# InDesign CS Creative Potential 4: Tables

## 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 shift 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.**
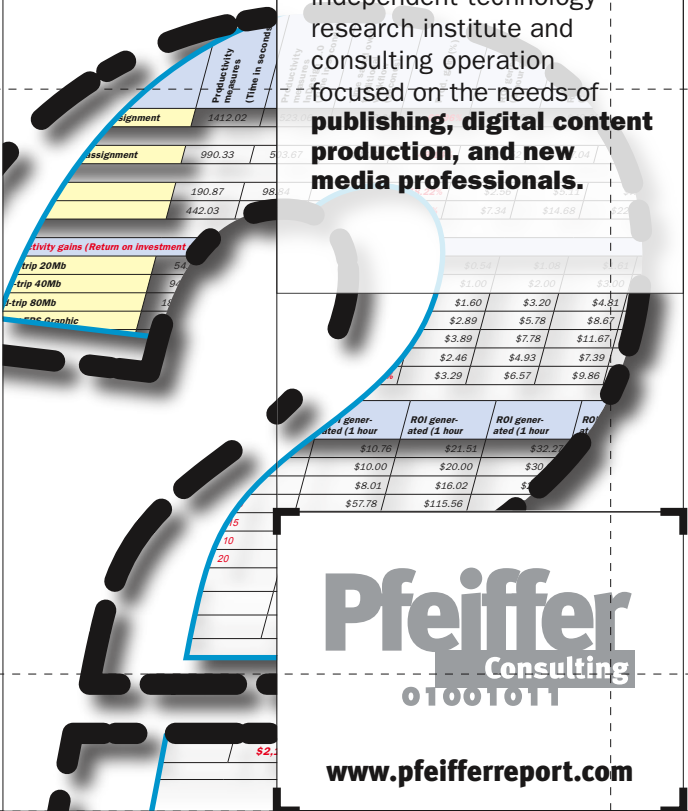
**PFeiffer**
**Consulting**

**www.pfeifferreport.com**

# 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.

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*Assessing the new tools: InDesign extends the possibilities of the page layout environment significantly beyond the possibilities 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.**
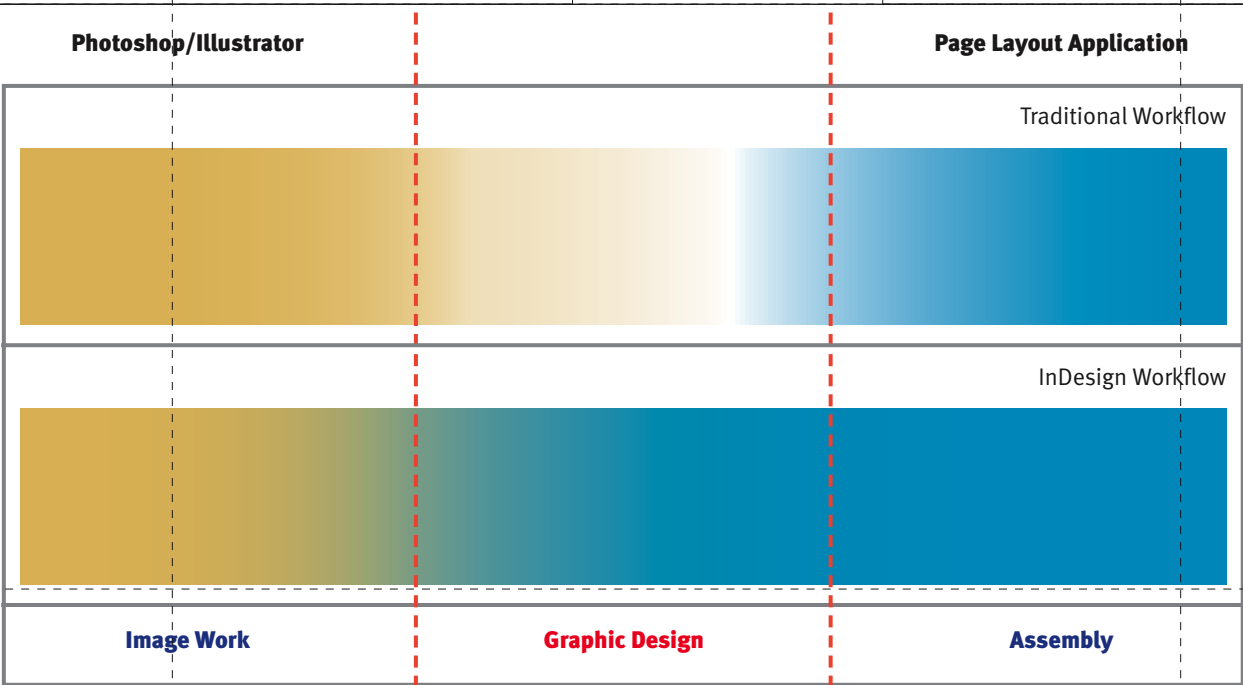
The methodology for analyzing creative potential consisted in **isolating four key areas of functionality which InDesign brings to the market:** Transparency, sophisticated table support, expert typography and new design functionality. We then set out to research **the possible combination between these 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.

