

The Adobe InDesign CS Productivity Benchmark

Real-world Productivity Measures in Design and Publishing

Momentous changes

The publishing world is undergoing a phase of intense change. **From an operating system perspective, the maturation of Mac OS X has made a conversion of the creative environment to Apple's new operating system unavoidable for any Macintosh-based publishing site, creating a intricate set of challenges.**

As far as the publishing environment is concerned, the successive releases of InDesign, culminating so far with InDesign CS have attracted a significant following, while the arrival of a Mac OS X savvy version of QuarkXPress has given publishers an alternative to InDesign (which has supported Apple's new OS for several years). In addition, Adobe has recently released the Adobe Creative Suite, which combines Adobe Illustrator, Photoshop, InDesign and Acrobat in an integrated design environment.

Increasingly, publishing professionals are looking at updating their existing setup to take in account new capabilities. InDesign has contributed significantly to this process: OpenType offers many attractive possibilities to publishing; support of native Photoshop and Illustrator files within a page layout can speed up the production process significantly, and PDF functionality is gaining ground in print production around the globe. In other words, we are witnessing the emergence of a new type of creative workflow, with an expanded set of capabilities—and new challenges to productivity.

About this report

The report presents the core findings of an extensive productivity benchmark project commissioned by Adobe Systems. It compares a publishing setup based on InDesign CS and other applications in the Adobe Creative Suite with a publishing workflow centered on QuarkXPress, Photoshop, and Illustrator.

Based on the Pfeiffer Consulting Methodology for Productivity Benchmarks, the project covered a variety of typical design and publishing assignments. It provides real-world productivity measures and analyzes the productivity impact of frequent workflow steps, such as integration with graphic and image editing software. **In addition, productivity in everyday design operations was also measured.** For a short description of the methodology and hardware configurations used in this project, see the Methodology sidebar on page 3 of this report.

For an in-depth discussion of the methodology, as well as detailed results, please download the full «Adobe InDesign CS Productivity Benchmark Report» from our Web site at www.pfeifferreport.com

Major Findings

- InDesign CS **allows a streamlined and tightly integrated creative workflow**, which can yield significant productivity benefits over traditional design and publishing workflows.
- Assignment-based productivity benchmarks show **increased productivity in real world publishing assignments.**
- InDesign **increases productivity by offering built-in features**, such as drop shadows, that eliminate the need to switch programs to produce common creative effects.
- In everyday design operations, **InDesign has a clear productivity advantage** over QuarkXPress 6.1.

About Pfeiffer Consulting

- Pfeiffer Consulting is an independent technology research institute and consulting operation focused on the needs of **publishing, digital content production, and new media professionals.**
- Download the full **Adobe InDesign CS Productivity Benchmark Report** at www.pfeifferreport.com.

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Productivity Challenges in a Modern Publishing Workflow

Major Points

- Adobe InDesign CS can offer **significant productivity increases due to close integration with other Adobe applications.** It also offers built-in support for features such as transparency, which can speed up the creative process.
- Simple usability improvements can yield significant productivity gains, particularly in frequently used operations.
- The ability to use native multilayered Photoshop files without the need for an intermediary file format **provides a streamlined workflow and gains in productivity.**

Inventing the future of publishing workflows

We have already observed that the publishing industry is currently in a phase of profound change. It is interesting to see how expectation from tools can evolve once such a transformation is underway, and InDesign has certainly contributed considerably to changing the level of expectancy publishing professionals have from their page layout tools. **Support for transparency, high quality display of imported images, support for native file formats such as Photoshop and Illustrator are all very rapidly becoming core requirements for a modern publishing environment.**

The question is of course: what is the impact of these advanced features on performance and productivity? It is true that the first version of InDesign was sluggish on all except the most powerful computers of the period, while QuarkXPress based workflows ran quite happily on computers which were several years old.

This situation has changed significantly. The necessity of upgrading computers to Mac OS X has increased hardware requirements for the average publishing workstation, and many publishing companies view the evolution of their page layout environment as part of an overall hardware upgrade scheme. But even on an application level, things have changed significantly. InDesign 2.0 was significantly optimized compared to the first release, and InDesign CS is more responsive still. On the other hand, QuarkXPress 6.x, which runs only on Mac OS X and Windows is significantly slower than previous version of the program.

