

# InDesign CS Creative Potential 1: Constructive Design

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## A Paradigm Shift in Graphic Design

Pfeiffer Consulting is a research and consulting company with its roots in creative markets. We have been following the creative design and publishing environment for years, since desktop publishing started to revolutionize the way printed documents were produced. In the course of these years, several true paradigm shifts occurred in the way in which creative professionals and designers work. The first one was the arrival of the initial wave of page layout applications. The second occurred when Adobe Illustrator opened up the possibilities of PostScript-based vector illustration, yet another, with the arrival of the first desktop based digital retouching tools such as Adobe Photoshop.

**In many respects, InDesign could represent another such paradigm shift:** the arrival of a new generation of tools which could profoundly impact the way designers work - and ultimately, the way designs look.

Since the arrival of InDesign, Pfeiffer Consulting has conducted a number of research projects around page layout and design processes, including technology analysis and productivity measures comparing Adobe's page layout software with other design workflows. During this process we realized something surprising. InDesign redefines the way graphic designers can use their page layout tool, and opens up significant creative possibilities; yet many designers are not aware of this potential, or only use the program in a limited way.

## Researching Creative Potential

**This project was conceived to explore InDesign's creative potential, and it does so through a research-based approach,** by analyzing and experimenting some of the thousands of possible combinations of original functionality included in the program. The illustrations included in the research reports have not been created to showcase design; their aim was **to explore new possibilities and to demonstrate unusual combinations.**

In other words, we are not trying to demonstrate different ways of achieving the effects you already use; we are investigating visual structures and design combinations which would be impossible or extremely time consuming to achieve.

All examples in these reports (and of course the reports themselves) were created **using only InDesign, without resorting to additional programs.** From the outset it was clear that key software applications often used in conjunction with page layout software (Adobe Photoshop and Illustrator, for instance) are essential for handling vector illustrations and pixel images; nevertheless, their use tends to slow down the graphic design process if these programs are used as a substitute for missing functionality in the page layout application.

To underscore that point, **we measured the time necessary to achieve a given design or effect. Because in the end, how fast you can achieve something is as important as what you can do.**

## Major Findings:

Adobe InDesign CS integrates many design possibilities **which previously required specialized software applications.**

Combinations of functionality such as transparency, complex table designs, expert typography and others **provide strongly increased creative potential.**

In addition to creative potential, **this integration offers a strong increase in productivity** and speeds up the design workflow considerably.

## 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.**

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Consulting  
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# Understanding the Nature of Graphic Design

## Expanding the creative horizon

Whatever we create—be it a global ad-campaign of a simple PowerPoint presentation—the tools we use have a strong impact on our creations. We embrace their potential, we bow to their limitations and integrate them in our way of working. **The tools, their shortcomings and constraints as much as their possibilities, define the shape of our creative work.**

This is particularly true in graphic design. The built-in design possibilities of the page layout application will determine how far a graphic designer can go and what he can do without resorting to additional applications. **This is an important aspect: however powerful programs such as Adobe Photoshop and Illustrator may be, having to use an imaging application to create simple graphic effects is not only disruptive and time consuming, it limits the designer in the scope of things he or she can achieve.** Who would want to use a word processor to correct a typo in a headline?

## The logic of graphic design

Let's forget for a second everything we know about computer programs and desktop publishing, and let's look at the graphic design process itself. What is the basic design workflow? How does it work? How important is the integration of tools? What are the levels of excellence required?

## Major Points:

Page assembly, graphic design and image work are **different aspects of the creative process** with different needs and requirements.

**Integration of design tools** with the core page layout environment is essential.

InDesign **expands the basic tool set** for page production in a number of ways.

*Assessing the new tools: InDesign extends the possibilities of the page layout environment significantly beyond what is currently available in other applications of the kind, including transparency, expert typography and a complete set of table building tools.*

*Some of these functionalities, such as high-end composition, should have been part of desktop page layout tools for a long time; others integrate possibilities which used to require a second software application. Yet another group of functions go well beyond the existing page-building paradigms: this is particularly true for nested frames and compound paths, which may not seem spectacular at first but open up enormous design possibilities.*

*However, the true creative potential stems from the fact that all of these tools are integrated with each other in the standard page layout environment and can be combined in thousands of ways.*

## Transparency Core Functionality:

- Object transparency
- Soft-edge drop shadows on objects, text, and placed images and graphics
- Feathered edges on objects, text, and placed images and graphics
- Transparency support in Photoshop, Illustrator and PDF files
- Transfer modes for objects, text, and placed images and graphics

## Table Design Core Functionality:

- Header and Footer rows (repeating)
- Custom line styles and alternating fills
- Transparency support
- Supported by nested and compound frames
- Content extending over cell borders
- Content cropped by cell borders
- Support for tilted, rotated and sheared tables

## Expert Typography:

- Full OpenType support, including automatic replacement of alternate glyphs, discretionary ligatures, old-style figures etc.
- Hanging punctuation
- Hyphenation and justification on paragraph level, with support for horizontal scaling
- Optical kerning
- Nested style sheets

## Graphic Design Core Functionality:

- Nested Frames
- Compound paths
- Stroked text
- Gradient on text
- Gradient on strokes and lines
- Custom line styles
- Transfer modes

**There are three levels of visual work involved in the majority of graphic design projects: page layout**, which usually consists in assembling texts and images created by others; then there is **graphic design** which consists in shaping the graphic identity of the project and elements necessary for it, and finally **image work and illustration**, which consists in creating and applying image retouching and styling effects to selected image elements.

It would only seem logical for the graphic design part to be controlled by the art director in the environment used for the page layout and assembly of elements. **However, since the advent of desktop publishing tools in the late eighties, the limitations of page layout applications have resulted in a shift of design work to programs initially conceived for image and illustration work, such as Photoshop and Illustrator.**

Indeed, the limitations of most widely used page layout tools have shaped the way in which design work is currently practiced. So much so that many professionals do not necessary perceive these limitations any more.

