

The Story of the Ribbon

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Office User Experience Team

mi:08



Why am I here?



- Office 2007 introduced a totally redesigned user experience
- How and why did it happen?

Office 2007 Timeline

August 2003

- Product Cycle Begins

September 2005

- First Public Demo of the New Office UI at PDC

November 2005

- Beta 1

May 2006

- Beta 2

November 2006

- Released to Manufacturing

Summer 2003

flashback

Good Enough

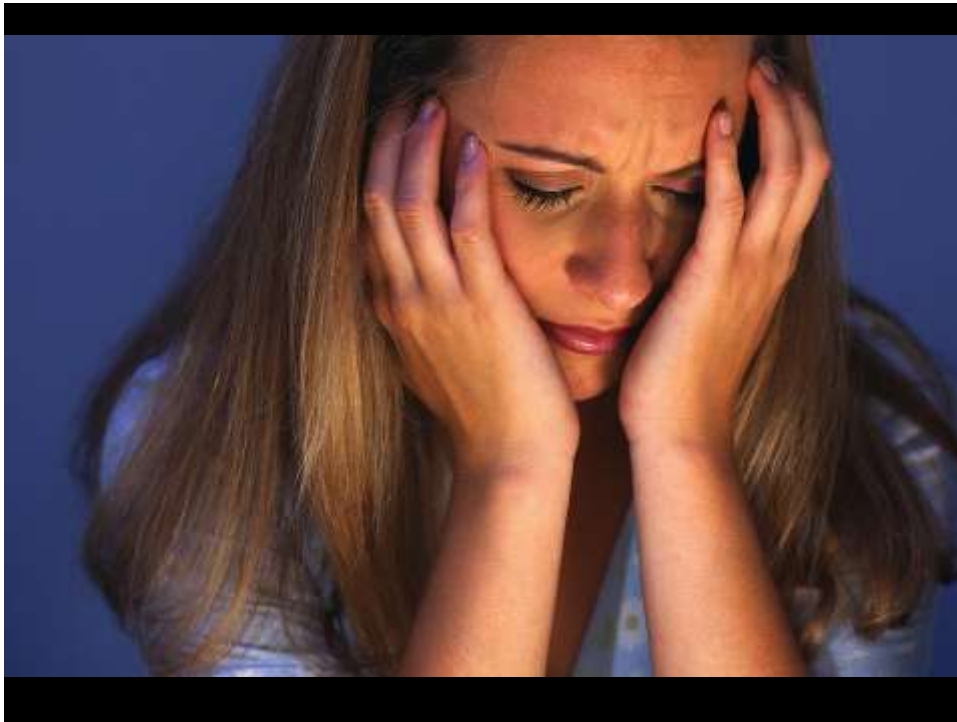
“Good Enough”

- Conventional wisdom:
 - “Office is good enough.”
 - “People only use the same 5% of Office.”
 - “Everything I need was in Office [95, 97, 2000].”
- Asking real people told us a different story:
 - “I’m sure there’s a way to do this, but I can’t figure out how.”
 - “Office is so powerful, I would be better at my job if I knew how to use it more.”

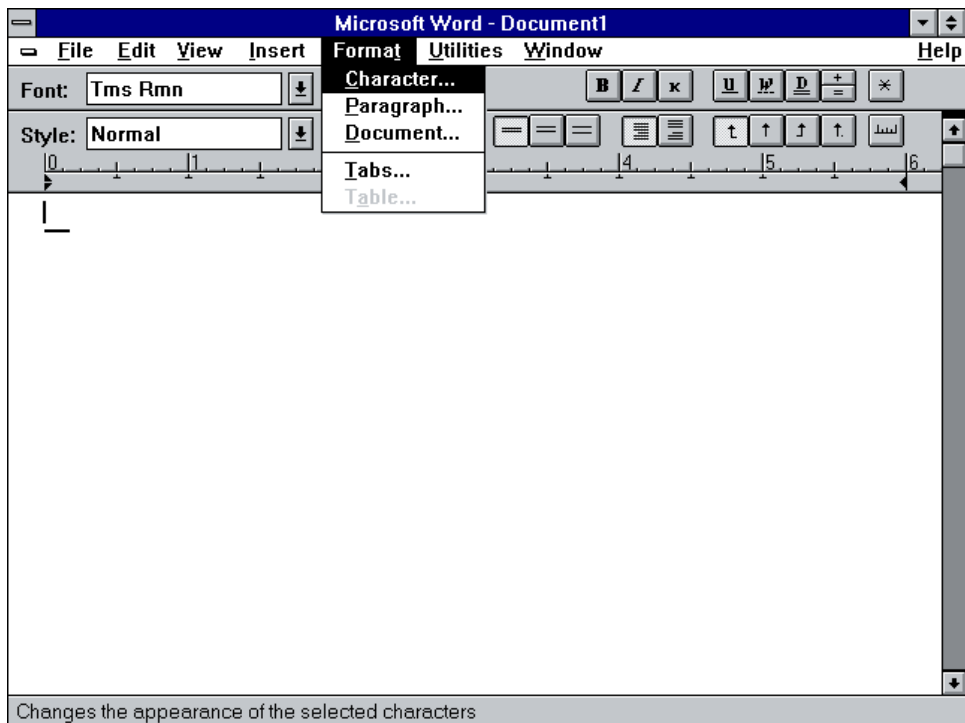
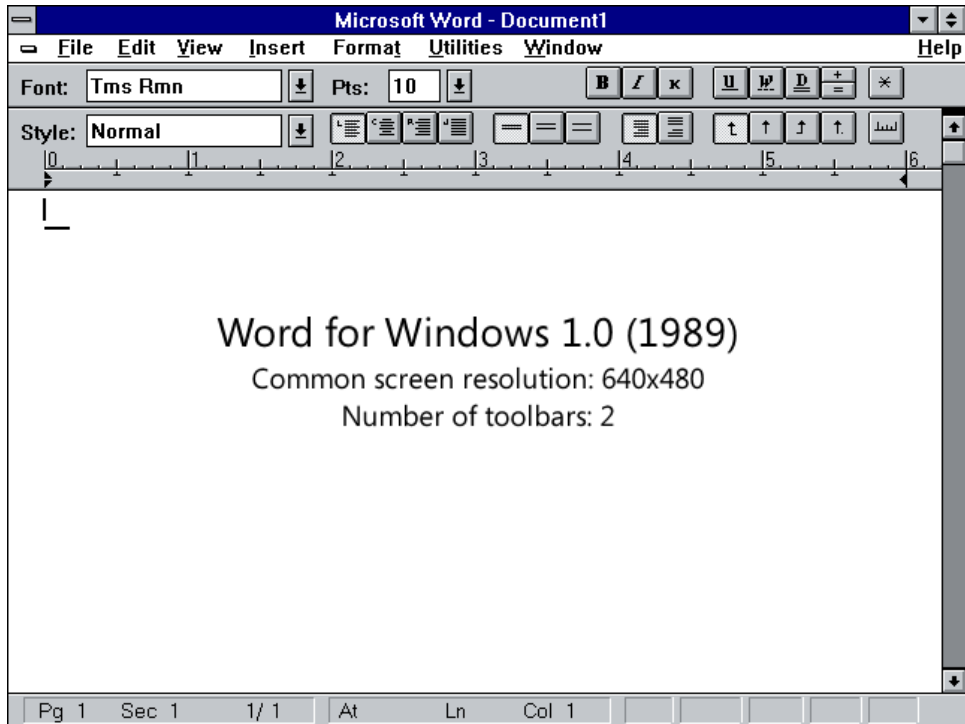
**The user interface was
failing our users.**

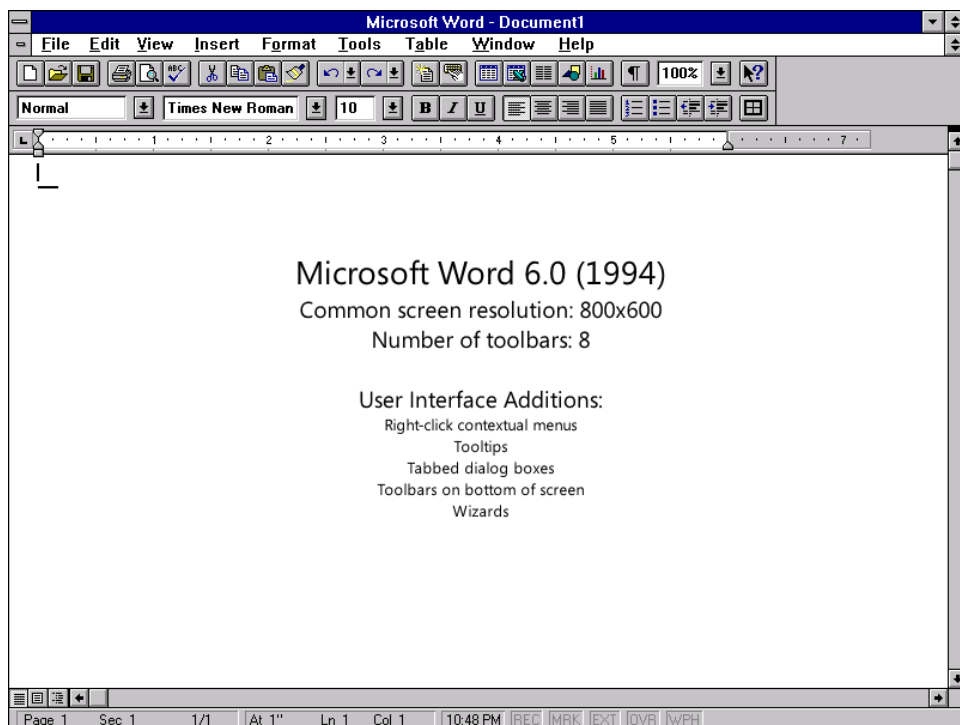
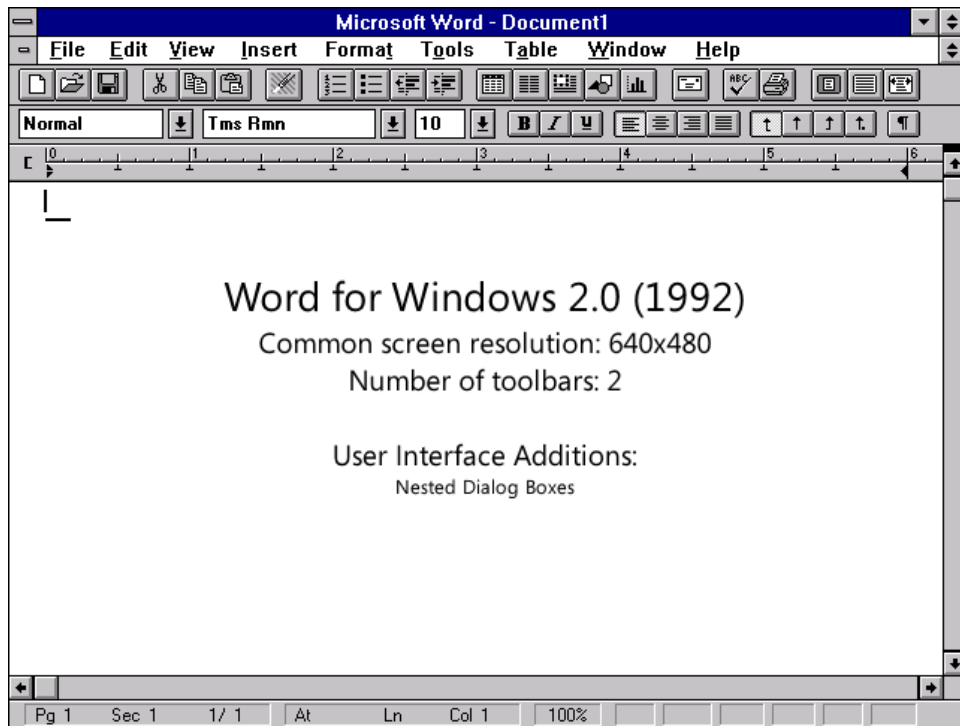
User Interface Breakdown

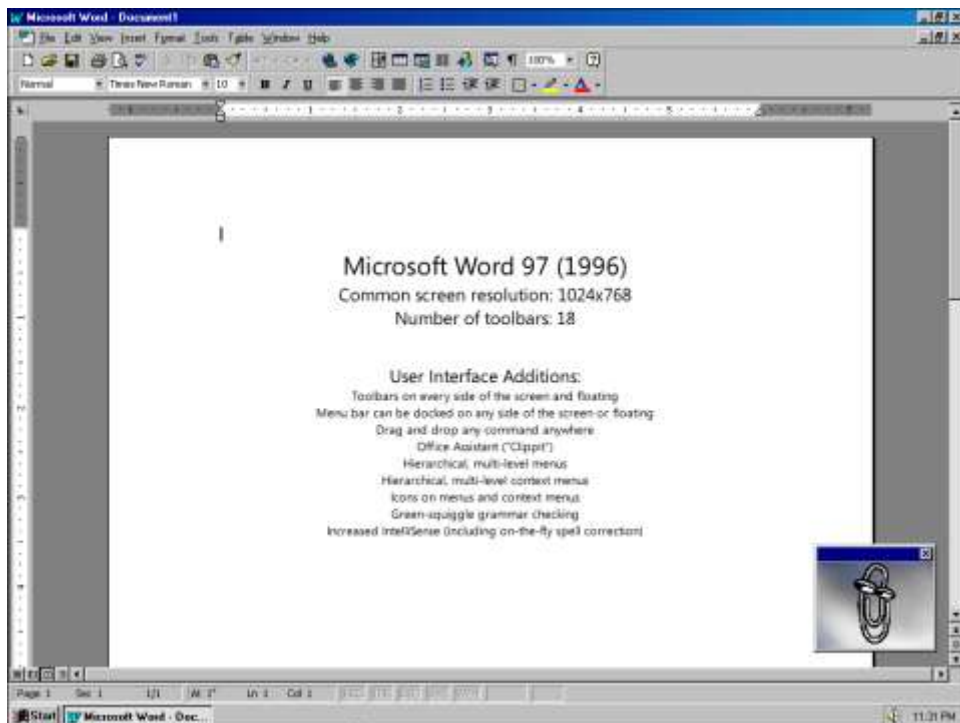
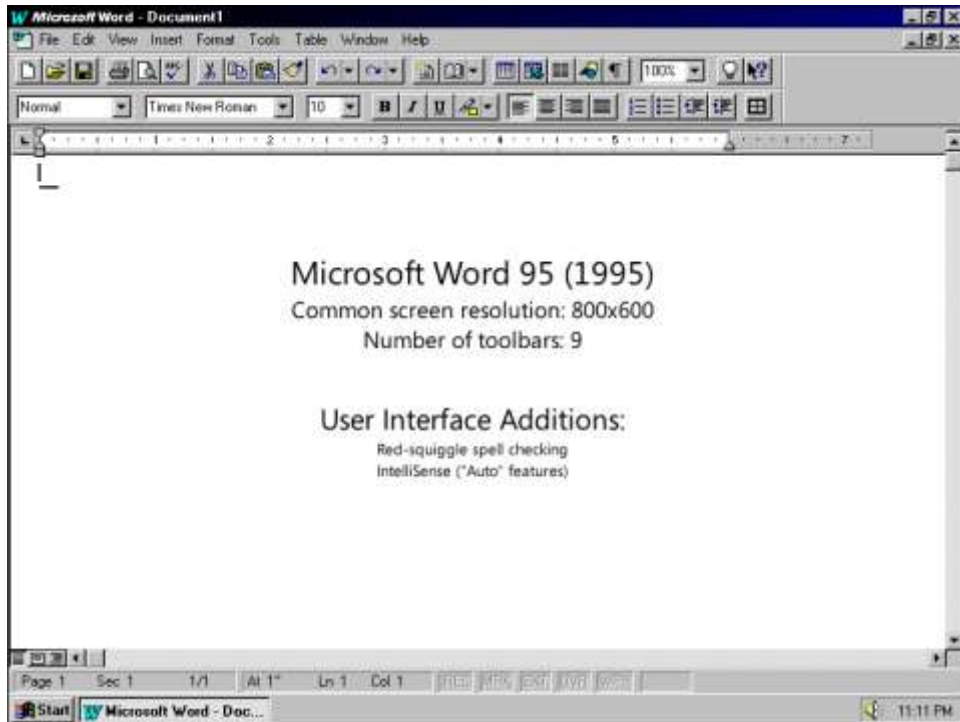
- We added new features...
...but hardly anyone found or used them
- Office seemed increasingly complicated...
...and that seemed to get worse every year
- People want better ways to get things done...
...but they assume nothing will ever change