InDesign CS: Moving towards a Mature PDF Workflow

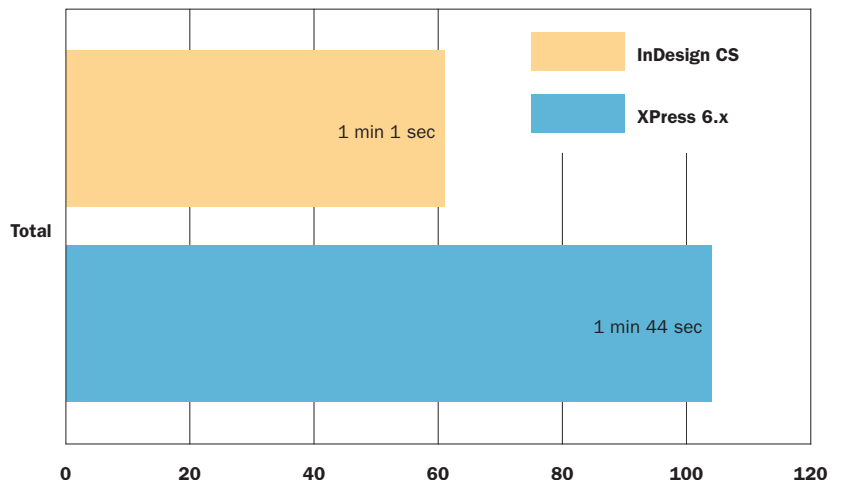
InDesign CS offers mature PDF export, well beyond the possibilities available in previous versions of the program—as well as its main competitor.

Adobe's program supports export in all recent PDF "dialects" or language variations including ISO-standard PDF/X-1a and PDF/X-3, as well as PDF 1.4 and the 1.5 version of the file format released with Acrobat 6.

In terms of speed of PDF export, InDesign is still clearly ahead of QuarkXPress 6.x, which in the benchmarks for this project was significantly slower than InDesign CS in generating a PDF file.

PDF Export

Time in seconds – shorter is better



Methodology

This report is based on international market research and market-specific productivity benchmarks conducted by Pfeiffer Consulting for Adobe Systems Inc. It also includes elements from independent research projects conducted by Pfeiffer Consulting.

Nature of benchmarks: Experienced professional performed segment-specific design assignments and workflow benchmarks, define in clearly repeatable steps and executed in a closely monitored way. Each assignment was performed three times in each publishing environment; the average value of the three results was used.

Major design and magazine publishing productivity measures consisted of double-page spreads executed from scratch in the typical workflow setup.

Additional benchmarks measured the impact of InDesign specific functionality on overall productivity.

For an in-depth discussion of the benchmark methodology, comprehensive benchmark data, and systems configurations, please download the complete “Adobe Creative Suite Productivity Benchmark Report” at www.pfeifferreport.com

Configurations

To adequately reflect widely used hardware configurations, benchmarks were not conducted on the latest generation of computers but on hardware platforms that are commonly used in creative environments: a standard 733 MHz Power Macintosh G4 equipped with 768 MB of RAM. All benchmarks were conducted on Mac OS X 10.3. To represent real-world working conditions as closely as possible, no scripting was used during any benchmarks.

For more information, please contact: research@pfeifferreport.com

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Performance and productivity

Performance and productivity are two completely different aspects of technology. On recent hardware, performance (i.e. the raw processing speed and throughput of the computer) are of less and less importance for the overall productivity of a page layout workstation. Nevertheless, some advanced functionality can still keep the user waiting: high resolution display of a complex page can take some time, and so does the creation of a PDF file from a complex layout.

The real productivity challenges in the modern publishing workflow lie in the fluidity and efficiency of the complete publishing setup. The way software applications are conceived, the quality of the user interface, and the integration of different applications contribute enormously to the overall productivity of a creative workflow.

Often a small difference can have a big impact over time. Here's just one example of this: to place a picture in a QuarkXPress document, the user first creates a picture frame, and then imports the required image. In InDesign, on the other hand, all that is required is to import the picture and to draw a box where the image should go. This may seem like a small difference, but when you import 10 images this way, InDesign is 60% faster than QuarkXPress performing the same basic task.