**The need for speed—and integration**

Anybody who works creatively (and that includes just about anybody who has ever had to produce a document of any kind) has a devouring need for speed. When you are in the process of giving form to a vision, any slowdown can interrupt the creative process, disrupt a stream of ideas, and ultimately make the difference between a masterpiece and a failed attempt which lands in the dustbin (be it physical or digital).

**Creativity is thinking about the project, not about the tool.** Painters do not think about their brushes when they paint, writers give little thought to the mechanical aspects of their craft—and usually hate it when anything stands in the way of their inspiration. That’s why in computer related work, speed (or more precisely absence of delay) is so important. **What needs to happen needs to happen immediately. Imagine a word processor that would make you wait for each sentence to appear on the screen, or a pencil that would leave a mark a few seconds after you have drawn a line.** Anything which creates a delay or an interruption can have a terrible impact on or work—and if it happens on a repetitive basis, will shape and mould our work in ways we may not even imagine.

**Revolutionary combinations**

InDesign expands the basic tool set of the page layout environment significantly by adding support for transparency, expert typography and complex tables. These are impressive tools. The ground-breaking aspect of InDesign’s new possibilities, however, lies in their combination and integration. **Taken individually, all of the functionalities provided by InDesign are convenient. Used in combination, they add up to a entirely new tool set.** Transparency is useful, and so are tables. But imagine what you could do by combining them... and imagine the effects you could achieve by adding nested frames... and expert typography...

**Methodology:** The InDesign Creative Potential Research Project was conducted by Pfeiffer Consulting for Adobe. **The project is based on extensive research, technology analysis and productivity measures.**

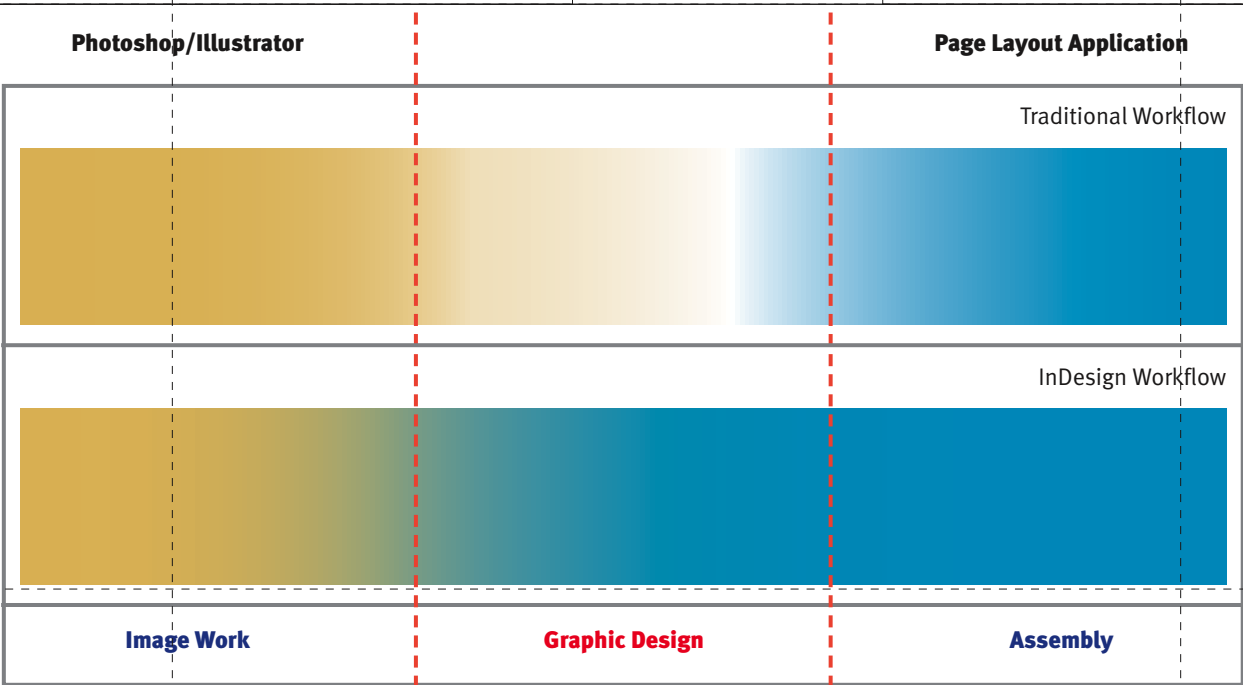
The methodology for analyzing creative potential consisted in **isolating four key areas of functionality which InDesign brings to the market:** Transparency, sophisticated table support, expert typography and new design functionality. We then set out to research **the possible combination between these functionalities and experiment their creative implications.** The main aim of this analysis was not to see how InDesign could change current design practices, but how the software might change the way designers combine certain graphic possibilities.

**All design examples in these reports were created using only InDesign, without resorting to additional programs.**

**Productivity Measures:** For each major example, **the necessary time to achieve the design was measured using the standard Pfeiffer Consulting methodology for benchmarking and productivity measures.** To find out more, please visit [www.pfeifferreport.com](http://www.pfeifferreport.com).

*In traditional computer design workflows, the page layout tool acts mostly as an aggregator: the program which is used to combine text and graphic elements to produce a page. As soon as a desired effect cannot be achieved within the page layout program, designers need to resort to other applications.*

*Graphic design, however, is different from image work: while Photoshop and Illustrator are essential tools for creating and manipulating vector illustrations and pixel images, they should not be required for the mainstay of graphic design work, which needs to be carried out within the page design environment to be efficient.*





# Constructive Design: The Basic Tool Set and its Combinations

## Redefining the graphic design process

Most page layout programs are relatively limited tools in terms of graphic design functionality: their main aim is to allow the designer to compose text and to combine it with illustrations produced in other programs. When one looks at the history of graphic design, however, it becomes clear that there is much more to it than just pasting up images and text.