*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.*

**Photoshop/Illustrator**                 **Page Layout Application**

Traditional Workflow

InDesign Workflow

**Image Work**          **Graphic Design**          **Assembly**

# Tables :
# The Basic Tool Set
# and its Combinations

## Discovering a new design tool

For many designers, tables a necessary evil: almost everybody is confronted with the need to lay out tabular data once in a while, and for a very long time there was no appropriate tool available to make this task more manageable.

InDesign has offered a tool for table creation for several years now, and it does a competent job in creating tables from scratch or in importing them from spreadsheet or word processing programs. But here we are interested in more than just creating simple tables in a convenient way. **In fact, by virtue of its integration with other design tools available, the table functionality in InDesign can become an interesting way of shaping and presenting information.**

There are many unexpected ways in which tables can extend the design potential: they can be provide an easy way to create sidebars in magazines or brochures; combined with customized strokes, tables can be used to create intriguing structures or patterns. Repeating headers and footers in tables can limit repetitive formatting.

From a graphic perspective, the possibilities are practically endless, especially when used in conjunction with transparency, drop shadows or feathered edges. And pasted inside another frame, tables offer a variety of ways of focusing the attention of the reader on a particular bit of information.

Unlike other tools in InDesign, tables are not available in programs such as Photoshop or Illustrator. It will be up to designers to experiment with these new tools and to find the most fascinating and unexpected possibilities.

### Major Points:

Well beyond their traditional use to represent numeric or tabular data, **the tables functionality in InDesign offers a set of interesting design possibilities**.

These possibilities are completely new—**no widely available tool offers a similar range of design possibilities with tables**.

In particular, **combinations with nested and compound frames as well as transparency** allow designers to expand the range of possible uses significantly.

## 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 insurmountable problems: a growing number of high-profile publications around the globe routinely use InDesign in production.

## Table structure, fill and stroke styles

| Header (Repeating) | |
|---|---|
| Section | |
| Content | Content |
| Content | Content |
| Content | Content |
| Content | |
| Content | Content |
| Content | Content |

| Header (Repeating) | |
|---|---|
| Section | |
| Content | Co |
| Content | Co |
| Content | Co |
| Content | |
| Content | Co |
| Content | |

| Header (Repeating) | |
|---|---|
| Section | |
| Content | Co |
| Content | Co |
| Content | Co |
| Content | |
| Content | Co |

## Rotated and tilted tables, nested frames
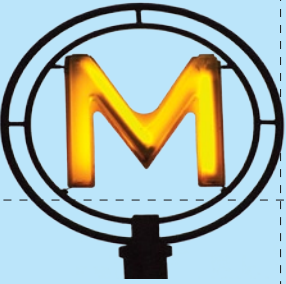


## Tables and transparency

| Header (Repeating) | |
|---|---|
| Section | |
| Content | Con |
| Content | Con |
| Content | Con |
| Content | |
| Content | Con |
| Content | |

| Header (Repeating) | |
|---|---|
| Section | |
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| Content | |
| Content | Con |
| Content | Co |

| Header (Repeating) | |
|---|---|
| Section | |
| Content | |
| Content | |
| Content | |
| Content | |
| Content | |

## Cropped/floating cell content with drop shadows

| Header (Repeating) | |
|---|---|
| Section | |
| | Mr. Sherlock very late in the not infrequen all night, was s I stood upon t the stick whic |
| Content | Con |

| Header (Repeating) | |
|---|---|
| Section | |
| | Mr. very not i all ni I stoo the s |
| Content | |

| Header (Repeating) | |
|---|---|
| Sect | |
| | Mr. Sh very lat not infre all night, stood upo the stick wh |
| Content | Co |
| Content | Con |
| Content | |

# Tables:
# Design Combinations
# in Standard Applications

## The medium and the message

More than most other design assignments, tables are first of all problems of communicating information. And more than most design elements, the information in tables is definitive. One may ask a staff writer or production editor to adapt copy to fit a design, or the illustrator to change a graphic, but rarely the same logic is applied to tabular data. What is there has to stay there, and that makes the designer's task all the more arduous.