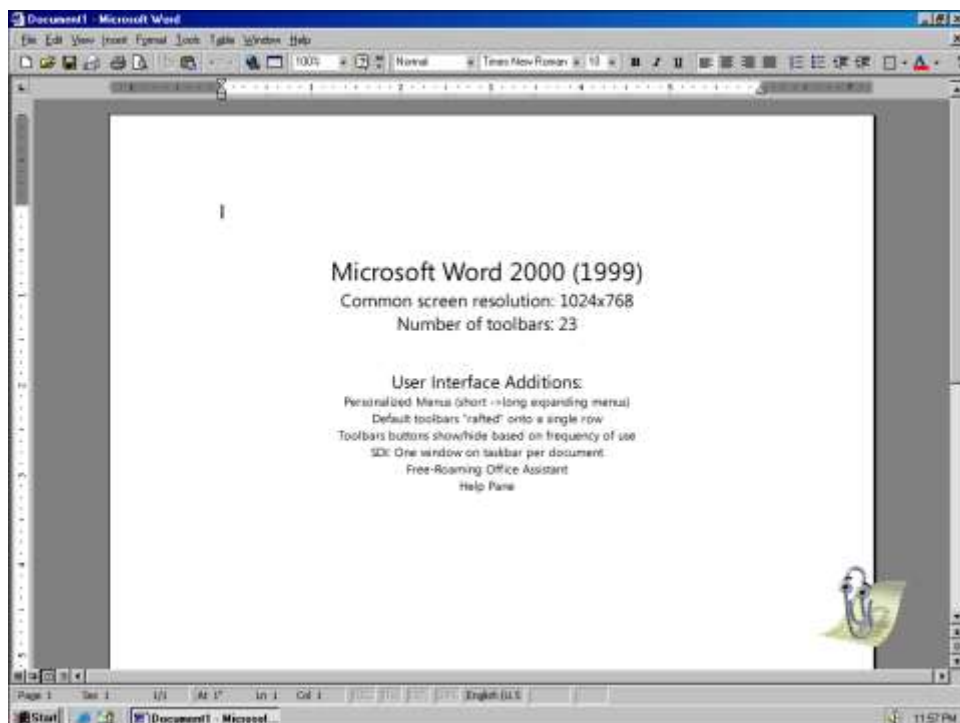
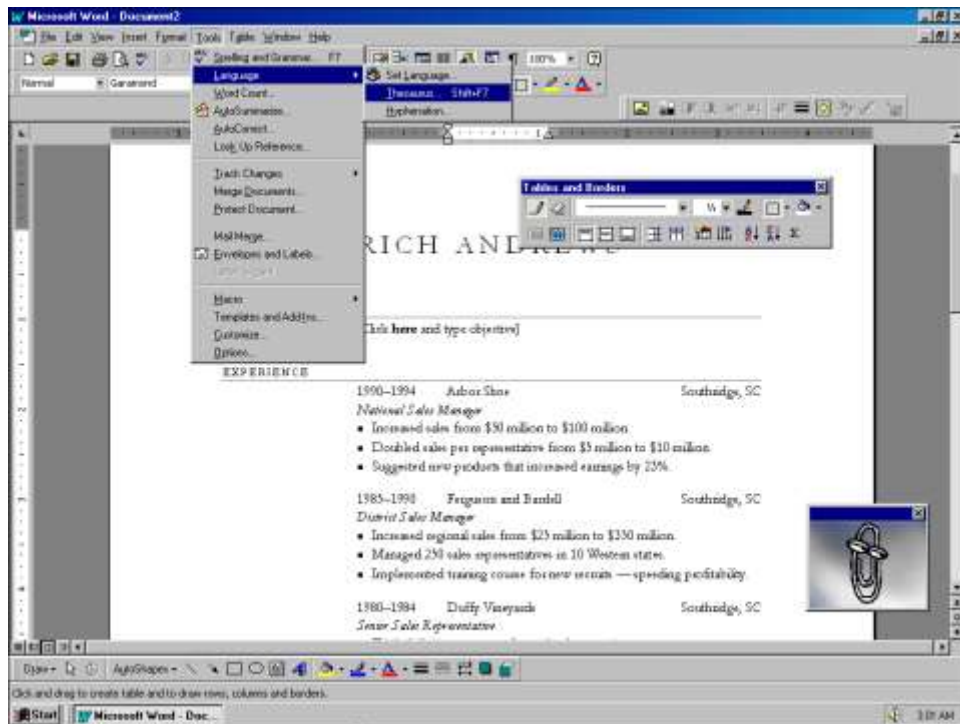


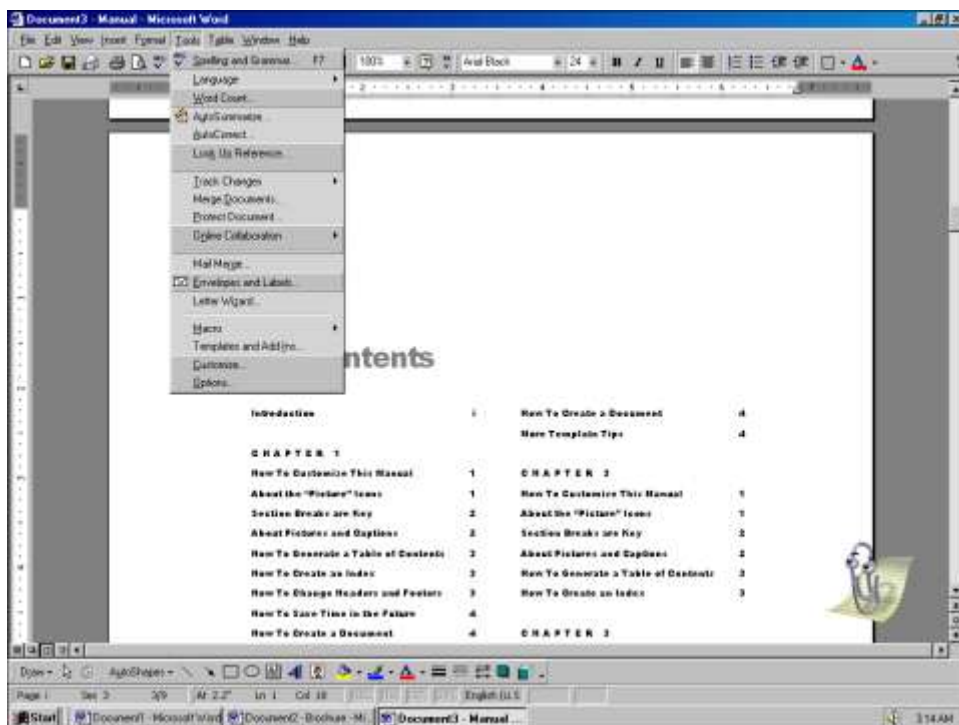
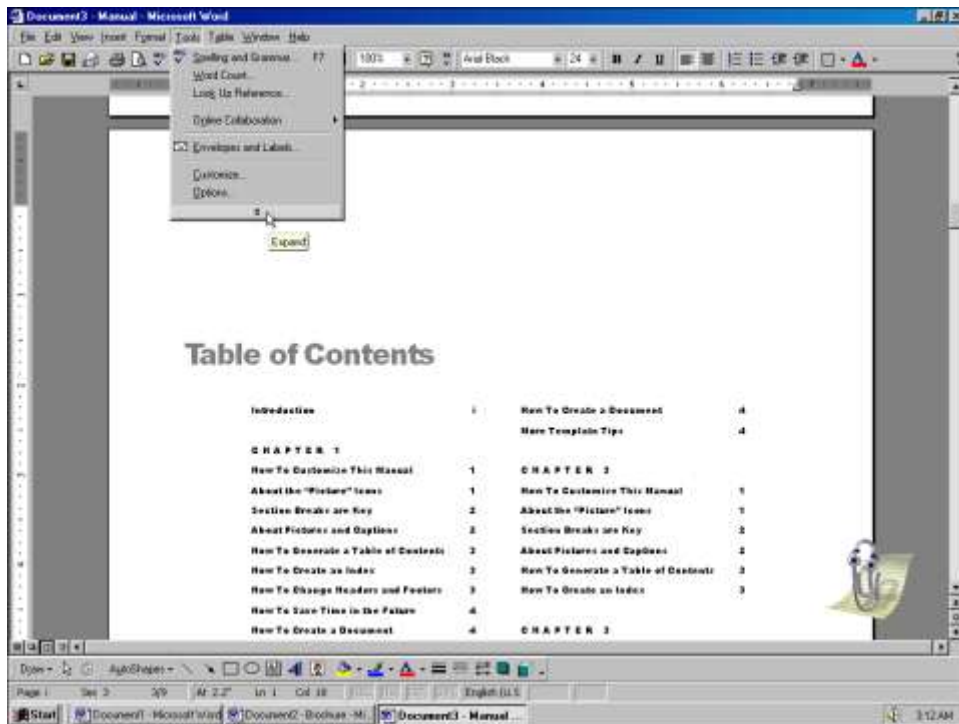


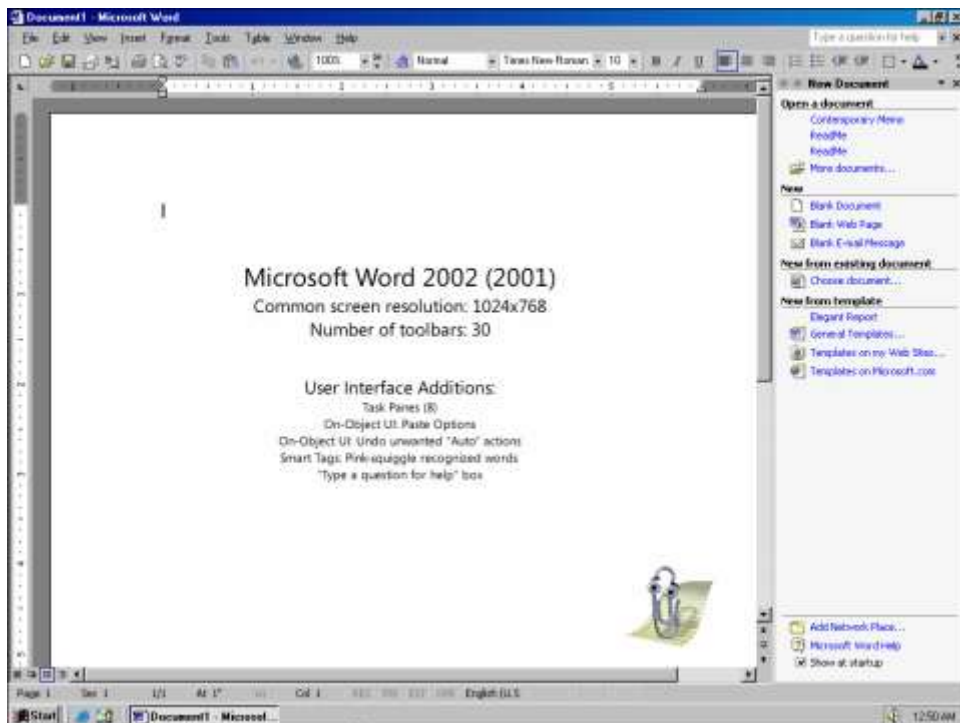
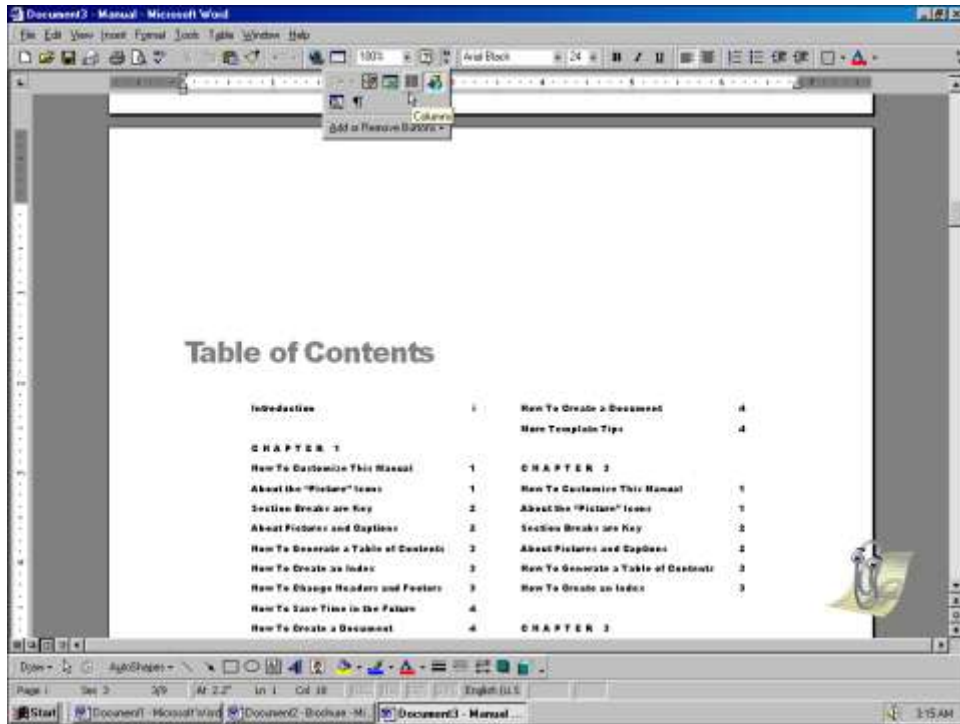