InDesign extends the basic design paradigm in a number of ways. Some of them, such as complex gradients or customizable strokes are well known from illustration software but unavailable in page layout programs; others push the logic of design itself, such as nested or compound frames.

In itself, nested frames are simple: in InDesign you can paste one group of frames inside an existing frame or group of compound paths. This possibility literally pushes design to a new level. **We are used to cropping images; now we can crop any design element, one word of text or a complete spread. This changes very fundamentally how a designer works.** In this report, for instance, all the examples are not simple picture files placed in the page layout, but live design elements which can be modified at any time, re-cropped, changed, even spell checked if necessary. Not a single example was integrated in the page layout as an EPS graphic.

**This is particularly important with typography:** creating elaborate type arrangements in Photoshop or Illustrator reduces the design to a graphic element, and makes subsequent editing and modification cumbersome.

## Major Points:

Most page layout programs offer only very limited graphic design functionality. This means that **designers have to use illustration software for creating design effects.**

InDesign **adds significant design potential to basic page layout tools** through the addition of nested and compound frames which can be combined with practically all other tools in the program.

**Customizable strokes have unexpected design capabilities** and deserve some exploration.

## That's wonderful—but will it print?

The history of computer based publishing is lined with ground-breaking innovations which could bring the sturdiest image setter to its knees if used without proper considerations: in earlier versions of Illustrator gradients could cause havoc at output time, and even pixel images had their fair share of problems. Innovation requires experience and learning, and this process repeats itself whenever we venture into something new.

Adobe InDesign pushes the envelope in terms of graphics capabilities, and that means that some adaptation of our production reflexes is in order. When using a modern PDF based workflow, the risks for problems are relatively minimal: the latest iterations of the PDF file format (1.4 and 1.5) were designed to handle

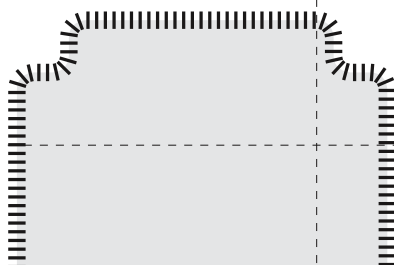
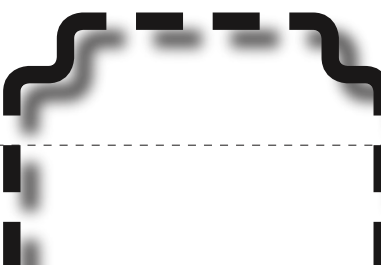
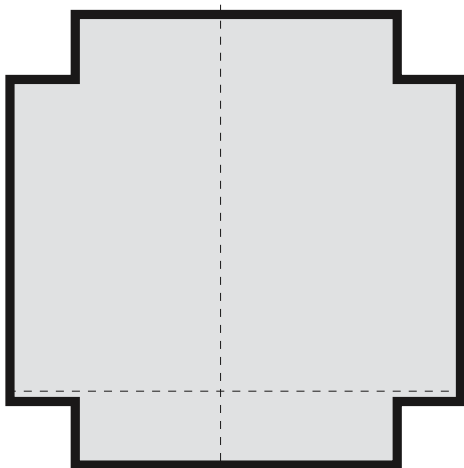
transparency, and Postscript Level 3 devices in general should be able to handle this feature. Older versions of the Postscript can be more problematic: Since PostScript has not been conceived initially to handle transparency, this capability (and features related to it such as drop shadows or feathered edges) can become a problem when used on older image setters.

The most important aspect when outputting to such a device is to pay attention to transparency flattening, a technique which basically renders transparent objects before output. In any case, with proper preparation, there should not be any unsurmountable problems: a growing number of high-profile publications around the globe routinely use InDesign in production.

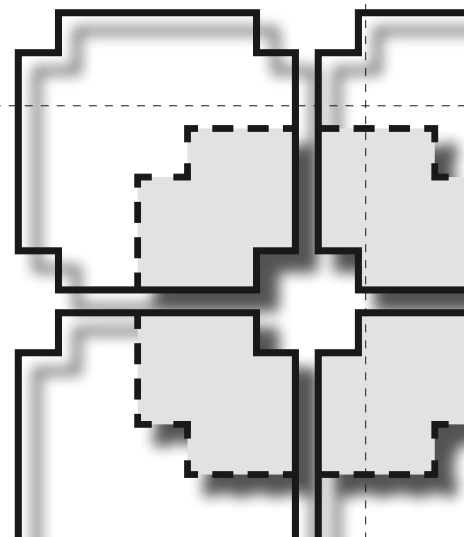
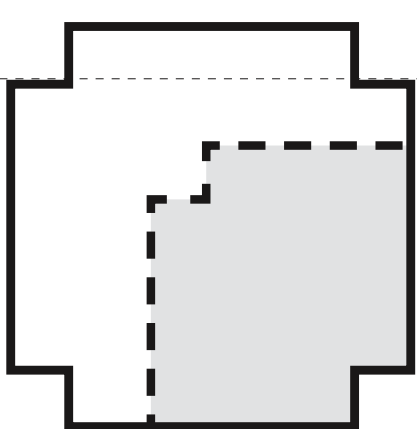
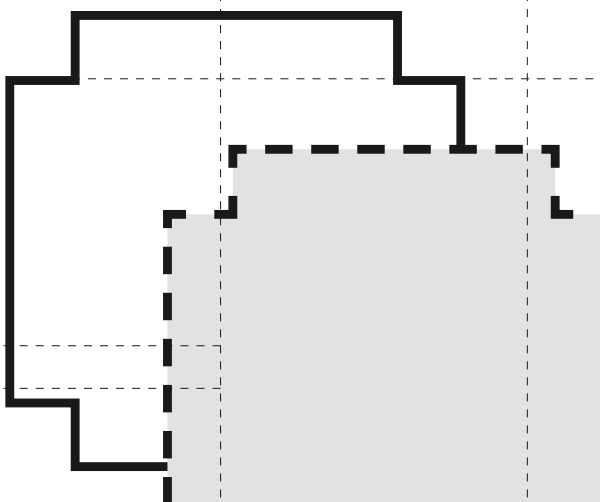
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## Basic creative possibilities and combinations with other tools or functions