There is another curious aspect to tables: the tools for designing them are usually even more limited than the software programs used to collect the data. In short, tables are a challenge—and the fact that designers are usually not very fond of figures does not do anything to make the situation easier.

## Tools and perspectives

There are two ways of looking at tables. From a straightforward perspective, it is reasonable to expect from a modern page layout tool the capacity to handle tables in a competent way. **InDesign offers a comprehensive range of table formatting options which include importing formatted tables from spreadsheets such as Microsoft Excel**, and to apply additional formatting, such as alternating fills and strokes to make the data presented more readable. Additional options include the use of custom line styles, as well as repeating headers and footers, which automate formatting on tables which are covering several pages.

The second way of approaching tables is through the eyes of a designer. What possibilities do I have to present the information at hand in a more compelling way? How can I focus the attention on a specific detail of the table?

On that level, InDesign's more advanced formatting options can be put to full use. A table can very easily be scaled and pasted inside a circular frame to make sure a particular detail stands out. This possibility can even be extended by using a feathered edge on the frame or by applying drop shadows or transparency effects to the table or its container.

## Rethinking the way we work

In a way, table design has always been the neglected sideline of design. The basic table formatting options provided by InDesign are powerful; **combined with other core design possibilities such as custom strokes and nested frames, Adobe's page layout software offers table designers a powerful toolbox.**

But, as observed elsewhere in this report, this will require designers to rethink the ways they work, and to be willing to experiment. It will be interesting to see how graphic artists integrate tables in their creations.

**Major Points:**

InDesign offers **a comprehensive range of tools for creating and formatting tables** and for importing tables from spreadsheets.

Designers can use **additional tools to enhance tables or to focus the attention of the viewer** on specific details.

In combination with options such as transparency and nested frames, InDesign's table design possibilities could redefine the way tabular data are presented.

Time necessary to execute this composition starting from the formatted table: **1 min. 12 sec.**

| ROI Projections based on incremental productivity gains | Time saved (seconds) | Number of occurences/week | ROI generated (1 hour @$100) | ROI generated (1 hour @$200) | ROI generated (1 hour @$300) |
|---|---|---|---|---|---|
| Photoshop Round-trip 20Mb | 19.36 | 20 | $10.76 | $21.51 | $32.2 |
| Photoshop Round-trip 40Mb | 36 | 10 | $10.00 | $20.00 | $30.0 |
| Photoshop Round-trip 80Mb | 57.66 | 5 | $8.01 | $16.02 | $24.0 |
| Precision Positioning EPS Graphic | 104 | 20 | $57.78 | $115.56 | $173.3 |
| Simple Transparency Effect | 140 | 15 | $58.33 | $116.67 | $175.0 |
| Drop Shadow | 88.66 | 10 | $24.63 | $49.26 | $73.8 |
| Export PDF | 118.34 | 20 | $65.74 | $131.49 | $197.2 |
| | | Total ROI generated/week | $235.25 | $470.49 | $705.7 |
| | | Total ROI generated/month | $940.99 | $1,881.98 | $2,822.9 |
| | | Total ROI generated/year | $10,350.88 | $20,701.76 | $31,052.6 |

| ROI Projections based on assignment-based productivity gains | Time saved (seconds) | Number of occurences/week | ROI generated (1 h... |
|---|---|---|---|
| Main Magazine Productivity Assignment | 888.96 | 5 | |
| | | Total ROI generated/month | |
| | | Total ROI generated/year | |
| Main Design Productivity Assignment | 486.66 | 5 | |
| | | Total ROI generated/month | |
| | | Total ROI generated/year | |
| Single Page Table | 92.03 | 5 | |
| Double Page Table | 264.28 | 5 | |
| | | Total ROI generated/month | |
| | | Total ROI generated/year | |

*InDesign allows a number of design options for tables which are inexistent in other page layout or graphic design applications. In these examples a table has been imported from Excel, preserving basic formatting, which was then fine-tuned using InDesign's tools. To create the magnifying glass effect, the same table was pasted inside a circle and scaled. This effect can then be extended through a glow effect, feathered edges, or by rotating the tables.*

# Tables:
# Design Combinations
# in Extreme Applications

### Testing the limits

So far we have seen table design potential which stays within the realm of "reasonable" use of tabular data, and we have looked at the way in which InDesign's functionality can enhance this process. But it is fairly obvious that it's design tools for tables can be pushed much further than one might initially think.