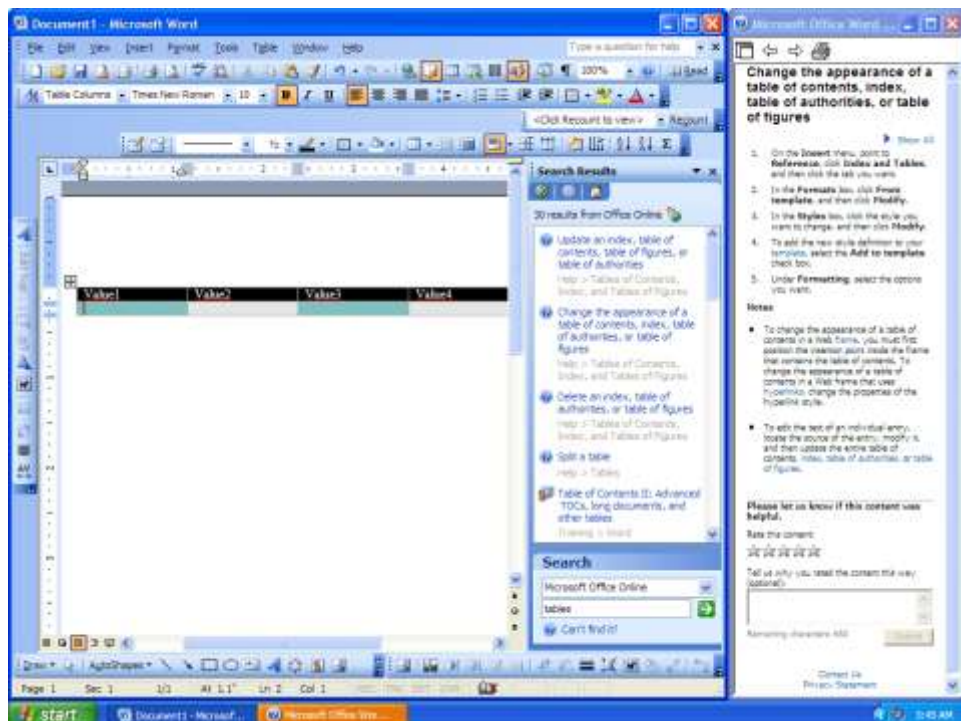


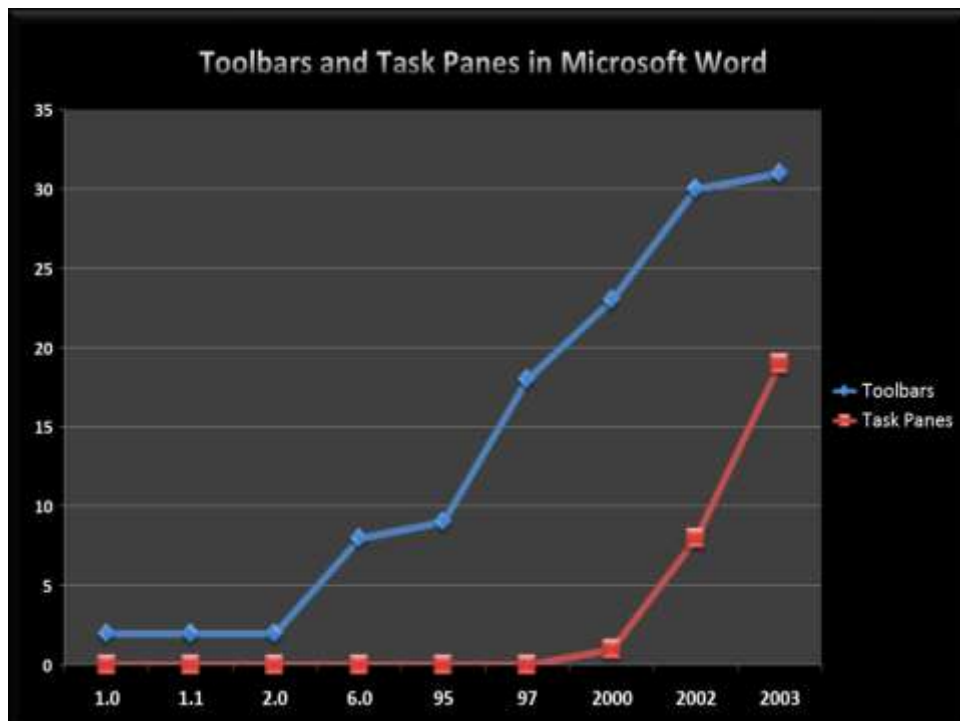
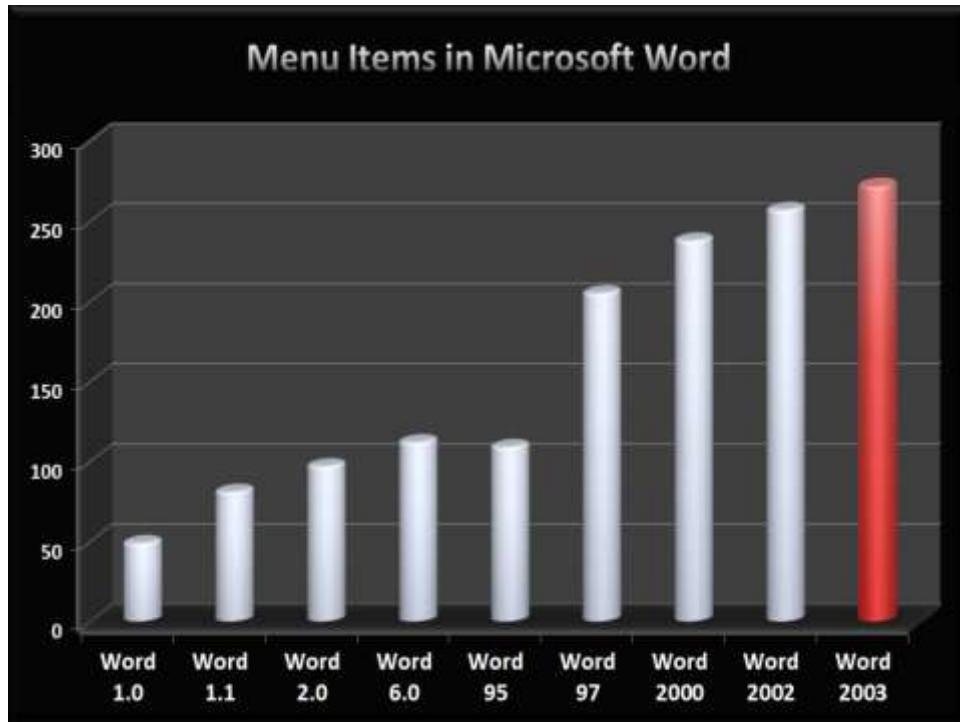






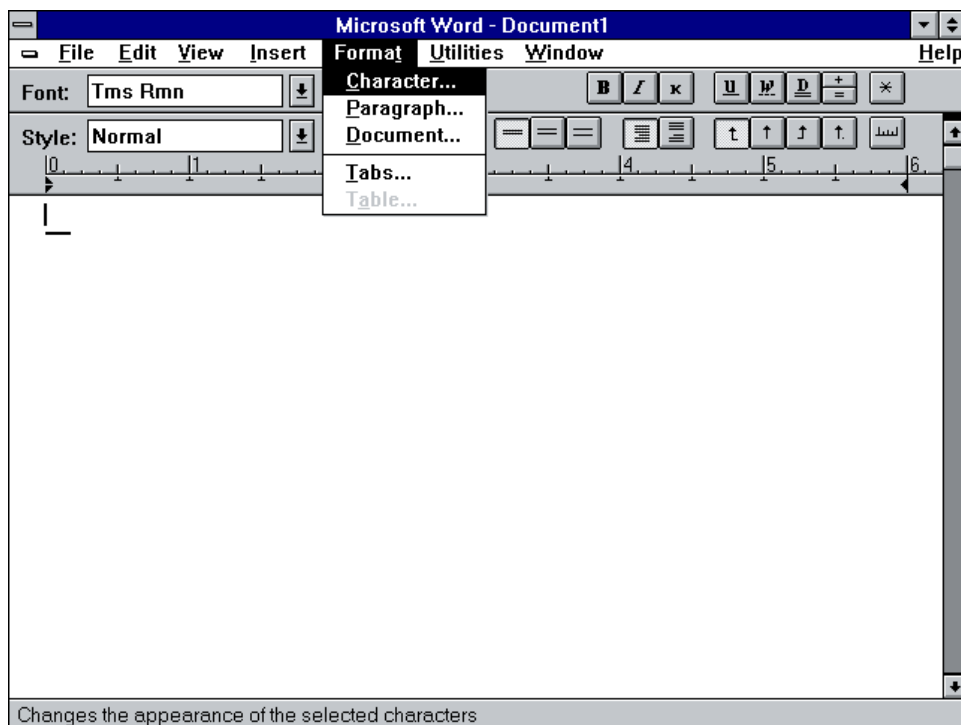






Why a New User Experience?

- Menus and Toolbars were designed for less full-featured programs
- The feature set of Office had grown and stretched existing UI mechanisms to the limit
- It was harder to find functionality than it was a decade ago
 - "There must be a way to do this..."
 - "I don't even know where to start looking."





**A new user interface
was needed...**

**...to reawaken the soul
of the software.**

Office 2007 User Interface

demo

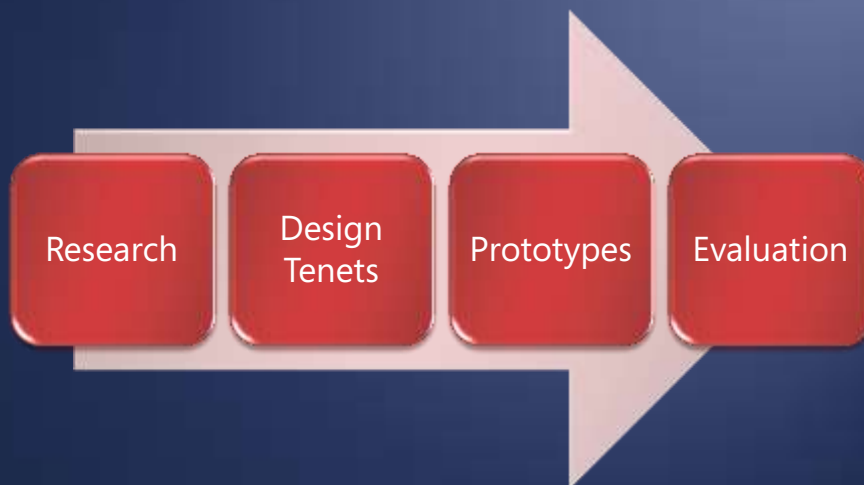
The New UI Framework

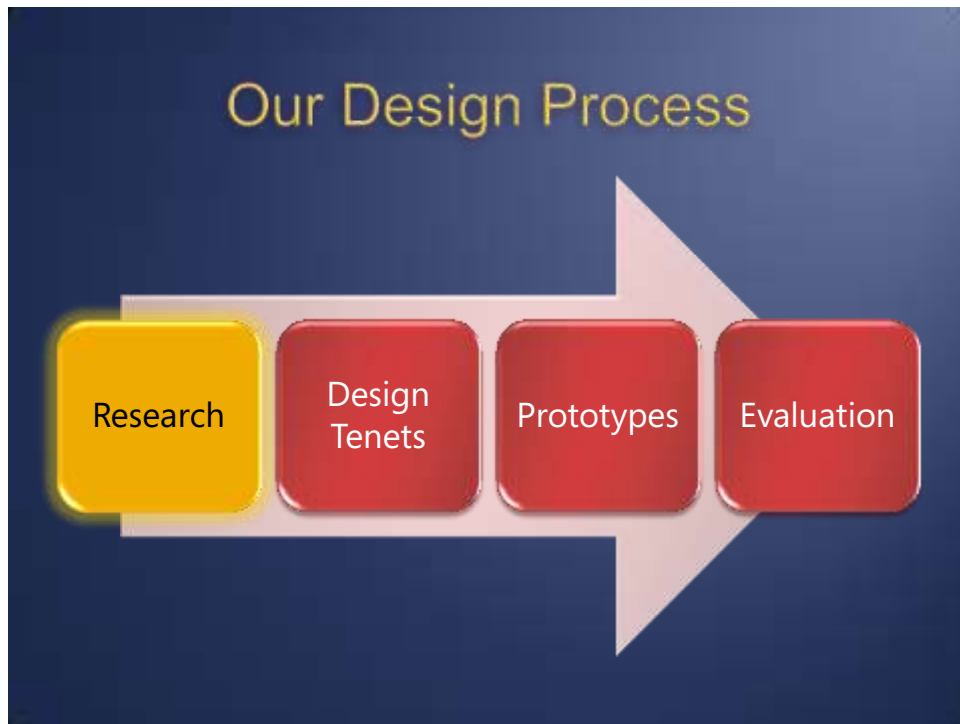
- The Ribbon
- Galleries
- Live Preview
- Contextual Tabs
- Quick Access Toolbar
- Mini Toolbar
- Enhanced Tooltips
- Enhanced Status Bar
- Live Zoom
- Customizable Status Bar
- KeyTips and Keyboard Navigation
- Streamlined Options
- Context Menus
- Office Menu

Results-Oriented Design

- Think about *features* instead of *commands*
- Present functionality at a higher level
- Illustrate features by their results
- Use galleries to get the user close to the result they want to achieve as quickly as possible
- **Visual! Tactile! Responsive!**
- *Compare to: Command-Oriented Design*

Our Design Process





Human interface design is
one part art
and one part science.

Art: Language and Emotion

- User interface is the language by which software communicates to a human what it's capable of
- People have an emotional relationship with their computer
 - On average, Office users spend more 1-on-1 time with Office than with their spouse

Art: Learning From Real People

- Visited people at their workplace
- Visited people in their home
- Invited people into our labs for freeform working and discussion
- We amassed over 10,000 hours of video of people using Office
- *How did people feel when using Office?*

The Fish

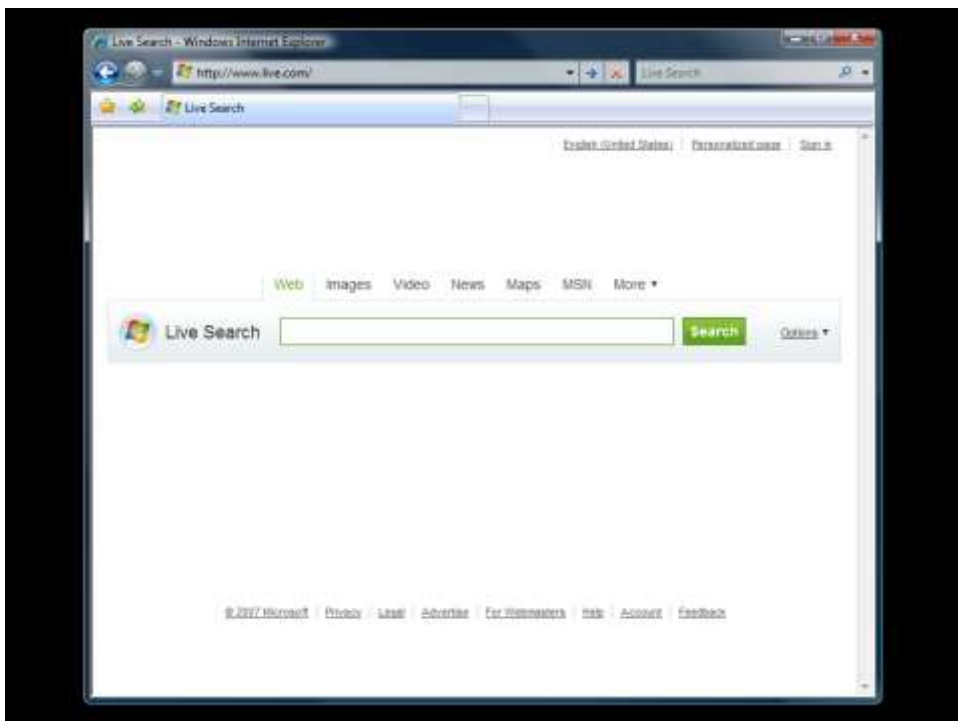
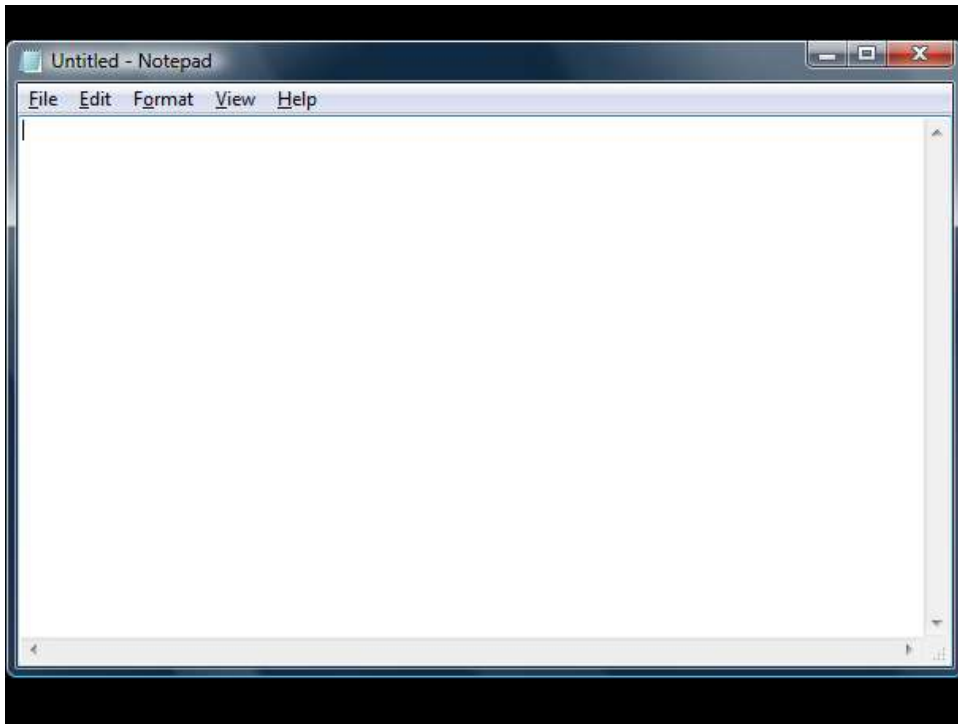
Summer 2003