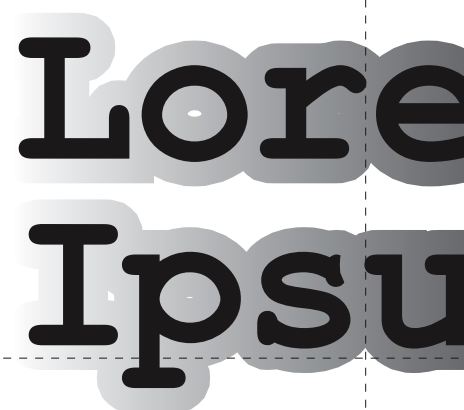
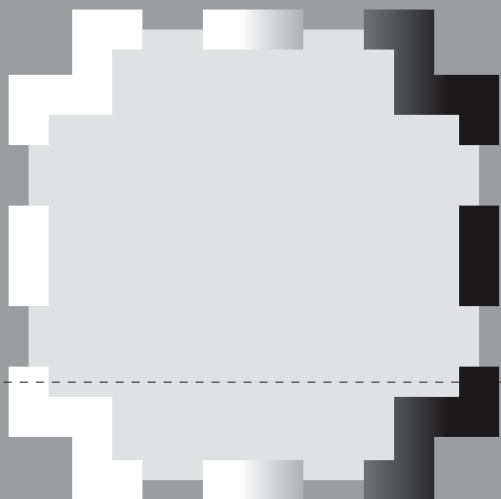
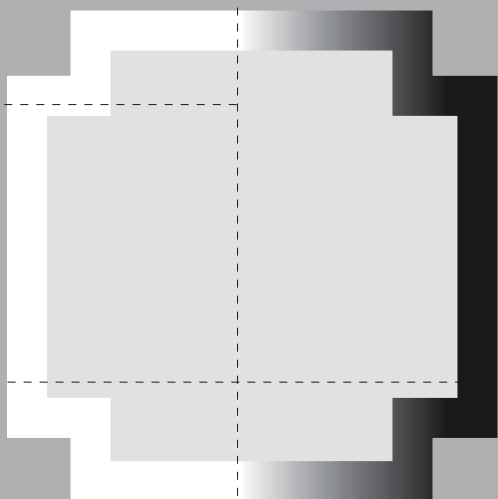
### Corners and strokes



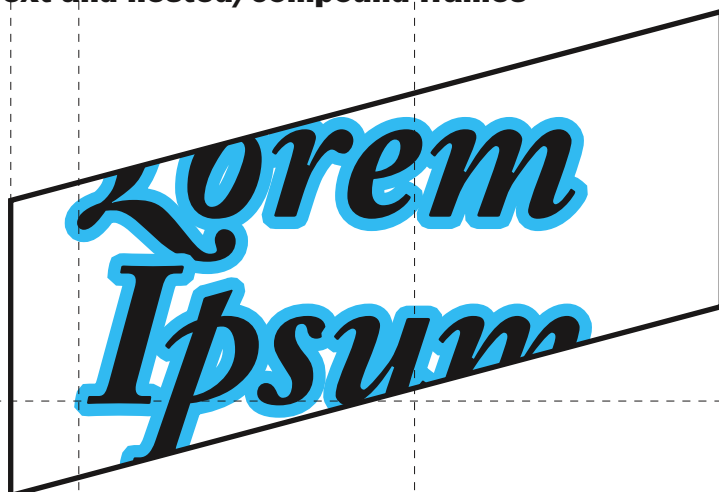
### Nested frames and compound objects



### Fills and gradients



### Text and nested/compound frames



# Constructive Design: Design Combinations in Standard Applications

## The art of combination

Graphic design is to a large extent the act of creating and combining visual elements to communicate a message. Designers generally draw upon all the elements at their disposal and find the most appropriate arrangement for the assignment at hand.

Before the computer came along, the creative workflow was very clear-cut. The traditional toolbox of the designer provided a very strict set of boundaries. The creative part of design was strictly separated from production, and inherent limitations of the output mechanism meant that designers had to manually generate many elements.

Initially, desktop publishing provided an immense sense of liberation for designers, because it made many complex design effects (such as text on path, for instance) extremely easy. But, as so often with new technology, it is easier to see what we gain than what we lose, and many designers are not even aware any more that some design techniques which were very easy in a pen-and-ruler world had all of a sudden become very complicated. **InDesign is the first mainstream page layout application which brings some of these lost possibilities to computer based page design.**

## Reinventing constructive design

Just as the first generation of page layout applications brought the possibility of scaling and shaping type, InDesign brings constructive design techniques to the computer screen. Nested frames have been part of InDesign's core functionality since version 1.0—it is actually quite surprising that relatively few designers have picked up on this possibility, which from a creative perspective opens up practically unlimited possibilities.

**Nested frames are probably the single most important contribution InDesign has made to the graphic design process.** The following pages illustrate some of the possibilities which would be impossible without this capability.

The first example simply uses a few oval shapes which are combined in a compound path and filled with a picture. The most important part here is the fact that each individual oval retains its original characteristics, and can be reshaped individually if necessary. The two variations of the object show how layering and custom line styles can be used to enhance the original shape.

The second example gives some idea how constructive design techniques can be combined with transparency effects, drawing upon InDesign's typesetting capabilities as well as transparency and drop shadows.

