivity paradox. Almost all claim to streamline workflow processes. Although few products are specifically targeted at the creative space, many allege to enhance the “collaboration” of work teams and therefore are relevant to Creatives. The most important of these fall into the categories of portal services and content or asset management systems (AMS).

Portal services

Browser-based portal services are used for accessing corporate, project, and personal information that can be customized and updated in real-time. This information can be used in planning, organizing, and executing projects. The products in this group vary widely in form and function, ranging from hosted web portals – such as eroom.net – to more powerful server-based solutions like Macromedia SiteSpring. Portal services are targeted at teams of workers that need to collaborate from different places, especially if their project involves threaded discussions and file sharing.

While portal services have strong collaborative tools and deliver relevant information quickly and easily, they are weak at offering value to the individual user. In fact, they are useless unless the entire team is running the same service or application. Also, they require that the user leave the context of their active document or application and open a web browser to access specific project information. Another major limitation with web browser interfaces is that they consume large amounts of screen space and are often cluttered with too much content. Finally, server-based portal services can be infrastructure heavy and



require large investments of time and money. Leading vendors in this area are Macromedia, SAP Portals, PlumTree, Microsoft SharePoint Team Services, eRoom Technology.

Content/Asset Management Systems

Asset Management Systems (AMS) are heavyweight client-server systems used for organizing, storing, editing, and distributing large volumes of structured content. These systems usually involve the integration of database, workflow, and editorial tools and are deployed on a company-wide basis.

Most AMSs structure workflow into separate tasks, such as writing, editing, output. These systems have a number of procedures for users to learn, including how to check-in, check-out, and track files. These processes don't map well to the way Creatives work – which is dynamically, collaboratively, and often across internal and external boundaries. In addition, these systems are geared towards the management of finished content, rather than the creation of it. This explains the low adoption rates of these systems among Creatives, who typically only touch an AMS at the end of the project, when they use it to archive files.

The major benefits of an AMS lie in re-purposing large volumes of structured content into different output formats, such as print, web, or CD-ROM. However, the high costs of an AMS, and the extensive IT support needed for installation, integration, and ongoing upkeep makes these systems a risky investment. For this reason, AMSs are implemented mainly by large publishing companies who can absorb the short-term costs for the perceived long-term productivity gains. They are largely irrelevant to most small to mid-sized creative shops. Documentum, Vignette, and Quark are leading vendors in this market.

Looking to the Future: Personal Workflow Applications

Personal Workflow Applications (PWA) are a new way of tackling the productivity paradox. It's an approach that recognizes the personal work processes of the individual and assists, supports, facilitates, and streamlines these processes. The ultimate goal of a PWA is to allow Creatives to spend less time on the onerous task of administering projects, and more time on the important task of creating content. The benefits of a PWA can be best explained through the three words that make up its name: Personal, Workflow, and Application.

Personal

PWAs are software tools designed to work with the individual's personal workflow and ad-hoc processes, not just the company's. They are applications that allow work to be organized the way that best suits the individual – not by application, but by project. A PWA:

- Supports and interacts with all commonly used applications and systems
- Integrates with the enterprise's existing workflow systems or a software solution set



Workflow

Typically, Creatives are responsible for creating and formatting content files, and more and more often, producing finished files for various media output. Each time the Creative is taken away from these tasks - for example to attend to administrative tasks like message and file management -- the creative process is interrupted. PWAs integrate seamlessly with the process of creating content so that time spent on administrative tasks is significantly reduced. For example, a PWA:

- Functions in the context of the working application, allowing creative work to continue uninterrupted or with as little disruption as possible
- Does not require a web browser to be opened to report information
- Updates information automatically in real time

Application

PWAs are tools designed for the computer desktop where each individual can immediately gain value from using it. They are easy to install, setup, learn, and use. As desktop products, they are inexpensive enough for the freelance and small shop owner to buy and support. And because most Creatives work out software problems on their own anyway, technical support is based around self-help tools like interactive online databases and web sites tools, and so forth. In addition, PWAs are:

- Designed for the individual desktop – not groupware – so that the first user can immediately benefit
- Easy to install, setup, learn, and use
- Inexpensive
- Low infrastructure; runs on a single workstation
- Low overhead; requires little or no IT support

PWAs streamline an assortment of simple and repetitive tasks, such as tracking e-mail messages, files, and the individuals and groups working in a project, rather than trying to re-organize a whole workflow, which is the approach most other workflow applications and asset management systems take.

When trying to figure out how to automate workflow tasks, David L. Zwang observes how people always “tend to look for solutions that eliminate large blocks of time. However, eliminating many small time blocks can deliver the same end result and be easier and less expensive to implement.” (American Printer, Feb. 2000)

This is the precise method that a PWA takes. By focusing on saving small increments of time – for example, shaving off seconds from a task, rather than minutes or hours – over and over again, the total time and money savings in the long term is immense. Take, for example, the simple task of finding an old version of a file attached to an e-mail message. These steps might include: opening or switching to the e-mail application, searching the inbox for the right message – sorting by author, subject, date, or some other variable – opening the message, then launching the attachment to check its contents. For the busy creative, this simple process may occur several times throughout a workday, and taken together leeches away valuable time from creative tasks.



Imagine a tool that allowed the user to see important project information such as files, messages, and people related to a document while they were working on it. The information updates in real time as information changes and includes all the necessary search, send, and receive functions. This way the user doesn't have to leave the context of the application each time you want to see some important piece of information related to it. This simple application of automation can save hours each week, depending on individual use.

Conclusion

The time has come for a new approach to streamlining creative workflows. The PWA concept is a natural evolution from project management and workflow tools or systems that require a heavy investment in time and money. PWAs aim to streamline workflow processes while respecting the ad hoc methods preferred by Creatives. In the end, the goal of PWAs is to save time and money by improving the productivity of Creatives in small increments. It frees Creatives from the mechanical processes of project and workflow management and enables them to focus on the key tasks – designing and creating effective content.

To read more about specific PWA tools, see the Six Degrees and Tokens brochures.