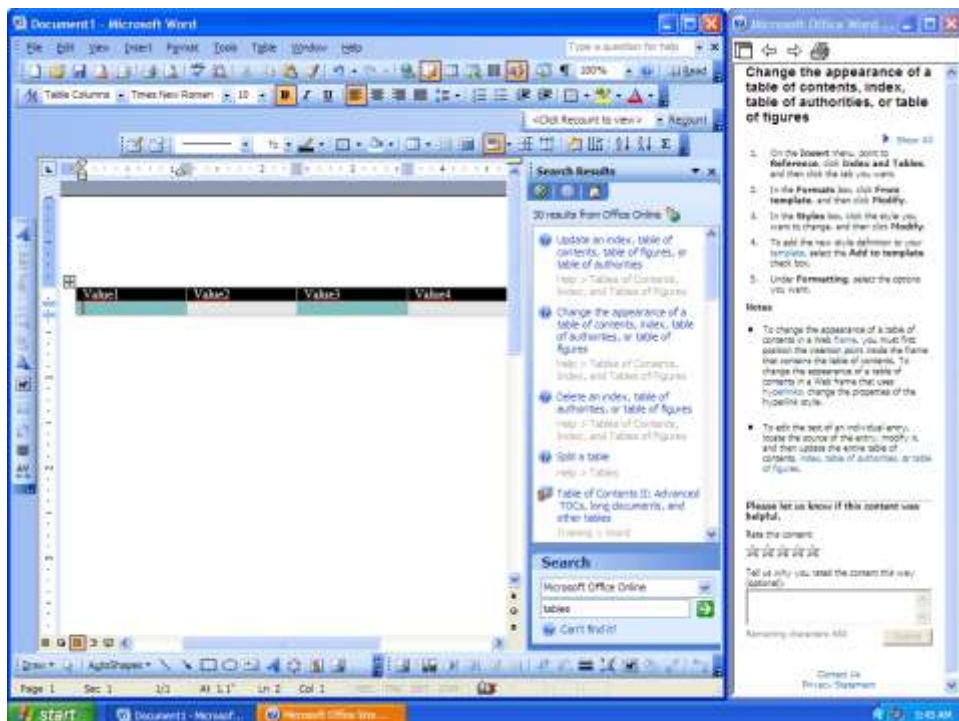
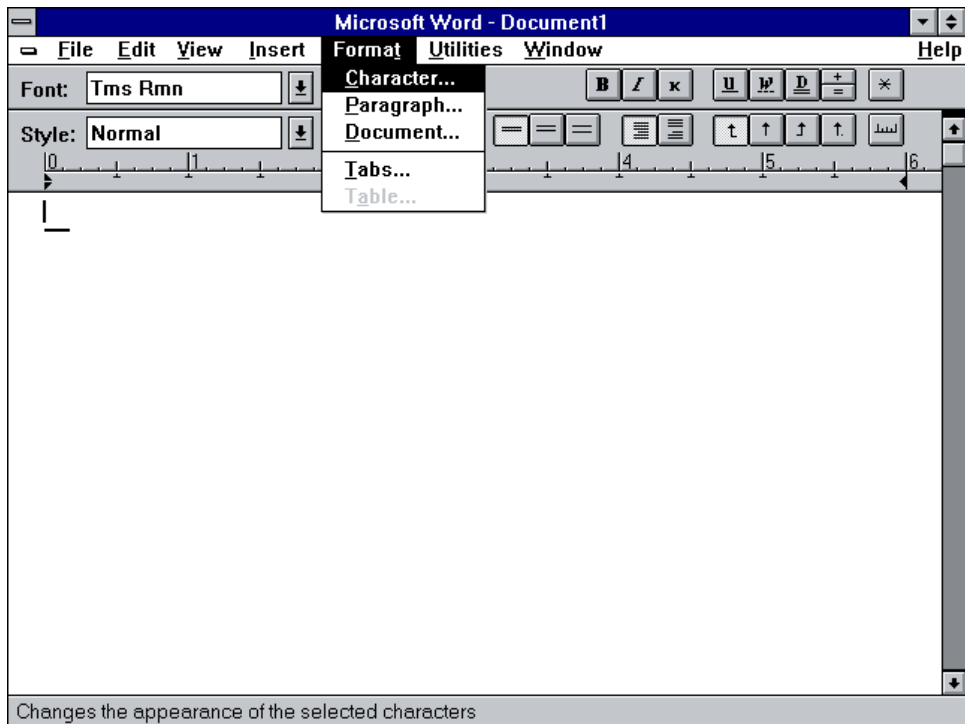
research



Revelation:

The
"Sense of Mastery"
was gone





Science: The Role of Data

- Over 3 billion data sessions collected from Office users
- ~2 million sessions per day
- Over the last 90 days, we've tracked 352 million command bar clicks in Word
- We track nearly 6000 individual data points
- We couldn't have done this without data!

Draw	Use=2132, New=14818
Select Objects	Use=12, New=1884
AutoShapes	Use=8117, New=17346
Line	Use=138, New=9472
Arrow	Use=242, New=1004
Rectangle	Use=111, New=1086
Oval	Use=1129, New=1276
Text Box	Use=126, New=4427
Vertical Text Box	Use=108, New=2652
WordArt	Use=121, New=3748
Diagram...	Use=133, New=408
Clip Art...	Use=882, New=1212
Picture...	Use=1829, New=13616
Ink Drawing and Writing	Use=1462, New=146
Fill Color	Use=1494, New=14621
Line Color	Use=1892, New=1501
Font Color	Use=963, New=46875
Line Style	Use=83, New=1782
Dash Style	Use=83, New=1188
Arrow Style	Use=104, New=3077
Shadow Style	Use=104, New=1576
3-D Style	Use=129, New=4771

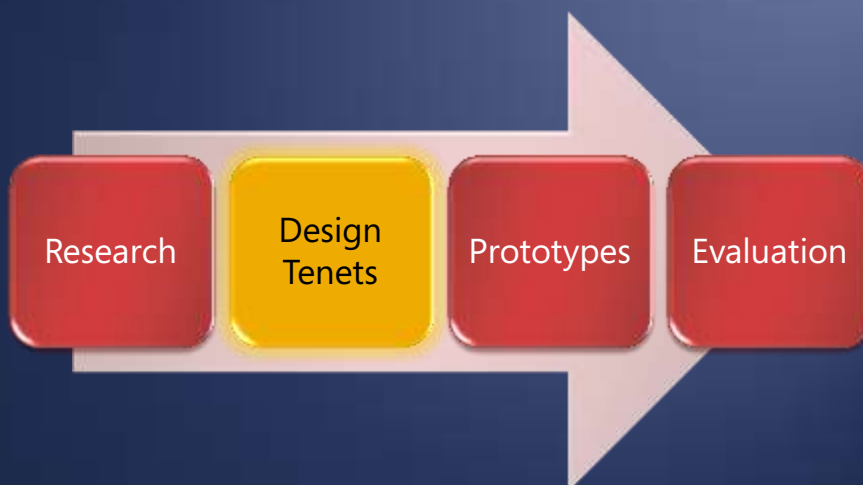
Science: Using Data

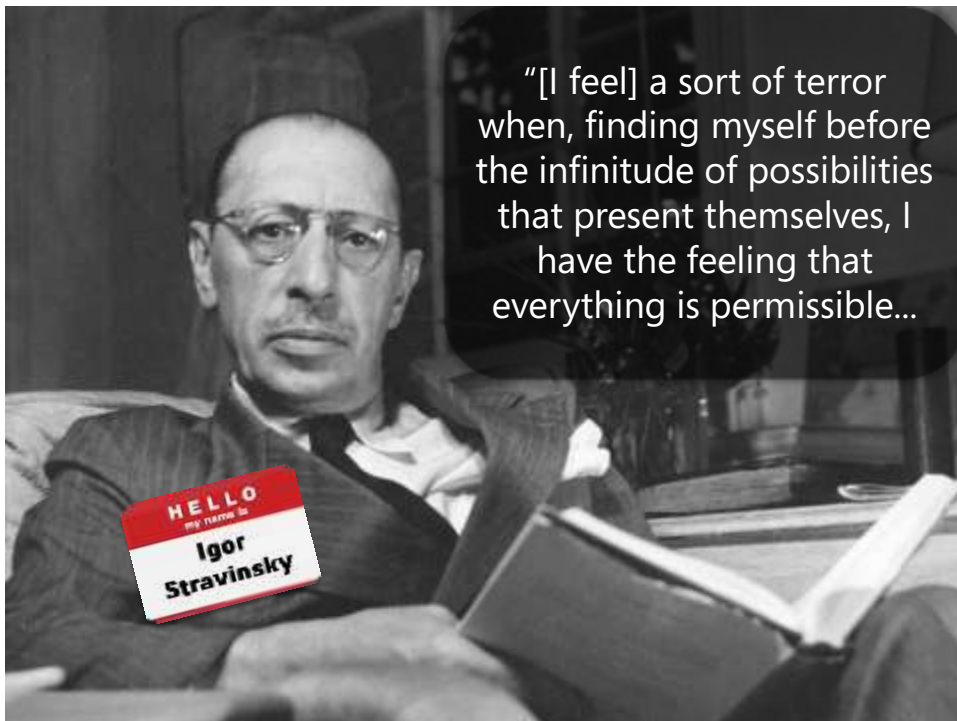
- Which commands do people use most?
- How are commands commonly sequenced together?
- Which commands are accessed via toolbar, mouse, keyboard?
- Where do people fail to find functionality they're asking for (in newsgroups, support calls, etc.)?

The Data

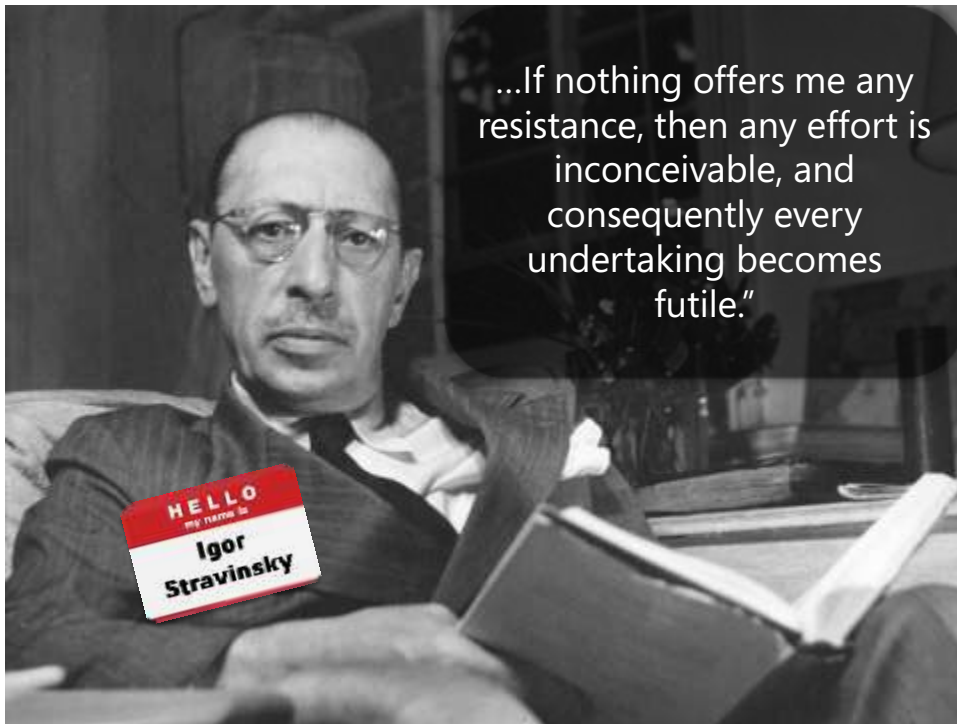
demo

Our Design Process





"[I feel] a sort of terror
when, finding myself before
the infinitude of possibilities
that present themselves, I
have the feeling that
everything is permissible...



UI Redesign Goals

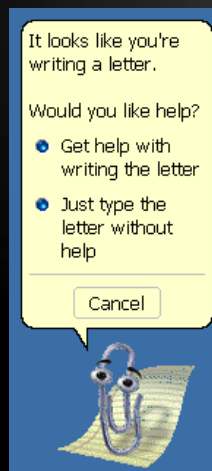
- Make the software easier to use
- Help people save time
- Help people to discover more of the power of Office
- Help people create beautiful, powerful documents

Our Design Tenets (Summer 2003)

- A person's focus should be on their content, not on the UI. Help people work without interference.
- Reduce the number of choices presented at any given time.
- Increase efficiency.
- Embrace consistency, but not homogeneity.
- Give features a permanent home. Prefer consistent-location UI over "smart" UI.
- Straightforward is better than clever.

Using Design Tenets

- Someone has a design idea:



Using Design Tenets

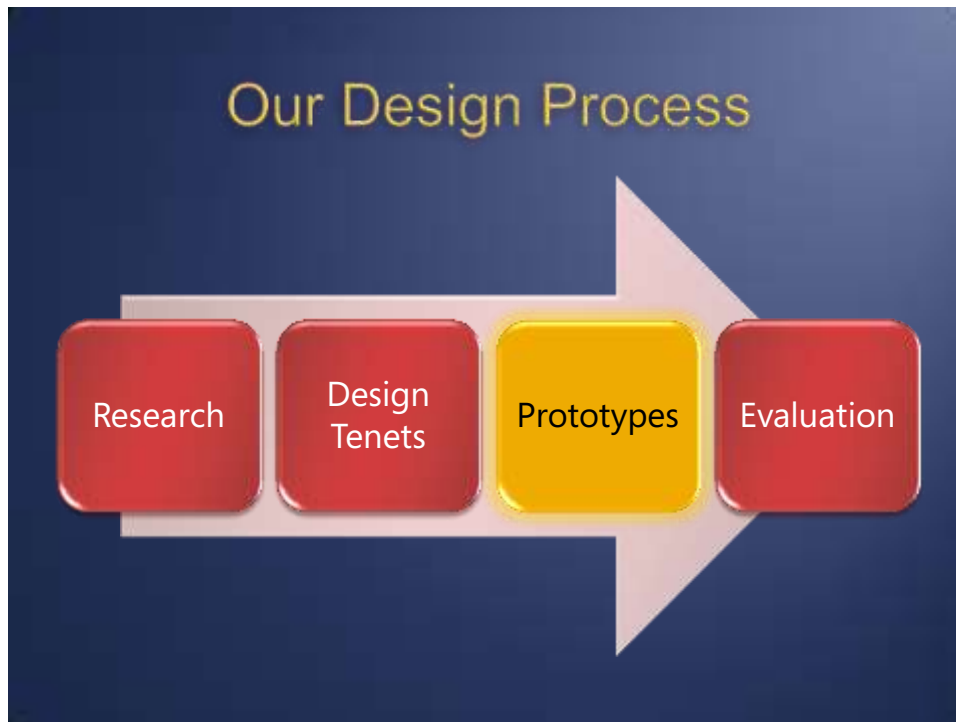
- Take the idea and validate against the design tenets



"Straightforward is better than clever."

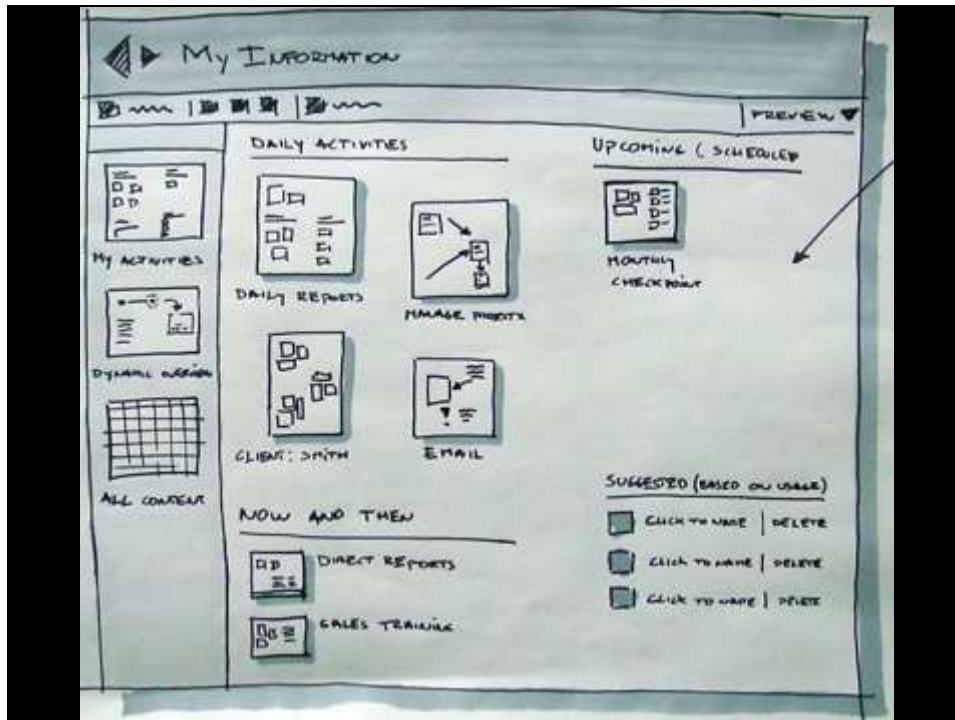
Design tenets have to be religion





Prototypes

- You can do anything in the world. What should you do?
- Hundreds of discrete prototypes were created
 - Over 25,000 images alone
- Everything from scratches on the whiteboard to elaborate Flash prototypes
- *Lots of late nights...*



Conceptual Prototypes

- First step: Conceptual Prototypes
- Designed to explore a few key concepts deeply (as opposed to broadly)
- A few examples:
 - The Configurator
 - Fluid Menus
 - The Strawman
 - Full-Page UI
 - Ring Task Guide

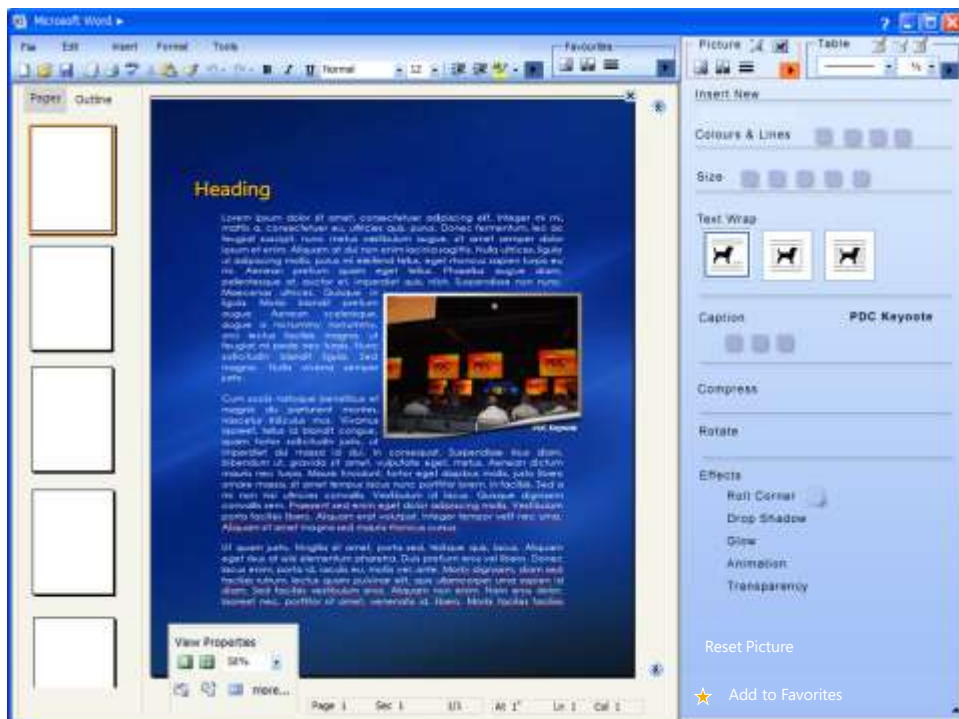


How Different Should It Be?