## Major Points:

InDesign **brings back constructive design techniques** which were very difficult or impossible in previous page layout applications.

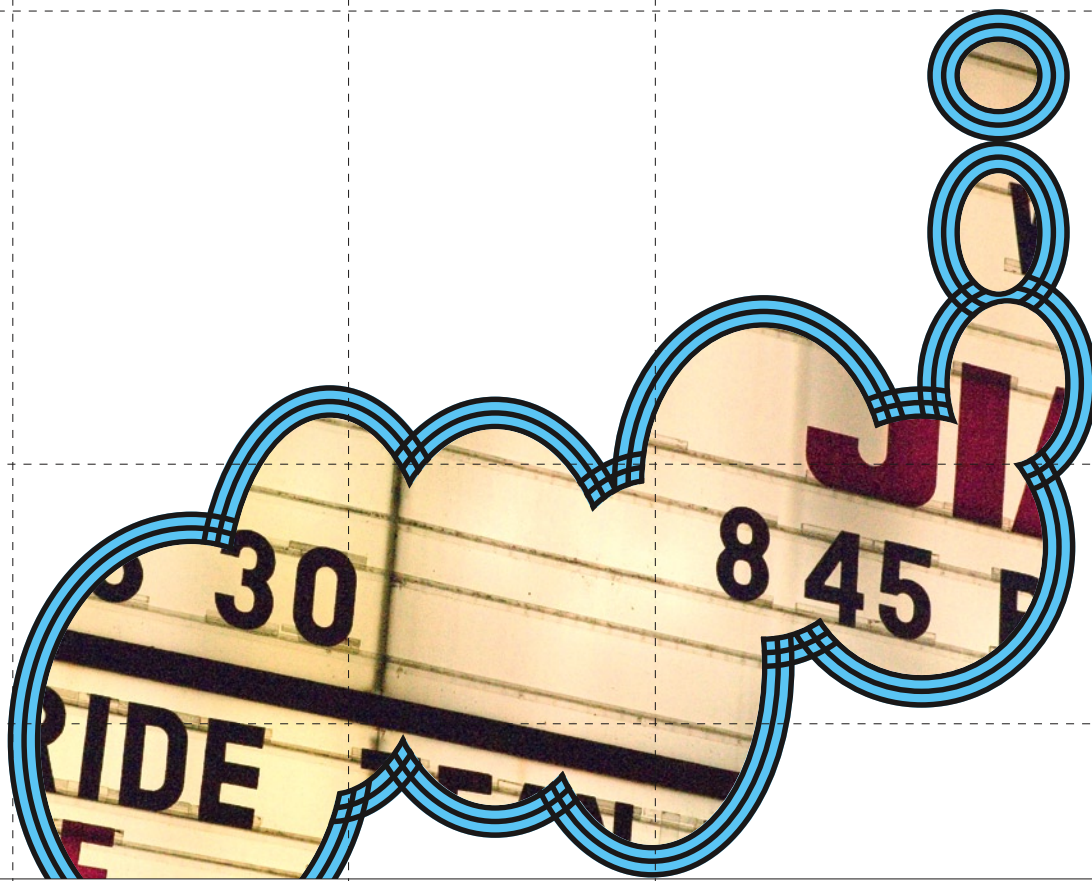
Combining frames into compound paths allows **complex designs without losing the capability to modify** each element individually.

Nested frames **expand graphic design capabilities** of InDesign based page layout workflows.

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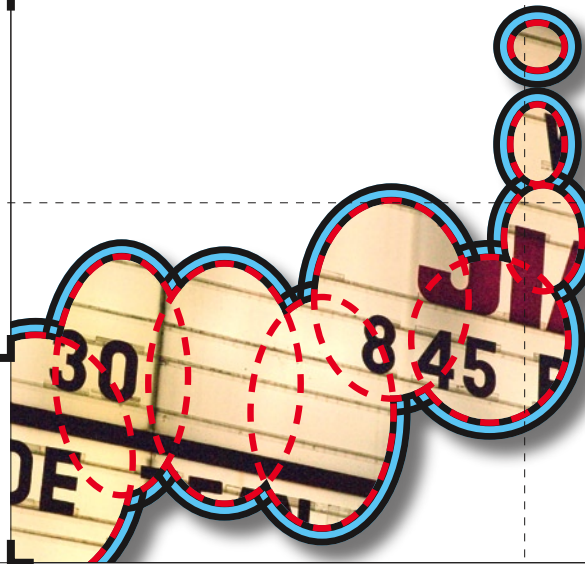
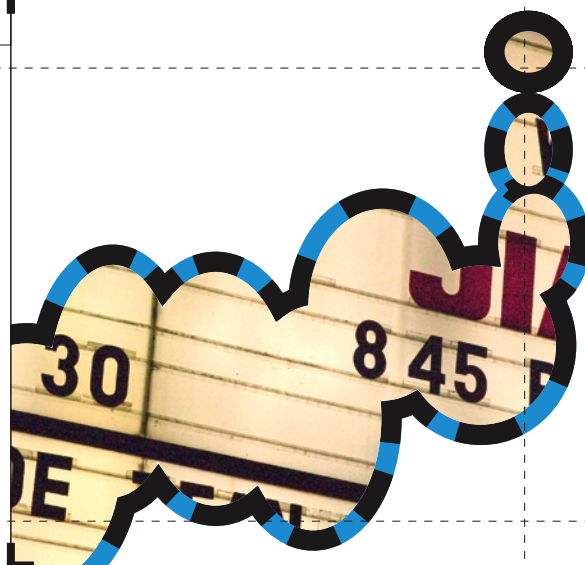


Time necessary to execute this composition starting from ungrouped shapes: 0 min. 33 sec.