Benchmarks and results

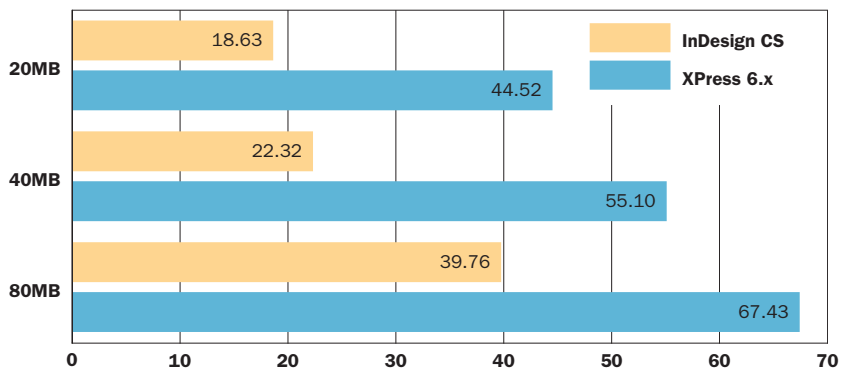
The benchmarks conducted for this project compared InDesign CS with QuarkXPress 6.1 in a wide variety of operations. They included complete design and publishing assignments, such as a double-page spread for a magazine, and a display ad. Productivity measures also included integration with other applications and productivity impact of original functionality. In addition, **a specific benchmark measured the overall productivity in everyday page layout and design operations** (see sidebar on page 5).

The results of the benchmarks were extremely interesting. As far as pure performance is concerned, QuarkXPress 6.0 clearly remains the faster program when importing large quantities of text as well as some image file types (particularly EPS files with an embedded preview image). InDesign CS on the other hand is markedly faster in generating high-quality screen displays of complex pages, or when generating PDF files.

Surprisingly, QuarkXPress lagged behind InDesign in everyday design operations (see sidebar page 5) in part because the program was clearly slower in saving a large file. In any case, the results deserve close scrutiny.

Key Productivity Gains through File Integration

Roundtrip Native Photoshop Files
Time in seconds – shorter is better



The ability of InDesign CS to work with native Photoshop files provides significant productivity benefits over traditional workflows because it eliminates several time-consuming file operations from the workflow.

Performance and Productivity in Magazine Publishing

Major Points

- Magazine publishing has **stringent requirements for productivity** and needs a wide variety of creative design options.
- **File format integration with other core applications in the Adobe Creative Suite** gives InDesign a clear productivity advantage in many magazine publishing workflows.
- Built-in support for frequently used creative options such as transparency and drop shadows can **significantly increase productivity in magazine production.**

The challenges of magazine publishing workflows

Magazine publishing can be complex. As in newspaper publishing, it has exacting requirements for text-related operations such as fast text handling and copy fitting. Like design-driven publishing, it often requires advanced creative control and tight integration with image editing and graphics software. Magazines usually have looser editorial constraints than newspaper, leaving more room for design and creativity. This in turn makes it more difficult to integrate the design workflow to the rigid structure of an editorial system.

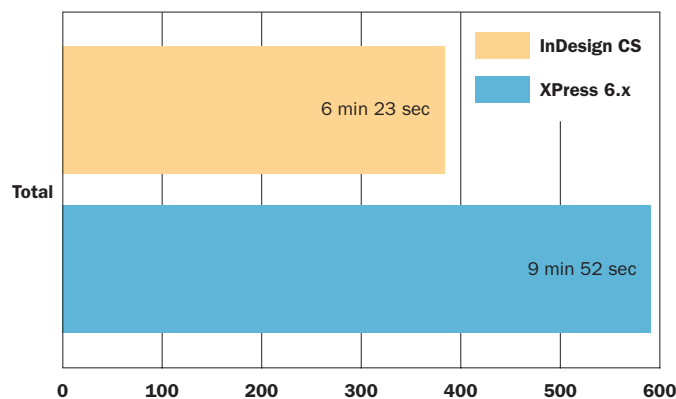
The nature of the typical magazine workflow has made it a test bed for technology innovations in publishing software. **Magazines were among the first publications to move to desktop publishing tools, and today magazine publishers are on the forefront of the new creative workflows emerging around the globe.**