(September – October 2003)

Designing the Office UI

prototypes



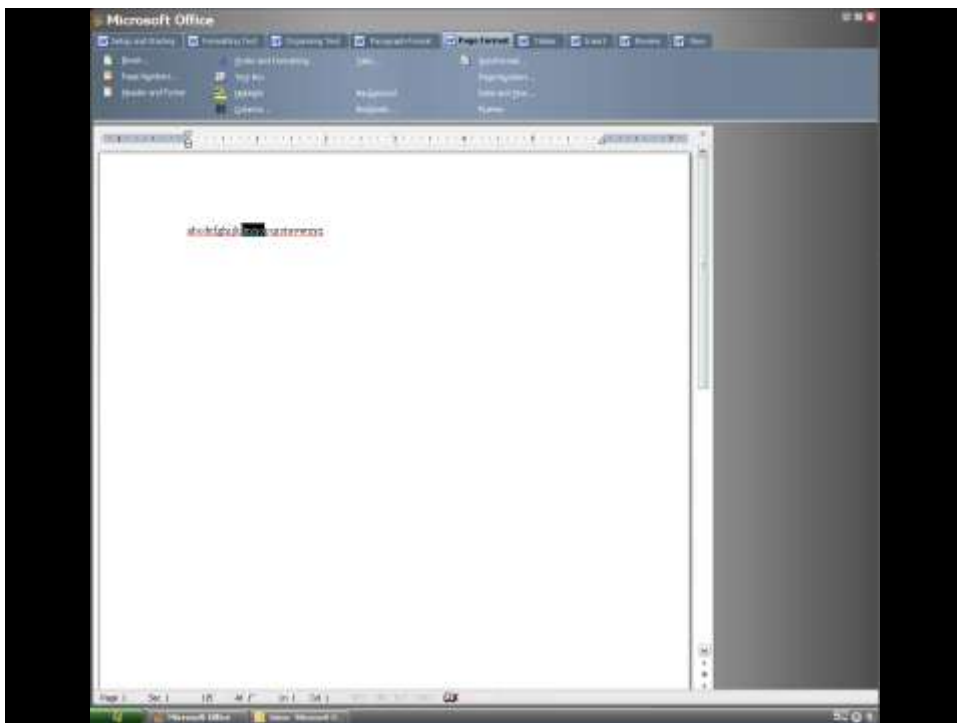
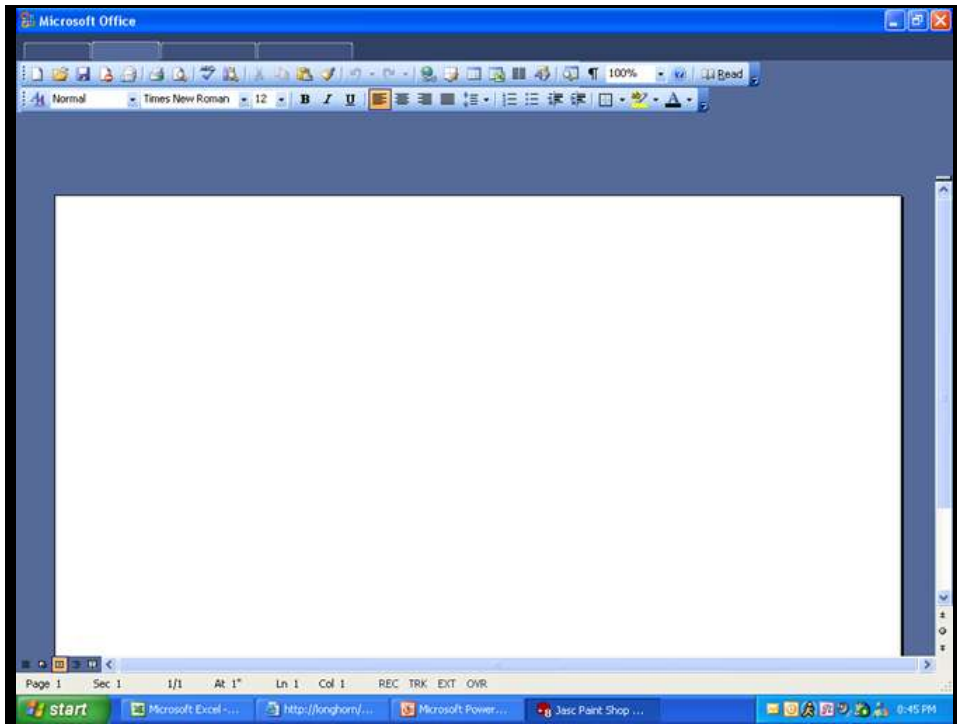


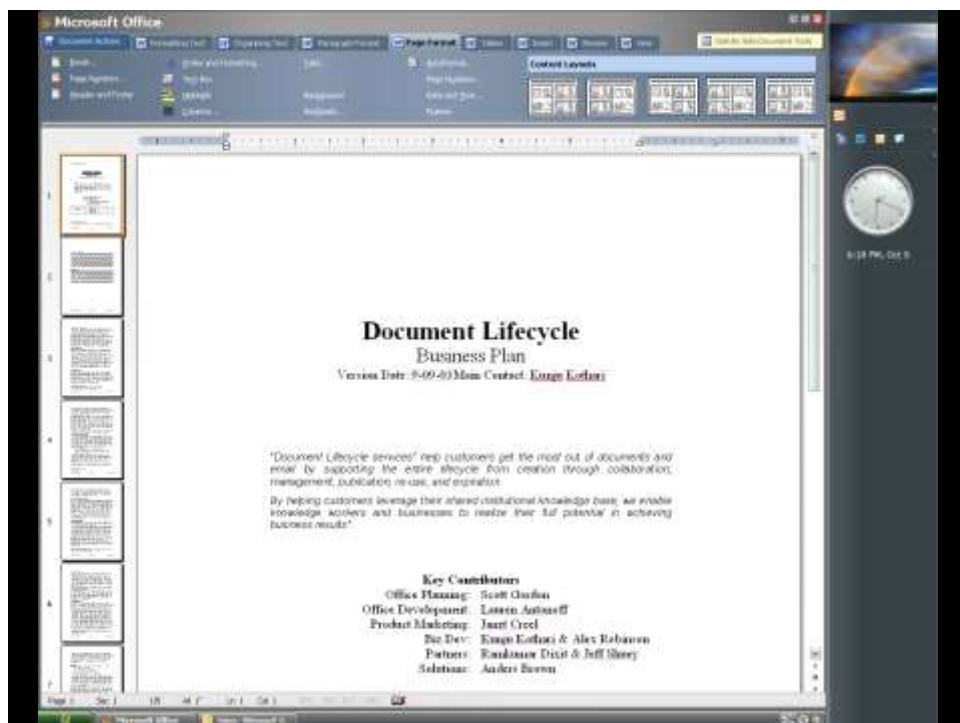
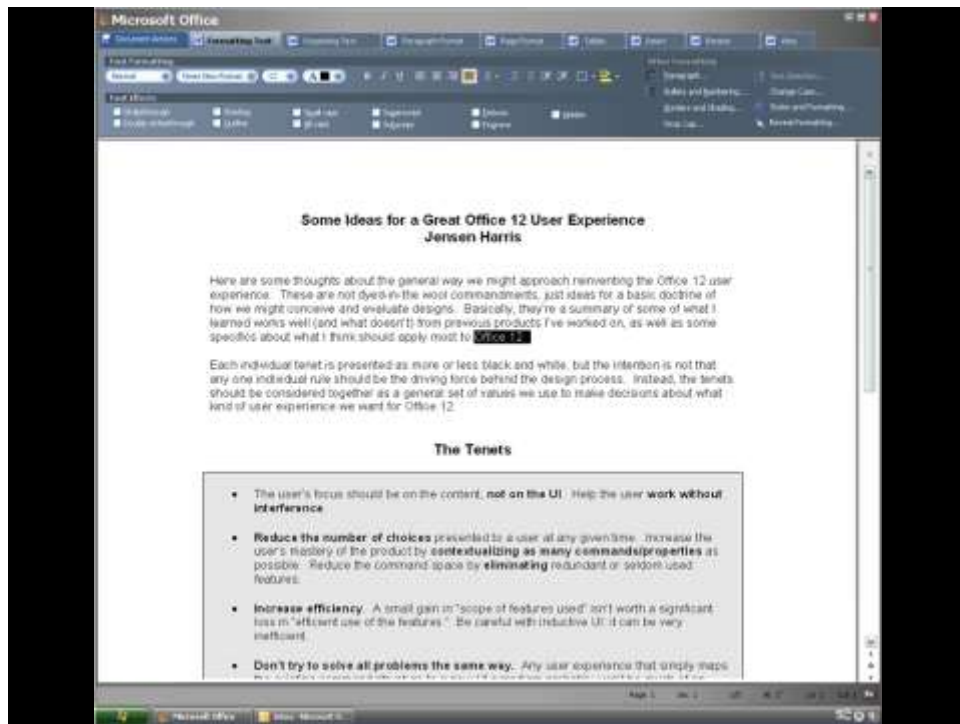
Nacent Ribbon Pictures

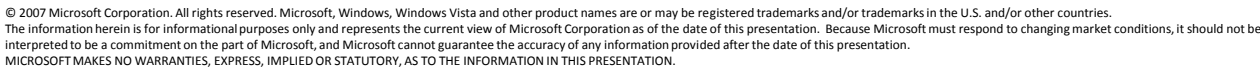
(October 9 & 10, 2003)

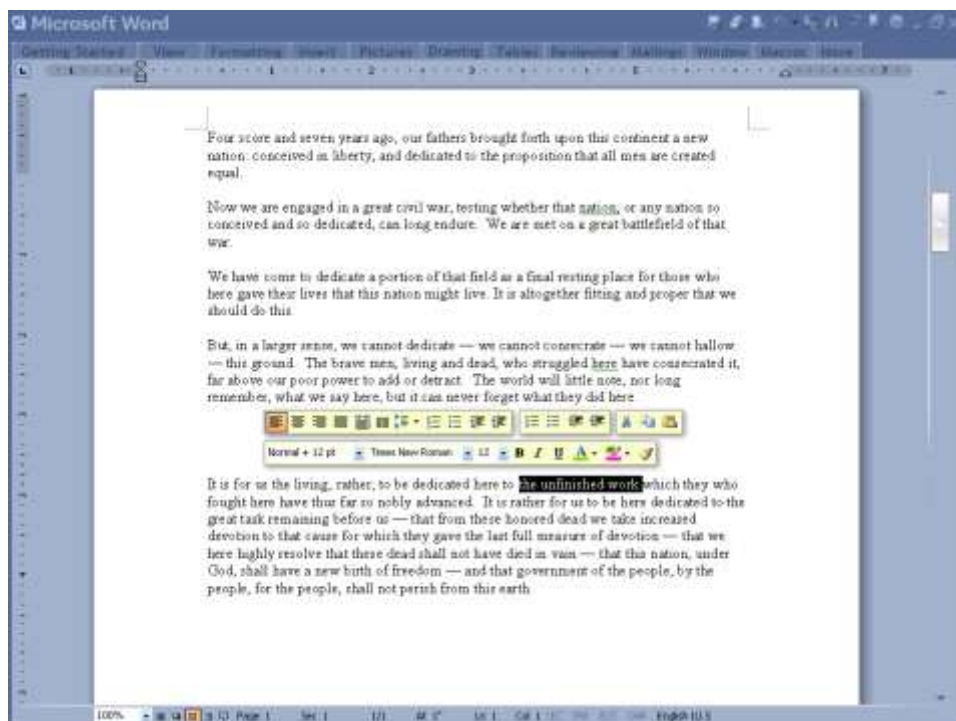
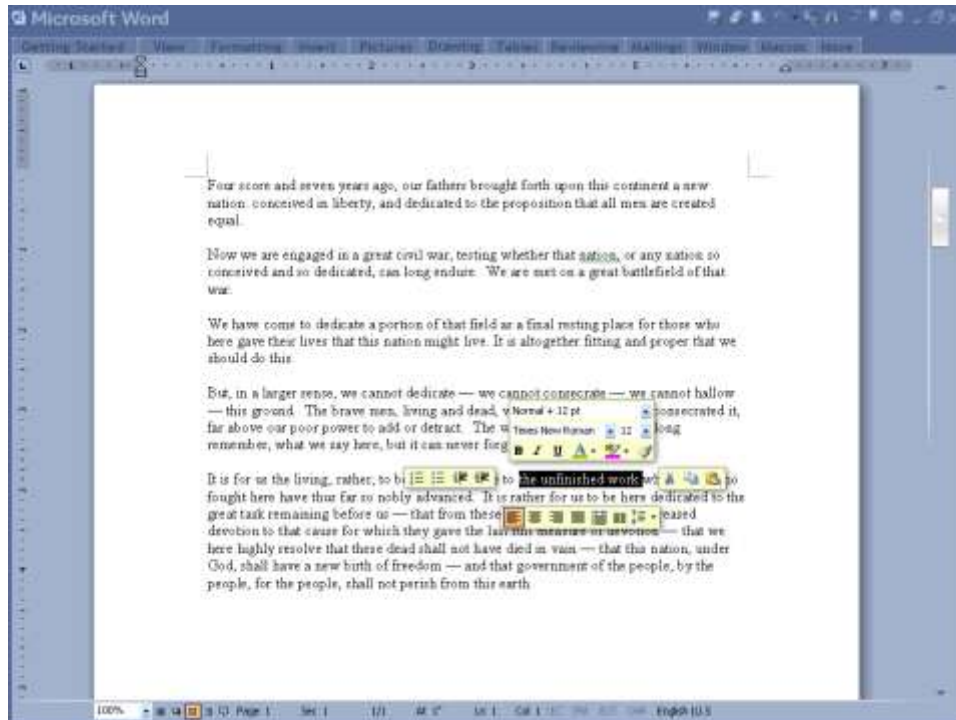
Designing the Office UI

prototypes







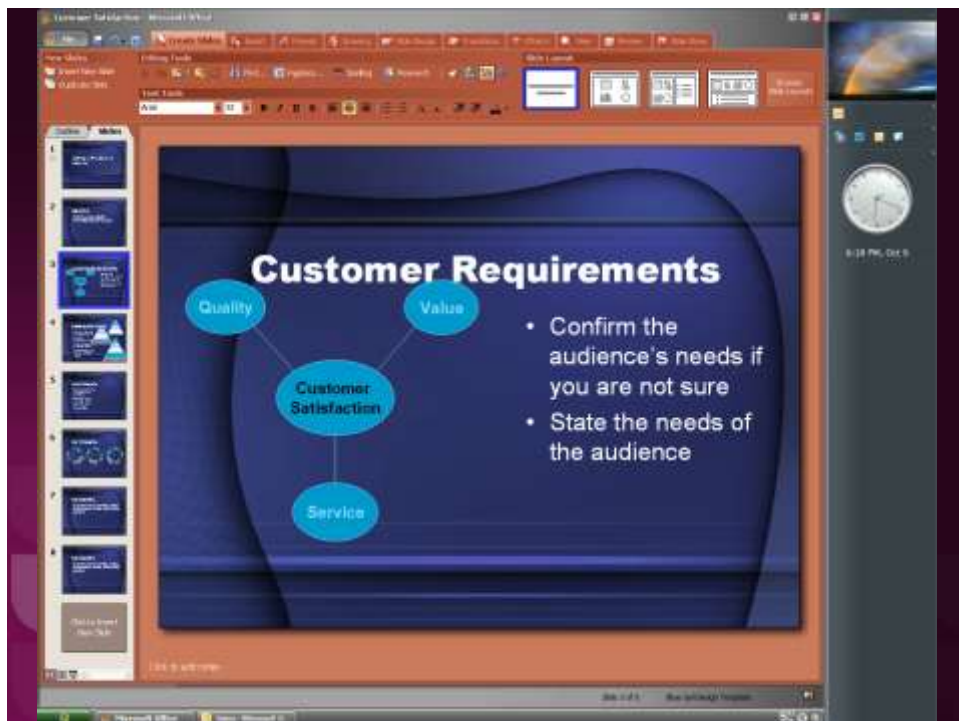


Tomatoey

(October 29-31, 2003)

Designing the Office UI

prototypes



The screenshot shows a Microsoft Office presentation window. The slide is titled "Customer Requirements" and features a diagram with four blue circles connected by lines: "Quality" (top left), "Value" (top right), "Service" (bottom), and "Customer Satisfaction" (center). To the right of the diagram is a bulleted list:

- Confirm the audience's needs if you are not sure
- State the needs of the audience

The presentation window includes a taskbar at the top with various icons and a sidebar on the left showing a list of slides. The system clock in the bottom right corner indicates 6:28 PM on Oct 9.