Using compound paths it is simple to combine several basic shapes into a complex one, while retaining an easy way to modify the resulting shape if necessary (for instance by moving individual elements around). Especially when combined with custom strokes, this

makes it easy to create and modify complex graphical structures rapidly. Pushing creative exploration one step further, the resulting shapes can be combined with drop shadows, transparency effects or other design possibilities.



"Really, pushing back his chair and bound to say that in all the accounts which you have been so good as to give of my own small achievements you have habitually underrated your own abilities. It may be that you are not yourself luminous, but you are a conductor of light. Some people without possessing a genius have a remarkable power of stimulating it. I confess, my dear fellow, that I am very much in your debt." He had never said as much before, and I must admit that his words gave me keen pleasure. For I had often been piqued by his indifference to my admiration and to the attempts which I had made to give publicity to his methods. I was proud, too, to think that I had so far mastered his system as to apply it in a way which earned his approval. He now took the stick from my hands and examined it for a few minutes with his naked eyes. Then with an expression of interest he laid down his cigarette, and carrying the cane to the window, he looked over it again with a convex lens.

"Interesting, though elementary," said he as he returned to his favourite corner of the settee. "There are certainly one or two indications upon the stick. It gives us the basis for several deductions."

"Has anything escaped me?" I asked with some self-importance. "I trust that there is nothing of consequence which I have overlooked?"

"I am afraid, my dear Watson, that most of your conclusions were erroneous. When I said that you stimulated me I meant, to be frank, that in noting your fallacies I was occasionally guided towards the truth. I am entirely wrong in this instance. The

from which a visitor."

"Well, then, supposing that 'C.C.H.' does stand for 'Charing Cross Hospital,' what further inferences may we draw?"

"Do none suggest themselves? You know my methods. Apply them!"

"I can only think of the obvious conclusion that the man has practised in town before going to the country."

"I think that we might venture a little farther than this. Look at it in this light. On what occasion would it be most probable that such a presentation would be made? When would his friends unite to give him a pledge of their good will? Obviously at the moment when Dr. Mortimer withdrew from the service of the hospital in order to start a practice for himself. We know there has been a presentation. We believe there has been a change from a town hospital to a country practice. Is it, then, stretching our inference too far to say that the presentation was on the occasion of the change?"

"It certainly seems probable."

"Now, you will observe that he could not have been on the staff of the hospital, since only a man well-established in a London practice could hold such a position, and such a one would not drift into the country. What was he, then? If he was in the hospital and yet not on the staff he could only have been a house-surgeon or a house-physician—little more

Time necessary to execute this composition starting from formatted headline: 1 min. 03 sec.

From a designer's perspective, the strongest creative potential of InDesign lies in the combination and integration of a variety of new tools. Graphic effects, such as the one presented here could obviously be created in a program such as Adobe

Illustrator but integrating them as a picture into the main-page design is extremely limiting in creative terms. And combining it with high quality typesetting in this way would be almost impossible and in any case very time consuming.

"And then again, there should guess that to be the Something Hunt, hunt to whose members he has possibly given some surgical assistance, and which has made him a small presentation in return."

"Really, Watson, you excel yourself," said Holmes, pushing back his chair and lighting a cigarette. "I am bound to say that in all the accounts which you have been so good as to give of my own small achievements you have habitually underrated your own abilities. It may be that you are not yourself luminous, but you are a conductor of light. Some people without possessing a genius have a remarkable power of stimulating it. I confess, my dear fellow, that I am very much in your debt." He had never said as much before, and I must admit that his words gave me keen pleasure. For I had often been piqued by his indifference to my admiration and to the attempts which I had made to give publicity to his methods. I was proud, too, to think that I had so far mastered his system as to apply it in a way which earned his approval. He now took the stick from my hands and examined it for a few minutes with his naked eyes. Then with an expression of interest he laid down his cigarette, and carrying the cane to the window, he looked over it again with a convex lens.

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# Constructive Design: Design Combinations in Extreme Applications

## Layering and constructive design

Nested frames are just a starting point for creative experimentation in InDesign. **These techniques can be pushed considerably further by using intelligent layering, which allows for very complex designs while keeping their structure clearly manageable.**

**This relies heavily on InDesign’s capacity to “paste in place”.** The user has the choice of either pasting an element at the center of the active view, or to paste it at the exact location where it was copied. (An element pasted inside another frame is always pasted at the exact position where it was copied, making it easy to arrange elements beforehand.)

**These techniques are extremely handy for a number of operations in page design, and they are the backbone for creating layered graphic structures.** Since their scope goes well beyond design practices in older page layout programs, designers may need to adapt to these new possibilities, but they do expand creative horizons considerably.

## Creating dynamic structures

**In fact, what InDesign brings back to the design process is the capacity to create dynamic structures in an interactive way.** Designers often think in terms of shapes and masses, and recreating a composition which is easily sketched out on a piece of paper can be complicated or impossible with most page layout programs.

The example on the following page is a case in point: starting from a rough drawing by the designer, it is about strong diagonal movement, visible only on the borders of the objects underneath it, leaving the background of the page visible. Imaging and sketching this sort of dynamic structure is easy—with pen and paper. Recreating it on screen can be daunting or impossible.

**To make this kind of design exploration easy is one of InDesign’s main strengths.** The result one can achieve is only half the story; ease of use and simplicity is even more important.

While most designers start with a sketch to manage their raw inspiration, the second phase is most often experimentation on the computer. Creative exploration is key to any design work, and if this phase is complex or counter intuitive, the most amazing graphic effects will probably not get used much.