Magazine publishers were among the first to move their workflows to InDesign, and some major magazines (such as Glamour, which is published by Condé Nast in the United Kingdom) were even produced with version 1.0 of the program. **Today, magazine publishing is probably internationally one of the market segment where InDesign is gaining ground the most rapidly.** In any case, magazine publishing is probably the segment of the publishing market that uses the greatest variety of the tools available in InDesign, from creative options

Key Productivity Figures: Magazine Publishing Assignment

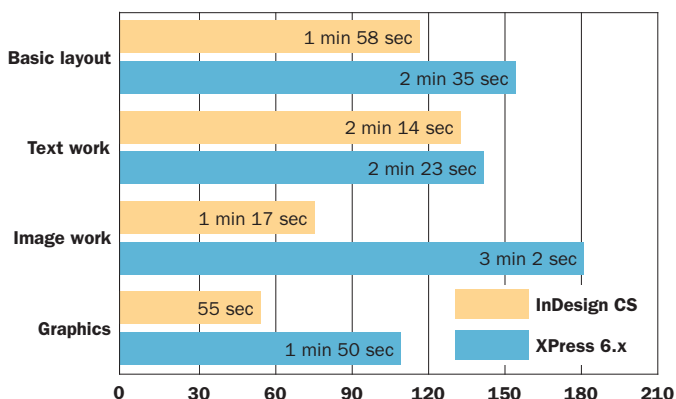
Magazine Spread

Time in seconds – shorter is better



Magazine Spread in Detail

Time in seconds – shorter is better



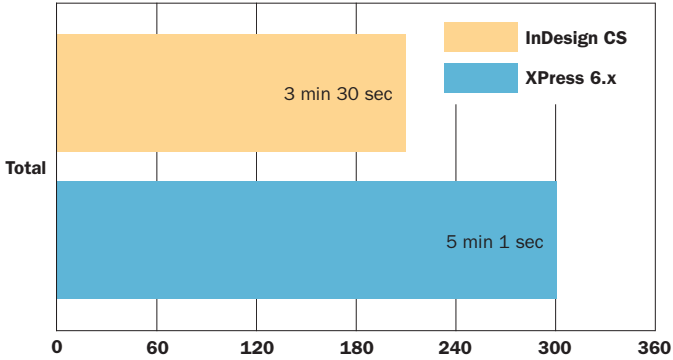
The magazine publishing assignment consisted of building a double-page spread built from scratch in both QuarkXPress and InDesign. All of the phases in a typical project were covered, including setting up the basic layout, importing text and pictures, image editing, integration of an Illustrator

graphic, and so forth. Interestingly, QuarkXPress 6.1 is not as fast at basic design tasks as previous versions of the program were, which explains why it lags behind InDesign. Major productivity advantages in InDesign stem from tighter integration with other Adobe software.

Productivity in Everyday Design Operations

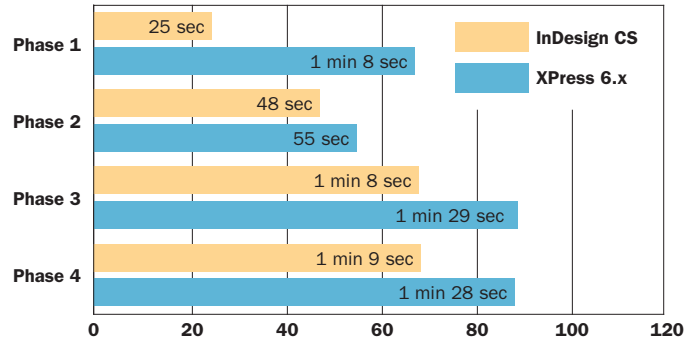
Everyday Design Operations

Time in seconds – shorter is better



Everyday Design Operations in Detail

Time in seconds – shorter is better



To see how well both programs hold up in everyday design operations on a demanding document, we designed a 500-page layout file containing one extremely long run of text, as well as several images per spread. The operator then modified this document by going to selected pages and modifying the

column layout, resizing images, and so forth. In this test, InDesign CS is clearly faster than older versions of the program. QuarkXPress 6.x, on the other hand, is markedly slower than older versions, and lags InDesign on many basic operations, including saving the page layout file.

such as transparency and drop shadows to tables and expert typography.

The nature of magazine publishing makes it particularly interesting in terms of productivity measures: a typical feature spread in a magazine will involve practically every element and application in a modern creative workflow.