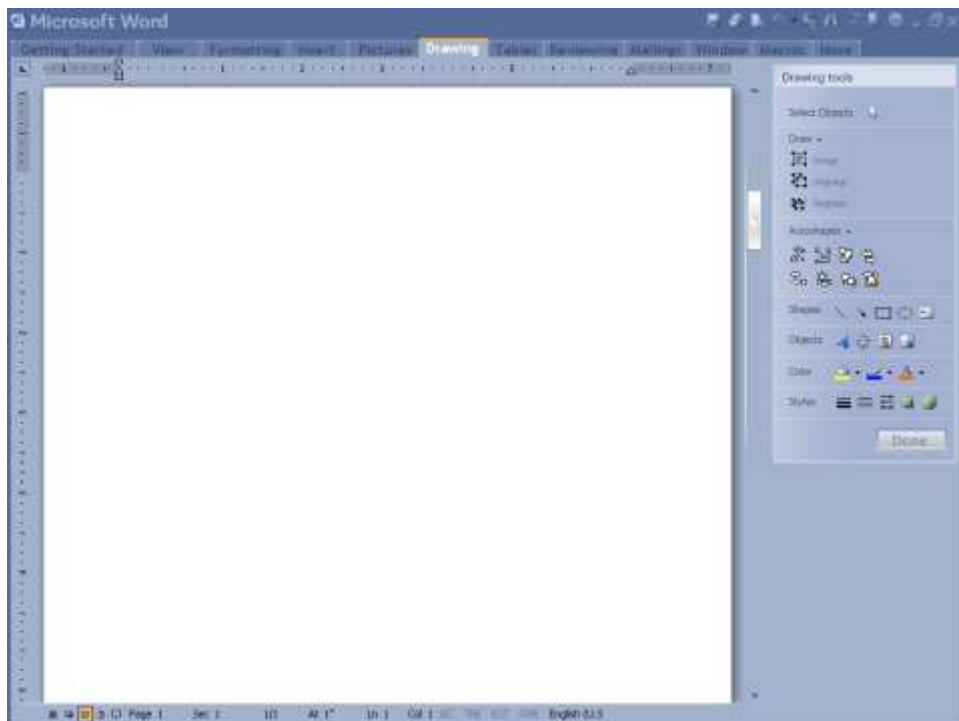
This is a duplicate of the screenshot above, showing the same Microsoft Office presentation window with the "Customer Requirements" slide. The diagram and bulleted list are identical to the first image. The system clock in the bottom right corner indicates 6:28 PM on Oct 9.

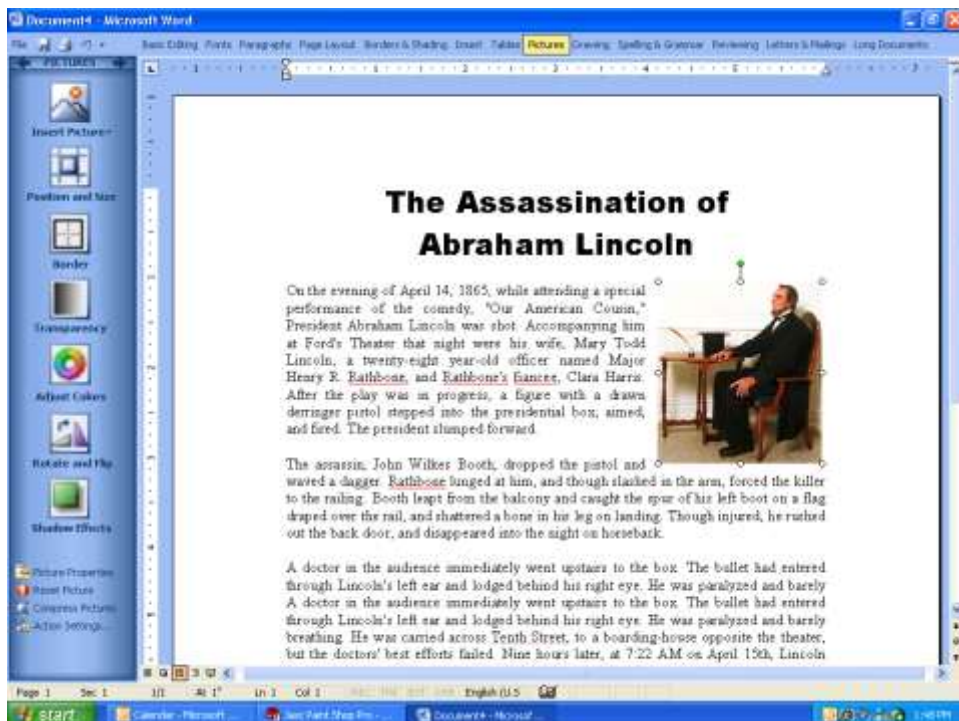
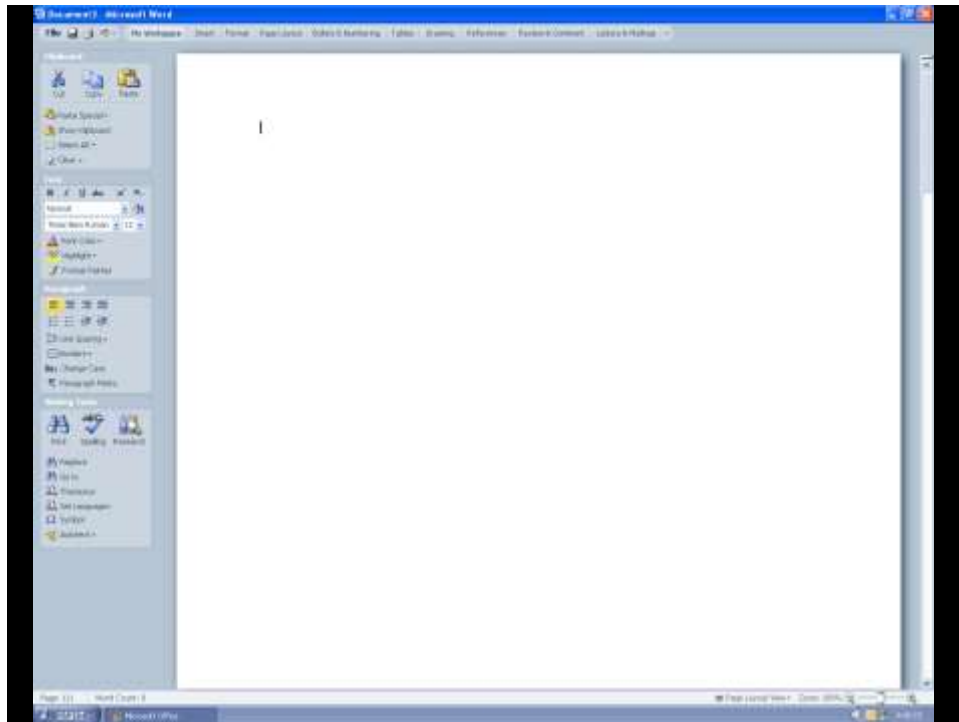
Ribbon on the Side

(November 2003 – May 2004)

Designing the Office UI

prototypes






Document4 - Microsoft Word

File Edit Format Paragraph Page Layout Borders & Shading Insert Tables Picture Drawing Spelling & Grammar Reviewing Letters & Mailings Long Documents

The Assassination of Abraham Lincoln

On the evening of April 14, 1865, while attending a special performance of the comedy, "Our American Cousin," President Abraham Lincoln was shot. Accompanying him at Ford's Theater that night were his wife, Mary Todd Lincoln, a twenty-eight year-old officer named Major Henry R. Rathbone, and Rathbone's fiancée, Clara Harris. After the play was in progress, a figure with a drawn derringer pistol stepped into the presidential box, aimed, and fired. The president flumped forward.



The assassin, John Wilkes Booth, dropped the pistol and waved a dagger. Rathbone lunged at him, and though slashed in the arm, forced the killer to the railing. Booth leapt from the balcony and caught the spur of his left boot on a flag draped over the rail, and shattered a bone in his leg on landing. Though injured, he rushed out the back door, and disappeared into the night on horseback.

A doctor in the audience immediately went upstairs to the box. The bullet had entered through Lincoln's left ear and lodged behind his right eye. He was paralyzed and barely breathing. He was carried across Tenth Street, to a boarding-house opposite the theater, but the doctors' best efforts failed. Nine hours later, at 7:22 AM on April 15th, Lincoln

Page 1 Sec 1

Start Calendar - Microsoft Word Field New Doc Document4 - Microsoft

Microsoft Office

File Edit Format Paragraph Page Layout Borders & Shading Insert Tables Picture Drawing Spelling & Grammar Reviewing Letters & Mailings Long Documents

Astro Pricing Guide

Model	Style	Type	Focal Length	Buy Price	Retail	AstroMart Low	rt	rt Low	rt Avg	rt High
5	TeleVue	Plossl	55	\$ 180	\$ 220	145	150	195		\$ 165.00
6	TeleVue	Plossl	45	\$ 80	\$ 110					\$ 72.00
7	TeleVue	Plossl	35	\$ 65	\$ 110	95	90	70		
8	TeleVue	Plossl	25	\$ 60				65		
9	TeleVue	Plossl	25	\$ 70	\$.95					
10	TeleVue	Plossl	21	\$ 90						
11	TeleVue	Plossl	20	\$ 90	\$.95	55	75	60 m/s		
12	TeleVue	Plossl	17	\$ 40		40	41 m/s			
13	TeleVue	Plossl	15	\$ 90	\$.82	55	65			
14	TeleVue	Plossl	13							\$ 81.00
15	TeleVue	Plossl	11	\$ 90	\$.82	64	65			
16	TeleVue	Plossl	10.5	\$ 35		50				\$ 51.00
17	TeleVue	Plossl	8	\$ 55	\$.82	55	72			
18	TeleVue	Plossl	7.4							\$ 48.99
19	TeleVue	Panoptic	35		\$ 365	295	320			
20	TeleVue	Panoptic	27	\$ 275	\$ 330	280	365	305		
21	TeleVue	Panoptic	24		\$ 295					
22	TeleVue	Panoptic	22	\$ 190	\$ 260	195	200	210	250	\$ 236.37
23	TeleVue	Panoptic	19	\$ 180	\$ 240					\$ 215.00
24	TeleVue	Panoptic	15		\$ 210					
25	TeleVue	Nagler 5	31	\$ 500	\$ 620			250		\$ 560.00
26	TeleVue	Nagler 5	25	\$ 475	\$ 560			300		\$ 362.00
27	TeleVue	Nagler 4	22		\$ 460			215		\$ 390.00
28	TeleVue	Nagler 2(disc)	20	\$ 170						
29	TeleVue	Nagler 4	17	\$ 275	\$ 365	295	339			
30	TeleVue	Nagler 5	16		\$ 330			270		
31	TeleVue	Nagler 5	31	\$ 500	\$ 620			300		\$ 560.00
32	TeleVue	Nagler 5	25	\$ 475	\$ 560			300		\$ 362.00
33	TeleVue	Nagler 4	22		\$ 460			215		\$ 390.00
34	TeleVue	Nagler 2(disc)	20	\$ 170						
35	TeleVue	Nagler 4	17	\$ 275	\$ 365	295	339			
36	TeleVue	Nagler 5	16		\$ 330			270		
37	TeleVue	Nagler 5(disc)	16		\$ 230					
38	TeleVue	Nagler 5(disc)	16		\$ 230					

Ready

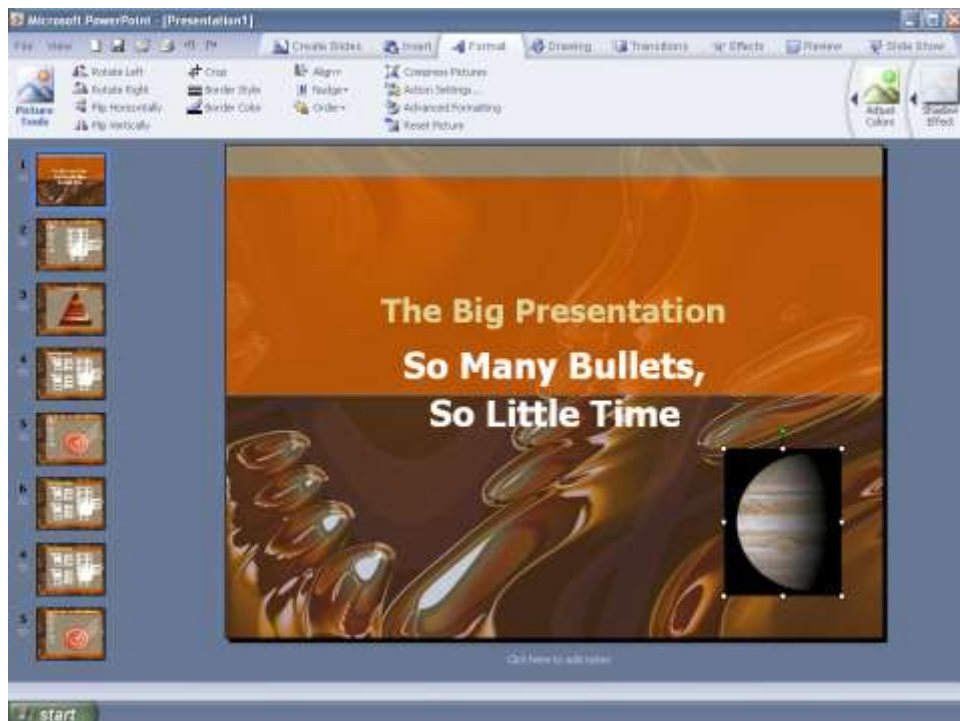
start Astro - Microsoft Office Microsoft Office

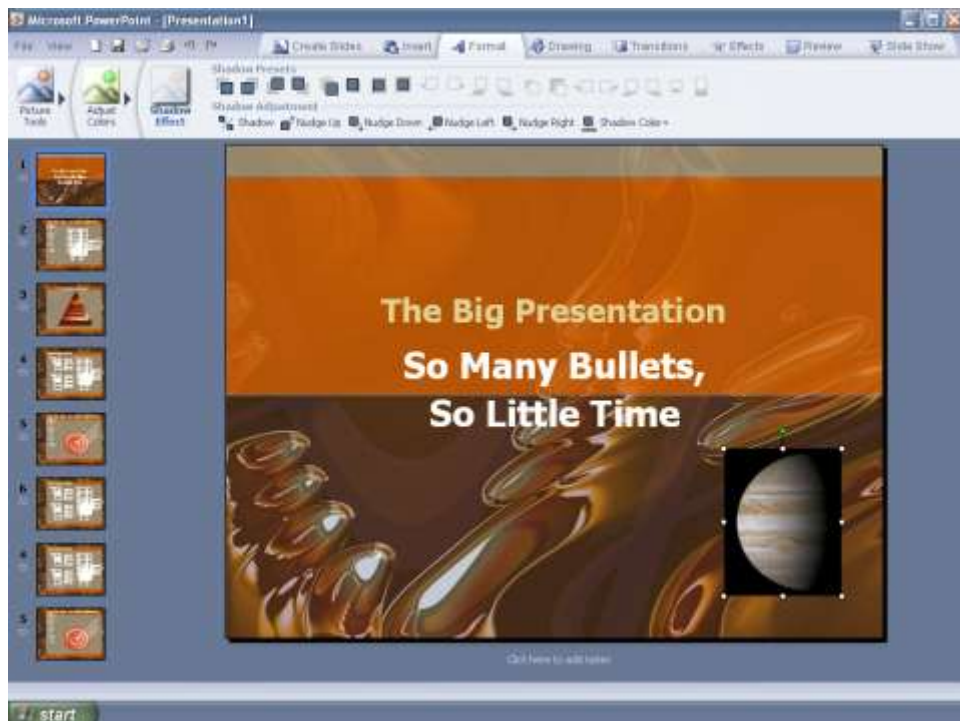
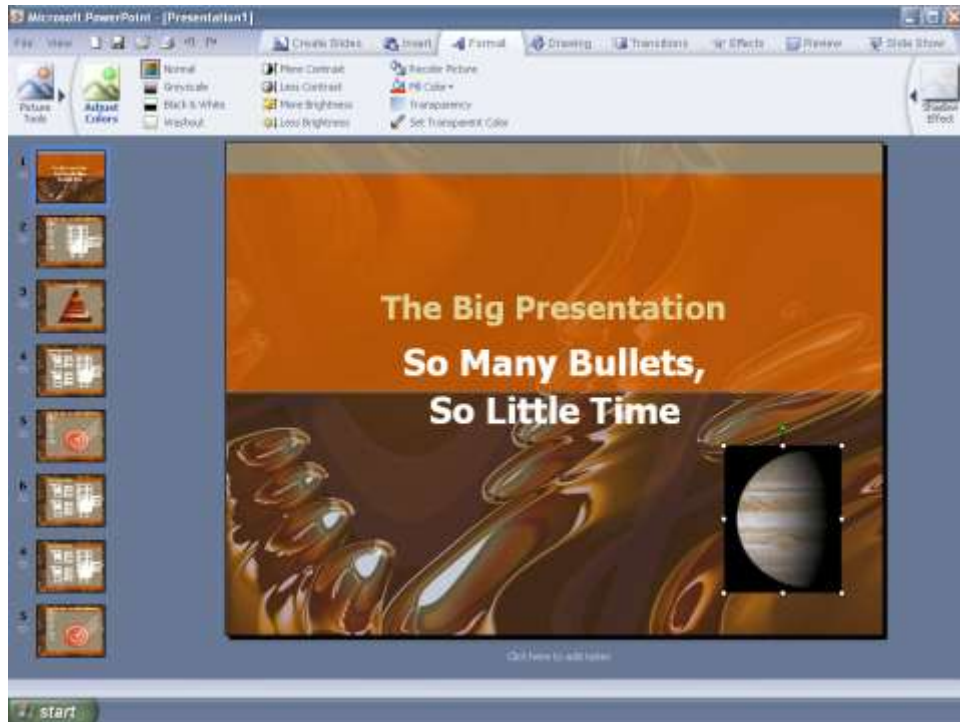
Scaling: Slidey Tabs