We have explored two routes in this respect. In the first one, presented here, the table itself becomes the center of the design attention, albeit in a different way. The aim is no longer to use design tools to provide a strong focus on a specific detail of the displayed data, but to embed a standard table in a composition which would have been impossible to achieve with conventional tools— at least in a reasonable amount of time. The second route, explored in the last section of this report (see page 10), focuses on a different aspect: how can InDesign's table building tool be used to expand formatting and design potential—without necessary simply being used to display tabular data.

### Asking the right questions

The starting point for this example starts with a popular design trick, using extremely enlarged type as a clipping path for an illustrative element. In current workflows, this technique is limited to importing a photograph or a vector graphic, but neither would be much use in what we were trying to achieve here. In fact, instead of pasting a picture inside the huge question mark, we used a completely formatted and tilted table created in InDesign. And we even went a step further, and repeated the process one more time, and added a modified drop shadow effect to enhance the result.

This example is a perfect illustration of the ease of use nested frames provide for design exploration. Once the basic table is created or imported from a spreadsheet, all that is required is to paste this table inside the question mark, which has been transformed into outlines, and to repeat this process one more time.

**The most important aspect here is the ease with which literally any aspect of the resulting group of objects can be modified.** Navigating the hierarchy of nested frames is simple: selecting the table inside both question marks can be achieved by simply clicking inside it; the container for the table can be shifted inside the principal question mark, its outline can be changed, as well as its stroke style, (along with any other aspect for that matter). And of course the table itself can be fully edited, as the variations on the next page illustrate.

Whether or not designers want to create exactly the example presented here is not very important. One thing seems obvious, however: once this kind of creative potential is available in a mainstream design tool, it will be used—in more ways one could possibly imagine today.

### Major Points:

InDesign **allows tables to be included in very complex graphic structures**, including nested and compound frames.

Every aspect of a table remains editable, **even when part of a complex hierarchy**.

Navigation of nested frames is easy and ensures that **all aspects of a group and its elements remain modifiable at any time**.

| | Production measure... (Time i... | Production measure... InDesign (Time i... | Time saved traditional workflow (seconds) | Prod... g | ROI ge... (1 hour | ROI (1... |
|---|---|---|---|---|---|---|
| gnment | 1412.02 | 523.06 | **888.96** | **62.96%** | $24.69 | $49.39 |
| ssignment | 990.33 | 503.67 | **486.66** | **49.14%** | $13.52 | $27.04 |
| | 190.87 | 98.84 | ...22% | | $2.56 | $5.11 |
| | 442.03 | 177.75 | | | $7.34 | $14.68 |

**ivity gains (Return on investment genera**

| | | | | ROI generated (1 hour @$100) | ROI generated (1 hour @$200) | ROI generated (1 hour @$300) | ROI ge... (1 hou... |
|---|---|---|---|---|---|---|---|
| rip 20Mb | 54.00 | | | $0.54 | $1.08 | $1.... | |
| trip 40Mb | 94.6... | | | $1.00 | $2.00 | $3.0... | |
| trip 80Mb | 181... | | | $1.60 | $3.20 | $4.8... | |
| ing EPS Graphic | 138... | | | $2.89 | $5.78 | $8.67 | |
| | 13... | | | $3.89 | $7.78 | $11.67 | |
| | | | | $2.46 | $4.93 | $7.39 | |
| | | | | $3.29 | $6.57 | $9.86 | |

| ...nerated ...ur @$100) | ROI generated (1 hour @$200) | ROI generated (1 hour @$300) |
|---|---|---|
| $10.76 | $21.51 | $32.27 |
| $10.00 | $20.00 | $30.00 |
| $8.01 | $16.02 | $24.03 |
| $57.78 | $115.56 | $173.3... |
| $58.33 | $116.67 | $1... |
| $24.63 | $49.26 | |
| $65.74 | | |
| **$235.25** | | |
| **$940.99** | | |
| **$10,350.88** | | |

| | |
|---|---|
| **$2,177.45** | |
| $67.59 | |
| **$270.37** | |
| **$2,974.03** | |
| $12.78 | |
| $36.71 | |
| **$197.95** | |

*Tables can be part of very complex visual structures while remaining completely editable. In this example, a table has been pasted inside a question mark transformed into an outline. The process was then repeated with the resulting group of objects, and a drop shadow was added. Editing any aspect of the elements of such a group is easy: the small illustrations on the right show different variations of stroke styles and effects at different levels of the design. Any of these changes can be achieved in a few mouse clicks.*

# Tables—
# the Way You Never
# Thought About Them

### The graphic design potential of tables

From a designer's perspective, InDesign's table functionality has several very powerful possibilities over similar functionality in other page layout applications. First of all, tables can use custom strokes, creating proper joins and corners for table cells, and secondly, objects pasted inside one cell can extend over the border of their container. And of course tables can be combined with transparency effects, drop shadows and nested frames. **In short, even if one does not set out to present tabular data, tables can be used as a creative tool in a variety of ways.**

For this example we have created a complete design assignment: a catalog page combining photographs, text and graphic elements. The design starts with a straightforward table, which is enhanced with custom strokes (de-activated for the last cell). The graphic elements in the background were created by extracting clipping paths from one of the imported images and using them as InDesign objects. (To achieve the texture of these elements, parallel lines with custom strokes were pasted inside the extracted paths.)