Comparing work methods

While the basic work methodology for building magazine pages is quite simple and is essentially the same when working with QuarkXPress and with InDesign, both programs show some significant differences in terms of user interface and integration with the rest of the publishing workflow. **It is also clear that sometimes little changes in the user interface can have a strong impact in overall productivity or fluidity of the design process.** As an example, QuarkXPress offers a keyboard shortcut for accessing the leading value for a selected text, while InDesign requires two or three steps for this operation. InDesign, on the other hand, allows the selection of tools by pressing one key, which is much faster than the method used by QuarkXPress.

There are many examples like these, and the productivity measures conducted for this project include these user interface differences. By allowing each operation to be executed in the fastest possible way in each product, we were able to emulate an experienced operator in both environments. (Please see the Methodology sidebar on page 3 for details.)

Results and analysis

While user interface aspects such as the ones cited above can provide productivity gains, the factors that have the highest impact are built-in functionality, such as drop shadows, and workflow integration. The ability to import native Photoshop and Illustrator files into InDesign layouts offers one of the strongest examples. **The fact that a user does not have to save intermediary files for placement, but can work directly with a multilayered Photoshop document, can have a considerable impact on the time it takes to complete a project.**

Finally, built-in functionality is a core factor for productivity: creating a drop shadow for a graphic element is a time-consuming operation in most production environments. Being able to create this effect in a page layout document not only improves overall productivity, it allows more creative experimentation. (It is interesting to note that many sites that have moved to InDesign see increased creative freedom as a main benefit.)

About the Adobe Creative Suite

InDesign CS (as well as Photoshop CS and Illustrator CS) exists both as an individual application and as part of the Adobe Creative Suite—or Adobe CS for short.

In addition to the core applications, **Adobe CS includes Version Cue**, Adobe's first attempt to provide workflow management on the end-user level to its product line-up. The program allows users to create projects and to manage the files without having to deal with the local file system. A workgroup can share project files; Users can create different versions of a document without having to change the document's name, add comments to a version, and retrieve an older version of a document.

While it is necessary to install the complete Adobe Creative Suite to create and share a Version Cue Project, **all Adobe applications with the CS label support Version Cue and can connect to projects established by another person in the workgroup.** This means that in a workgroup where the art director uses the complete suite, all other users can still contribute to his or her project, even if they only use InDesign CS or Photoshop CS.

Performance and Productivity in Design-Intensive Publishing

Major Points

- Integration of creative tools and options between different applications in the workflow needs to be well balanced for optimal productivity.
- In the productivity measures conducted for this project, InDesign CS was clearly faster than QuarkXPress 6.x.
- Creative functionality that eliminates the need for an additional program, such as transparency, can provide significantly increased productivity.

Pushing limits productively

Creative tools on the computer have always had to strike a balance creative potential and ease of use. While complex effects pose an interesting challenge to some more technically minded users the average creative professional is primarily a computer nerd. A tool is only as good as your mastery of it. Who has never experienced the intense frustration of knowing that an option one desperately needs is there somewhere but being unable to find it?

In other words, productivity in design and publishing is about having the right options in the right place: for example, it wouldn't make sense to use a word processor to correct a typo or input a headline. That's why integration of creative functionality within the page layout environment makes a lot of sense in terms of productivity and throughput.

This is important for a number of reasons, and not just to "get the job done as fast as possible." Design-intensive publishing has a lot to do with using the computer to extend intuitive creativity, not just with the speed at which one can produce a page.

Any disruption of the creative process can reap havoc in project which is still in a formative stage. The fewer steps there are between an idea and its realization on the screen, the better. That is why integrated functionality in