## Major Findings:

One of InDesign’s core strengths in terms of creative design is **the ease with which complex graphical structures can be created and modified.**

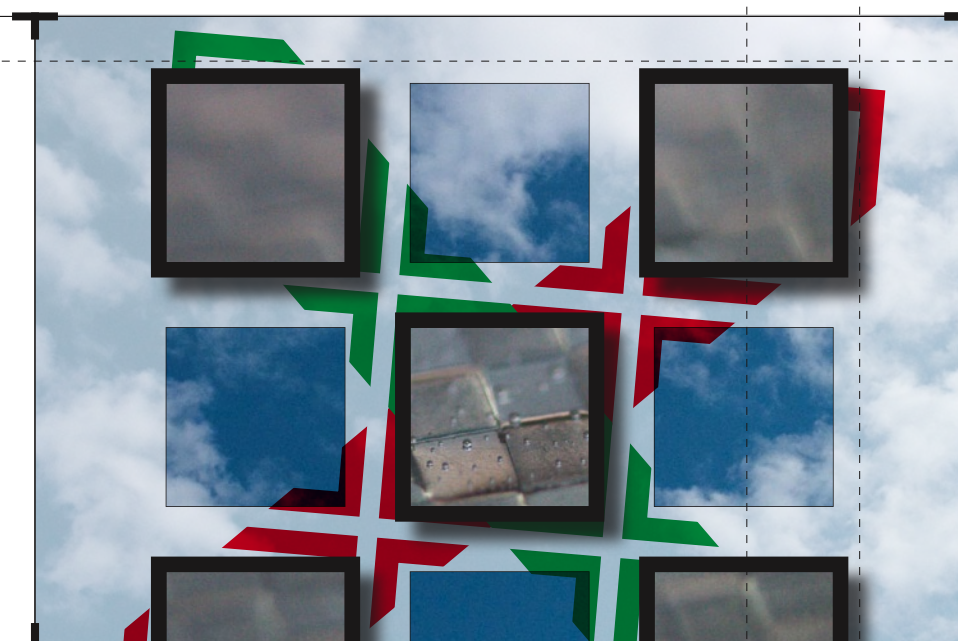
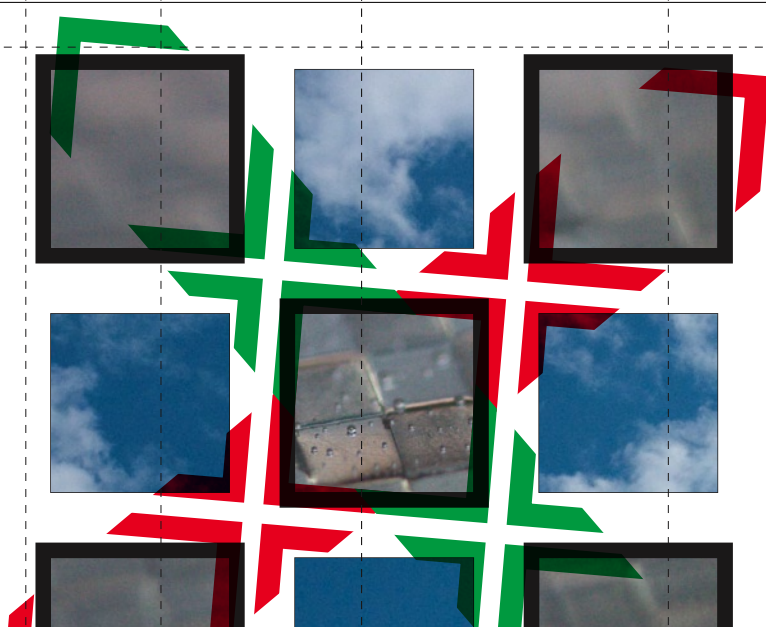
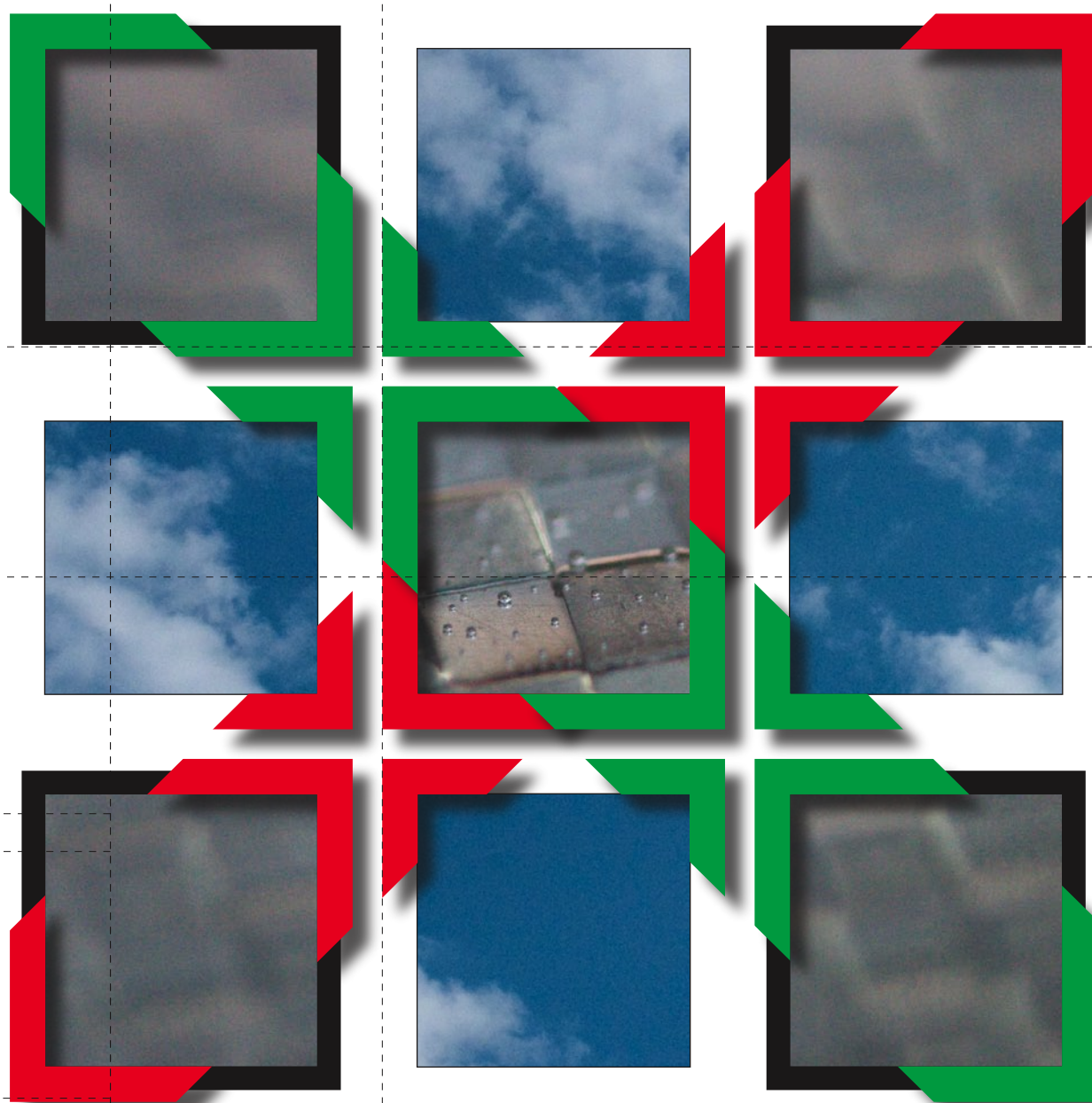
In addition to nested frames, **layering can help creating complex designs easily.**