The content for the table cells was created by pasting frames with different line styles inside each other and by importing Photoshop files containing transparency information. Alignment of all the objects in the table was achieved by using alignment options for the complete table.

The most important aspect of this example is the speed and ease: the central table can be created and formatted in under 3 minutes, including creation of the picture frames and placement of the high-resolution photographs.

**Major Points:**

InDesign's table design functionality can be used for **creating and structuring design elements in a variety of ways**.

The fact that the **elements pasted inside table cells can extend over the borders of a cell** allows a number of interesting design combinations.

Only InDesign was used to create the examples in this report. **All illustrations are design elements and can be fully modified**.

### About the design
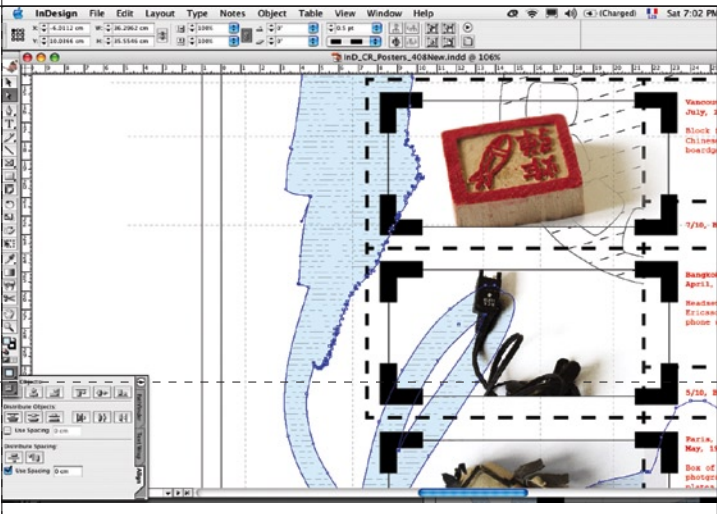


**Technical aspects:**

The basis for this design is a small table, which was used to organize imported Photoshop files with their embedded transparency information.

Nested frames and custom strokes were used to create the frames for the pictures.

The graphics in the background were created in InDesign by generating a clipping path from the pictures. The patterns inside these shapes was created by pasting lines with custom line styles into the outlines.
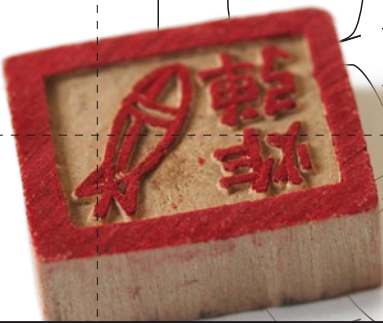
**Time required:**

It took **2 minutes and 23 seconds** to create and format the table as well as the picture frames and their content.

This included importing, scaling and positioning all 3 high-resolution Photoshop files.

# Found _ Wonders _ Catalog I
## http://www.wondersofthemodernworld.com

**Vancouver,
July, 2000:**
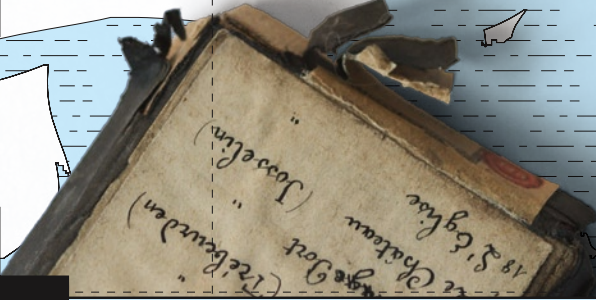
Block from
Chinese
boardgame.

**7/10, BB, 280880/a**

**Bangkok,
April, 2002:**

Headset for
Ericsson T28
phone with clip.

**5/10, BC, 79856/b**

**Paris,
May, 1995:**

Box of
photographic
plates dated
1912. Handwritten
label.

### Colophon:

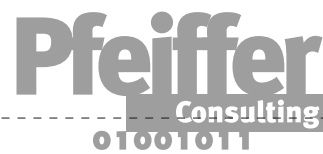**This report was created entirely with InDesign CS.**

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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