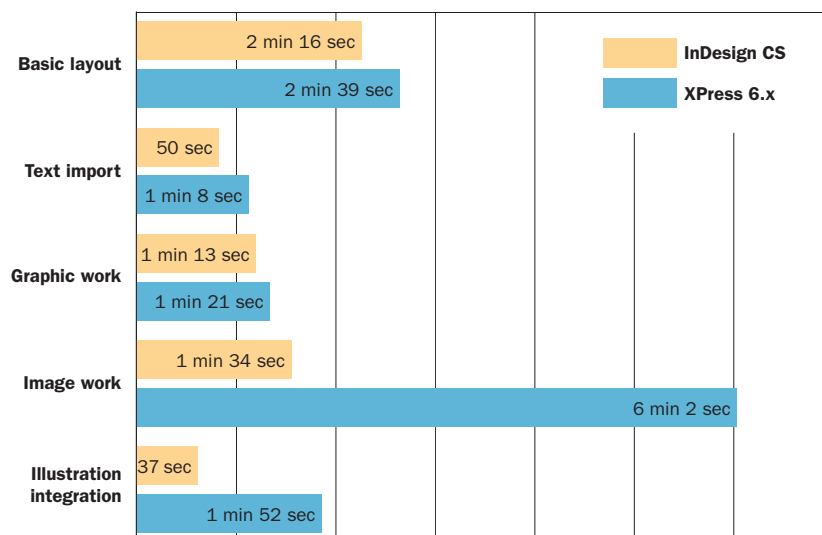
Key Productivity Figures: Creative Design Assignment

Completion of the Creative Design Assignment Benchmark demanded roughly six and a half minutes in InDesign CS, and just over 13 minutes in QuarkXPress 6.1.

Analysis of the detailed benchmark results shows how integration with Photoshop and Illustrator provides InDesign CS with a productivity advantage: while the program is slightly faster in all phases, it is in operations that draw upon application integration and original functionality that the productivity difference becomes the most visible.

Design in Detail

Time in seconds – shorter is better



Productivity Benchmarks: Formatting Tables

Unlike previous versions of QuarkXPress, release 6.1 allows importing of formatted Microsoft Excel tables, thus closing the gap with InDesign which has offered this possibility since version 2.0.

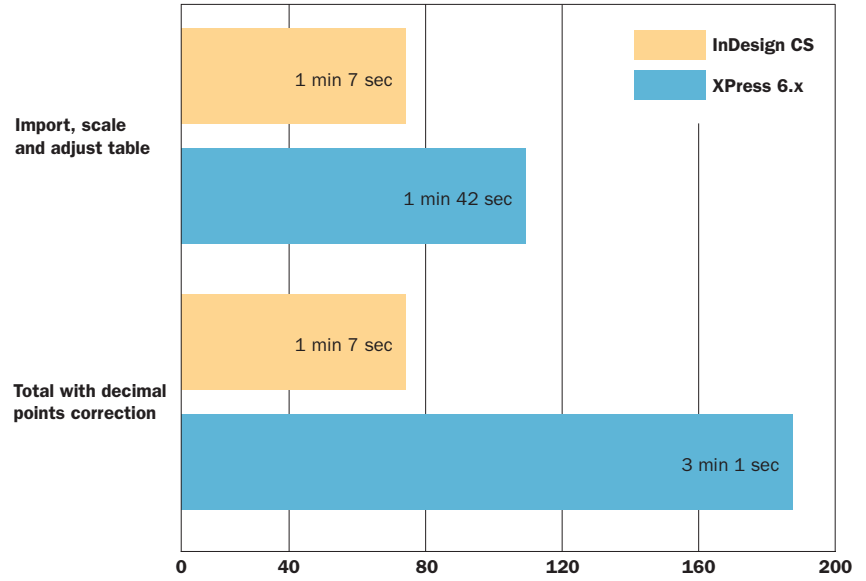
In terms of pure productivity, InDesign CS is still slightly ahead of QuarkXPress for single page table formatting. (Only single page tables were benchmarked for this project: QuarkXPress can not handle tables which exceed one page, while InDesign can spread a table over several columns or pages.)

The lower part of the chart on the right takes in account a curious shortcoming of QuarkXPress which can slow down table formatting considerably: QuarkXPress imports and displays all 8 decimals managed by Excel, even when the spreadsheet is set to show only one or two decimal points. This means that when importing a table containing calculations, the user has to manually edit out unwanted decimals by hand.

Since this does not affect all tables, we are presenting these measures separately in the chart, in order not to disadvantage QuarkXPress.

Tables

Time in seconds – shorter is better



the core design environment is so essential: not only for productivity, but also to assist the creative process.

What is slowing down the design process?

The creative design environment draws from intelligent integration of different software applications. However, to be truly efficient, this integration must be coherent and well balanced. In other words, the greatest productivity gains in this setup depend on the efficient combination of different options.