November 2003

Designing the Office UI

prototypes



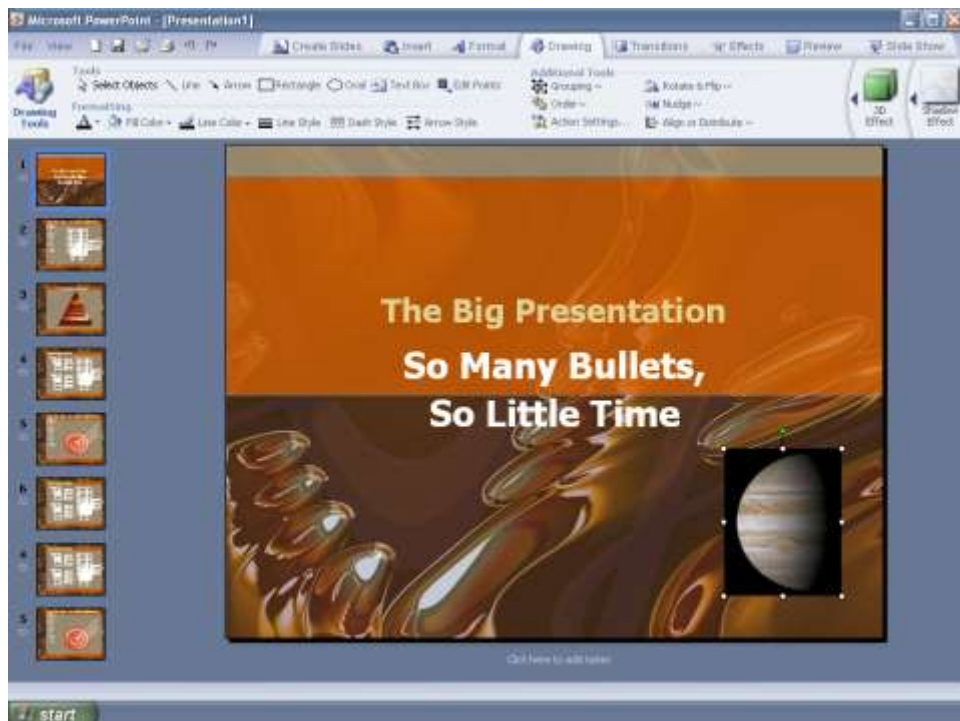


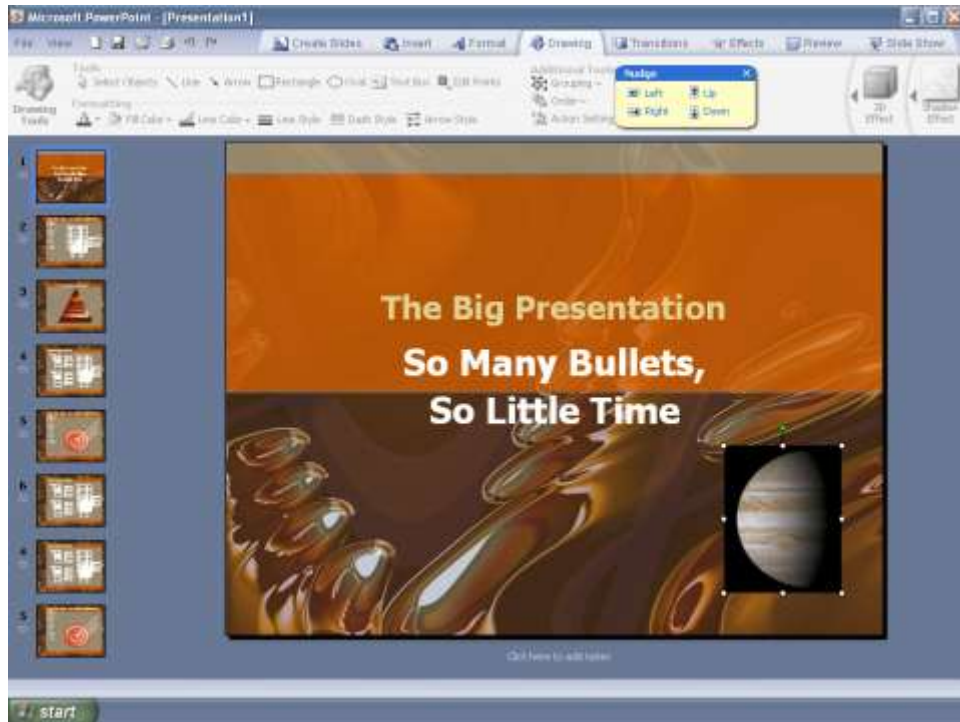
Scaling: Dialoguettes

November 2003

Designing the Office UI

prototypes





The screenshot shows a Microsoft Office presentation window. The slide is titled "Customer Requirements" and features a diagram with four blue circles: "Quality", "Value", "Service", and "Customer Satisfaction". "Customer Satisfaction" is in the center, with lines connecting it to the other three circles. To the right of the diagram is a bulleted list:

- Confirm the audience's needs if you are not sure
- State the needs of the audience

The slide has a blue background with a wavy pattern. The Microsoft Office interface is visible, including the ribbon with "New", "Slide Layout", "Edit", "Text and Drawing Tools", and "Other Tools". The taskbar at the bottom shows the Start button and several open applications. The system clock in the bottom right corner displays "6:18 PM, Oct 6".

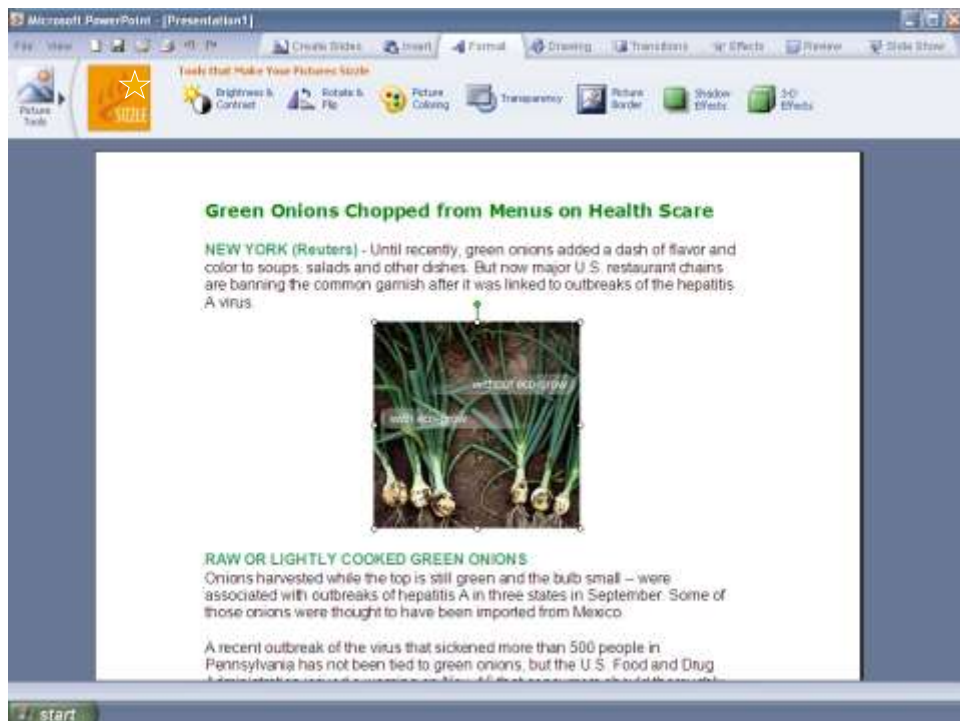
This screenshot is identical to the one above, showing the same Microsoft Office presentation window with the "Customer Requirements" slide. The diagram and bulleted list are the same. The interface elements, including the ribbon, taskbar, and system clock, are also identical.

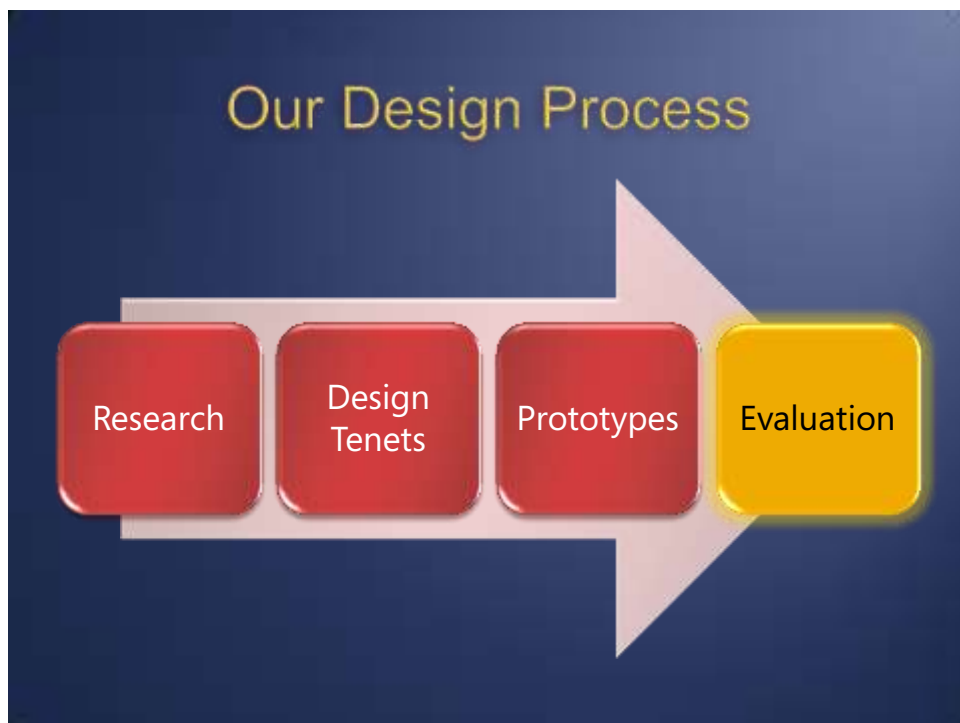
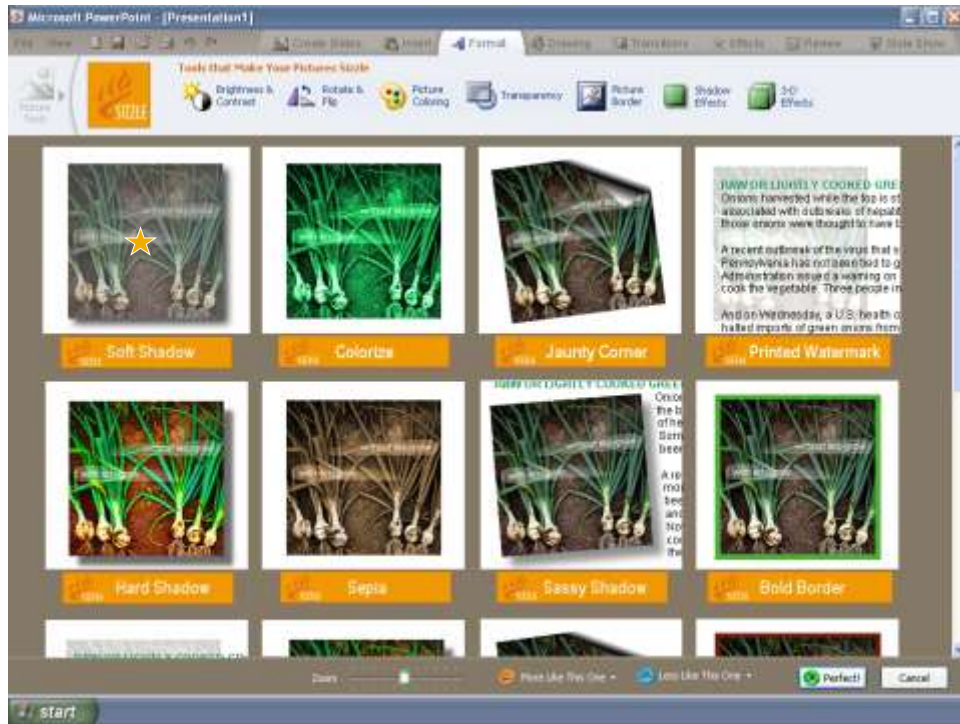
The Sizzler

November 2003

Designing the Office UI

prototypes



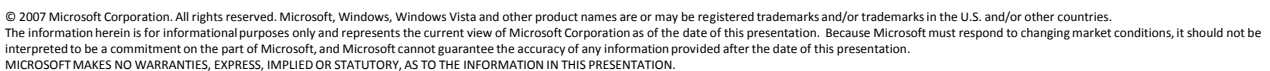


Evaluation: Is it Good or Not?

- Beta Users (internal and 3 million external)
- Anecdotal Feedback (blogs, forums)
- Benchmarks and Metrics
- Observations and Interviews
- Usability Studies (around the world and remote)
- Card Sorts and Paper Prototypes
- Surveys
- Longitudinal Usability Studies
- Long-Term Deployments (5 months+)
- Truman Show
- SQM (Customer Experience Improvement Program)

Longitudinal Usability

- Measures the impact of the product on someone over a number of months
- Rich, direct feedback mechanisms (both anecdotal and raw instrumented data)
- Studying learning curve, feature depth of usage, efficiency
- The single most valuable source of actionable feedback for us



Evaluating Feature Organization

- Card Sorts
 - Physical and Virtual
- Feature Affinity Research
- Command Loops
- Beta Feedback
- Longitudinal Usability
- *Needed to keep getting fresh eyes!*

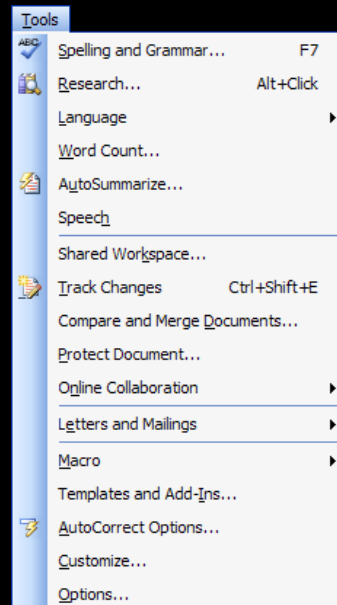
The Myth Of Ideal Organization

Game Show

What Do These Have In Common?

- Find out the current number of words
- Turn on speech command and control
- Create a SharePoint Document Workspace
- Print Envelopes
- Open the Visual Basic Editor
- Turn on hyphenation
- Merge the contents of multiple documents
- Start a web conference
- Tweak AutoCorrect settings

They're all on the
Word 2003 Tools menu!