**InDesign’s “Paste in Place” command is essential for creative work** and speeds up many aspects of page design.

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Time necessary to execute this composition starting from 1 single square: **2 min. 42 sec.**



*This example uses a combination of compound paths, nested frames and layers to make this complex structure manageable. Creating this example starts with the basic grid of frames, arranged in two groups of compound paths, used to*

*place the two pictures. For the red and green frames, both groups are duplicated, moved to another layer, and their stroke color is changed. Finally, they are pasted inside a diagonal shape which reveal only some parts of the frames.*

# Nested Frames: Moving Beyond the Obvious

## Shaping and exploring

We have already seen that nested frames are playing a central role for the creative potential InDesign brings to page layout. In the design project on the following page we are pushing the exploration of these possibilities one step further.

At the heart of the project is the super-imposition of a duplicated headline, drawing upon the graphic impact of different typefaces. **Creating the headlines is simple: all it takes is to paste the formatted type into two adjacent text frames, to shift it slightly and to find the right transparency effect.**

Once this first step is completed, one can start experimenting with the shape of the text frames. By using the direct select tool (the white arrow) one can easily move selected points on the outline, and watch in real time which parts of the headline inside the frame is cropped. It is of course also possible to shift the type inside the frame if necessary. And the text itself remains of course editable as well. Once the appropriate angle shape for the text frame is found, one can copy or duplicate and scale the frame to provide a container for the background image.

Creating the basic arrangement is fast: less than a minute was necessary to put together the central type arrangement. **It is of course essential that basic steps in a design project can be achieved very fast, and that creative exploration is not slowed down by the computer and the software.**

Finally the complete composition was grouped and pasted inside a frame, using custom strokes and gradients to create the border.

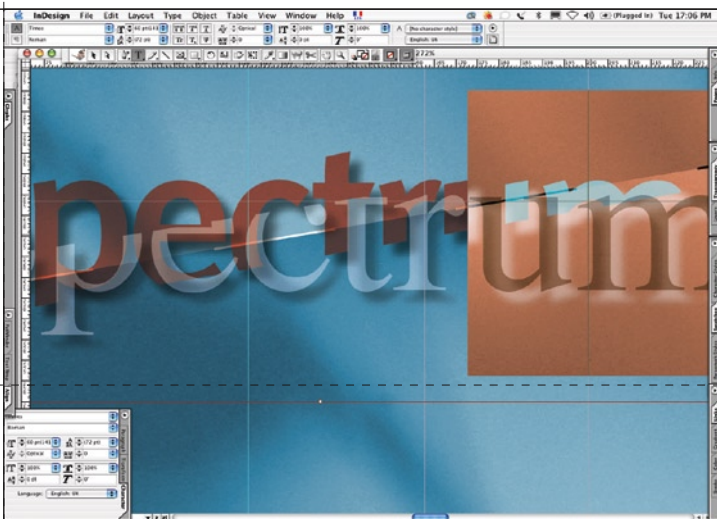
## Major Points:

**Nested frames are a key component of the creative potential** InDesign brings to the page design process.

Creative exploration of nested frames can be pushed one step further by manually reshaping the container shape of a composition.

**Custom strokes can be used in a variety of ways** to extend graphic possibilities in unexpected ways.

## About the design



## Technical aspects:

The central title was created by pasting the headlines inside adjacent frames which were then reshaped to change the crop of the headline. Transparency and drop shadow effects were added to achieve the desired effect. Throughout the design process, all texts and typographic parameters remain editable.

## Time required: 0 min. 53 sec.

It took less than a minute to achieve the central typographic effect, including setting transparency for both text objects.

**Only InDesign was used to create this design.**



**Hylan Thornton**

**Spectrum**  
Spectrum

**Giuliani String Quartet**

**Spectrum**  
Spectrum

**Spectrum**  
Spectrum

**Spectrum**  
Spectrum



**Colophon:**

**This report was created entirely with InDesign CS.**

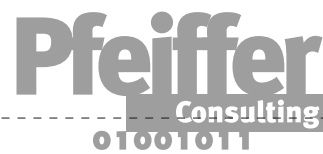
No other software was used to create any of the illustrations and examples used in this publication; all designs featured in these pages were used as live design elements, pasted inside a frame for positioning and cropping.

**Designs and Illustrations:**  
Eileen Brunswick and Laszlo Nahar.

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