Photoshop and Illustrator are indispensable tools in most creative workflows. However, moving between your page layout tool and these applications can create significant bottlenecks in the workflow. InDesign and QuarkXPress have both addressed some of these bottlenecks. For example, both programs offer high-resolution display of imported files, eliminating the need to switch to Photoshop to check details that don't show up in low-resolution previews.

However, InDesign clearly has an edge over QuarkXPress in the breadth and depth of its integration with its sister applications. In particular, its ability to import native Photoshop and Illustrator files saves time-consuming intermediary steps when modifying placed images or graphics.

The creative potential, however, goes well beyond the convenience of opening files directly: a number of effects that usually require the intervention of Photoshop or a similar image editor can be achieved in InDesign without leaving the program; other design effects would be impossible in a standard workflow.

Benchmark results and analysis

In the benchmarks conducted for the project, InDesign CS is more productive than QuarkXPress 6.x. **Part of this has to do with the evolution of the programs: InDesign is significantly faster than older versions of the program. The Mac OS X version of QuarkXPress, on the other hand, is slower than previous versions, even in simple operations such as saving complex documents, high resolution preview or importing tables.**

But, as the market research for this study confirms, productivity is not everything. Many designers who have switched to InDesign say that while the program allows them to be more productive, **they prefer to spend the time saved on creative experimentation, rather than on churning out more pages.**

The Benchmark Assignments

The benchmark assignments for this project included **a double-page spread for a magazine, a display ad, and a table imported from an Excel spreadsheet.** The productivity measures covered every aspect of the creative project, starting from the initial sketch used to define the project.

The projects were then precisely defined in terms of steps necessary for their completion. **Each individual phase of a project was executed in the fastest possible way in each program:** keyboard shortcuts and productivity features specific to each program were used when possible.

Each individual step of the project was executed in a controlled fashion, three times for each program. The average of the three measures was used to calculate overall productivity.

Additional benchmarks measured performance and everyday productivity with both programs, as well as the incremental productivity gains that can be achieved with specific program features.

For detailed discussion of the benchmark methodology and complete results of the benchmark project, please download the Adobe InDesign CS Benchmark Report at www.pfeifferreport.com

Productivity Gains through Built-in Functionality

Major Findings

- InDesign CS has a **clear productivity advantage over QuarkXPress in many workflows** because of built-in support for transparency and other features.
- During the productivity benchmarks, **the creation of frequently used design effects such as transparency or drop shadows took up to seven times longer with QuarkXPress and Photoshop** than with InDesign CS.
- These productivity increases **can provide important time savings** in ad-production and magazine publishing.

From the outset, Adobe's new page layout software has attempted to "push the envelope" in terms of design functionality, and **many operations that can be achieved easily with InDesign CS previously required the help of other applications such as Photoshop, Illustrator, or Macromedia FreeHand.**

But while most users will easily recognize the convenience of such options, it is not as easy to assess the real impact on productivity. For this benchmark project, Pfeiffer Consulting has measured **the time necessary to achieve some common effects, and compared it to a workflow where the designer needs to switch to another program to create the same result.**

One of the most important aspects of these possibilities, however, will be increased creative freedom for designers. Beyond simply providing higher productivity, the integration of options such as transparency gives the designer greater liberty to experiment without having to switch programs. **This is in stark contrast with current design workflows, where the page layout tool is increasingly used as a container for graphic elements created in other programs.** It will be interesting to watch the impact of these possibilities on graphic design over the next few years.

In addition to the features available in previous versions, InDesign CS adds nested style sheets, a feature that can provide significant productivity gains for repetitive formatting, such as product descriptions in a catalog, sidebars in a magazine, or classified ads. Nested styles allow users to embed character style settings in a paragraph style, so they can apply complex formatting more quickly.

The Impact of Original Functionality: Key Figures

Not surprisingly, built-in functionality that eliminates the need for an additional program increases productivity significantly: a transparency effect can be created in InDesign in a few seconds, while the same operation can take minutes, even for a simple effect, when you have to switch programs.

A new addition to the InDesign tool kit is nested styles, which can speed up repetitive formatting of sidebars and product descriptions in catalogs, among others.

Built-in Functionality

Time in seconds – shorter is better