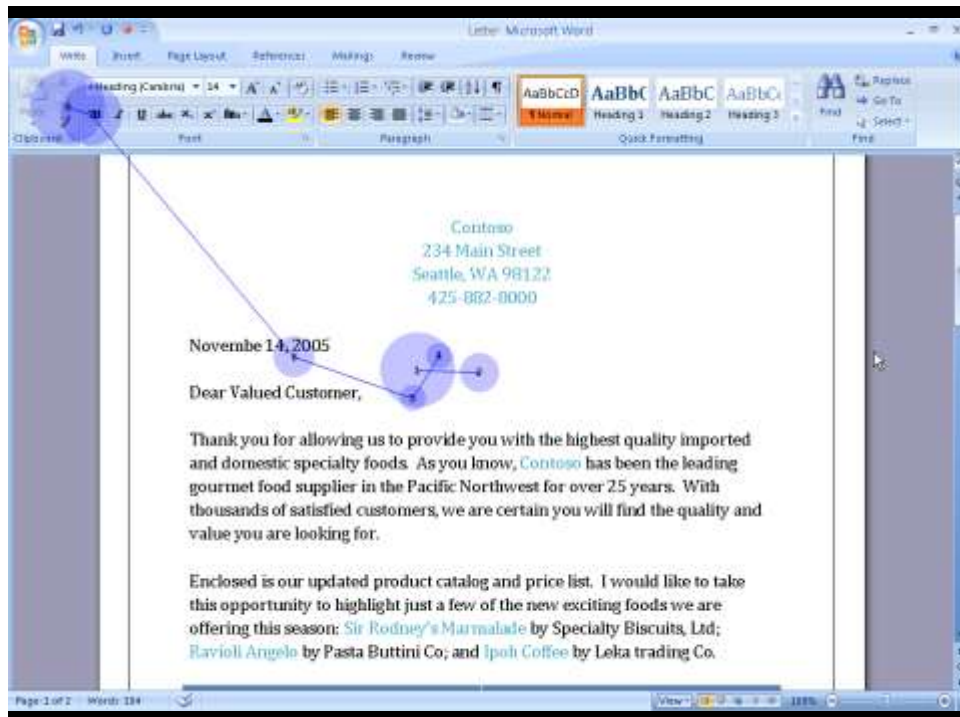
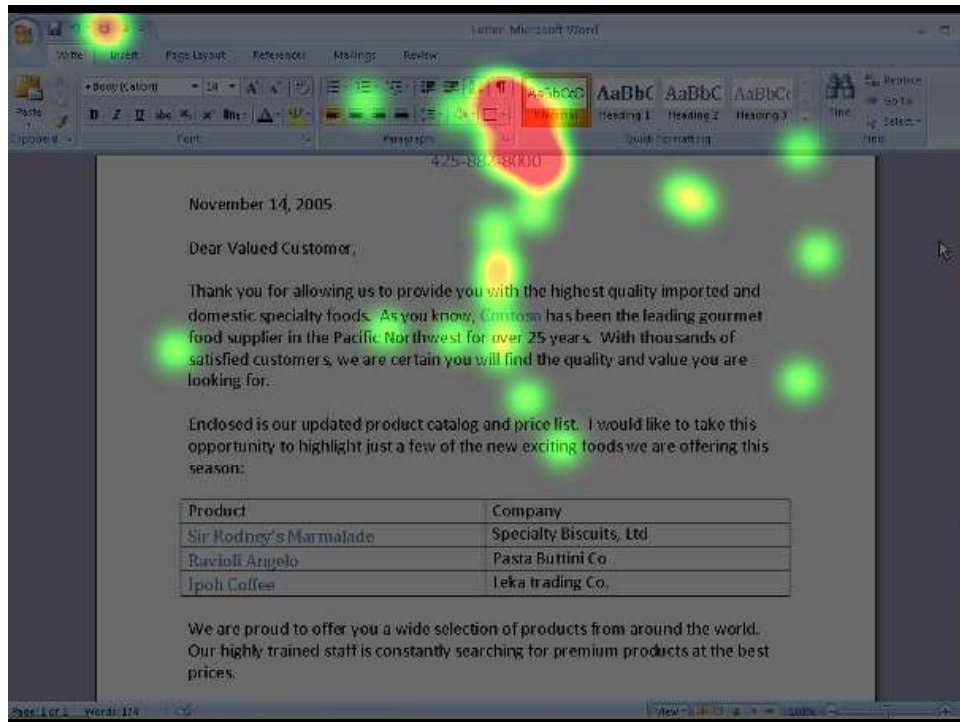


Sort It: Virtual Card Sort

video

Eye Tracking

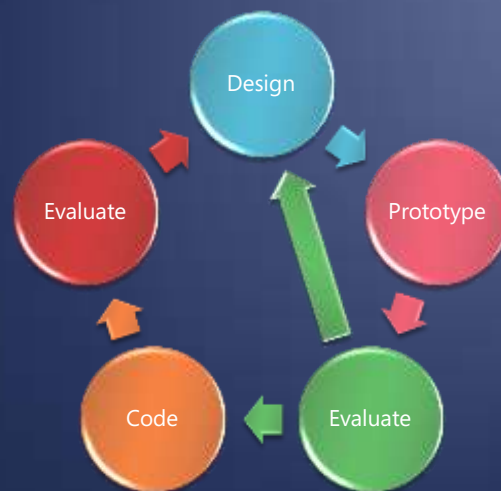
- Learn how people interact with the UI by watching where they look
- Two types used:
 - Heat map
 - Gaze tracking
- Help to understand linguistic similarities and differences
 - Right-to-left reading languages
 - Vertical text languages



From Initial Design to Final Product

ITERATION

Iteration Built Into the Product Cycle



Planning to Iterate

- Planted the “culture of iteration” in the team
- Time to iterate was accounted for in the dev schedule
- Certain things we knew we’d need to do 3 times to get right
- Our architecture was designed to make it possible for us to iterate late in the cycle
 - Only way to respond to longitudinal usability

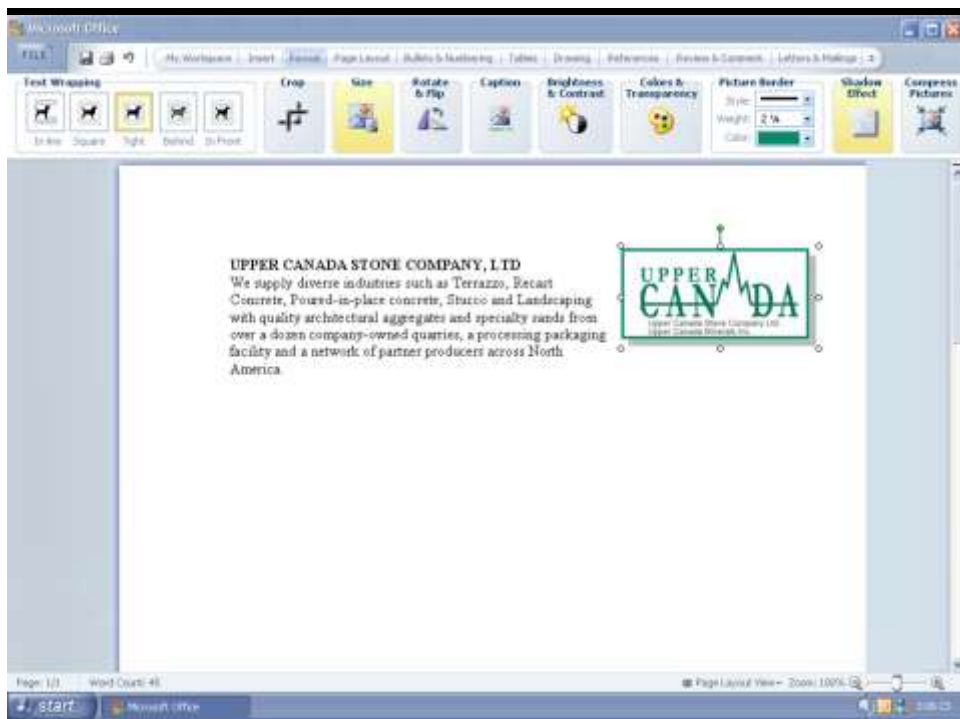
Object Formatting

Winter 2003 – Summer 2004

case study

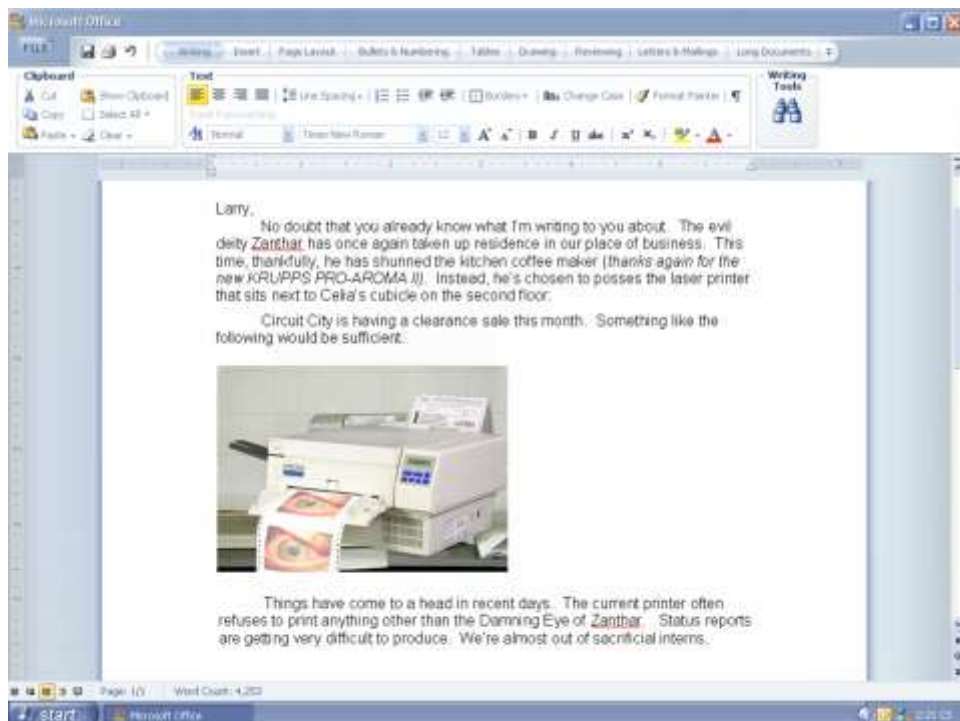
Try 1: The “Format” Tab

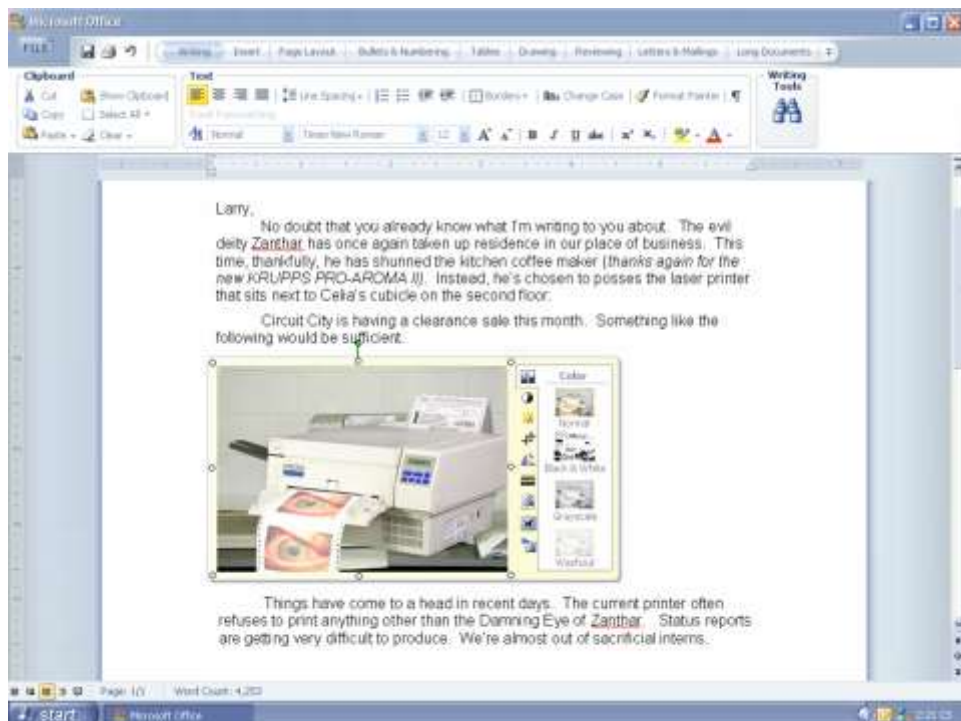
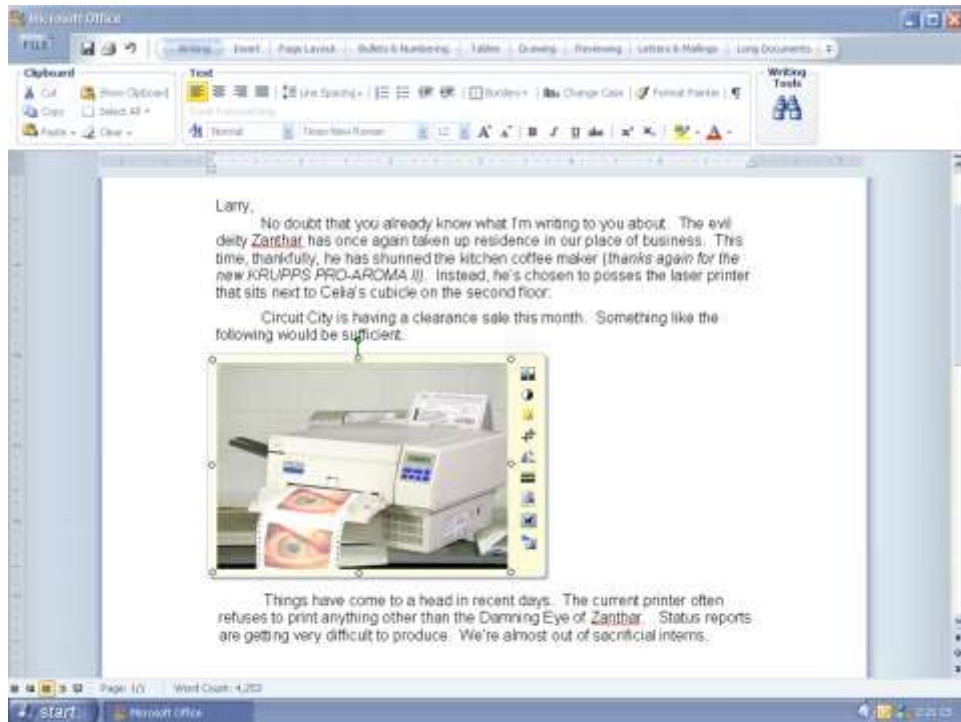
Case Study: Object Formatting

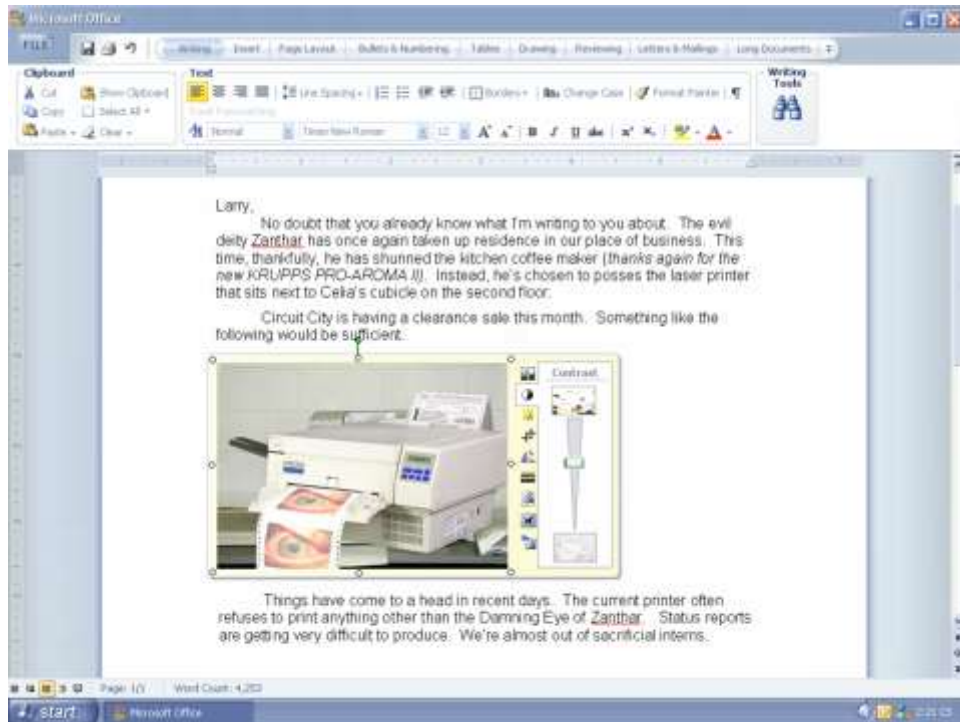


Try 2: On-Object Commands

Case Study: Object Formatting

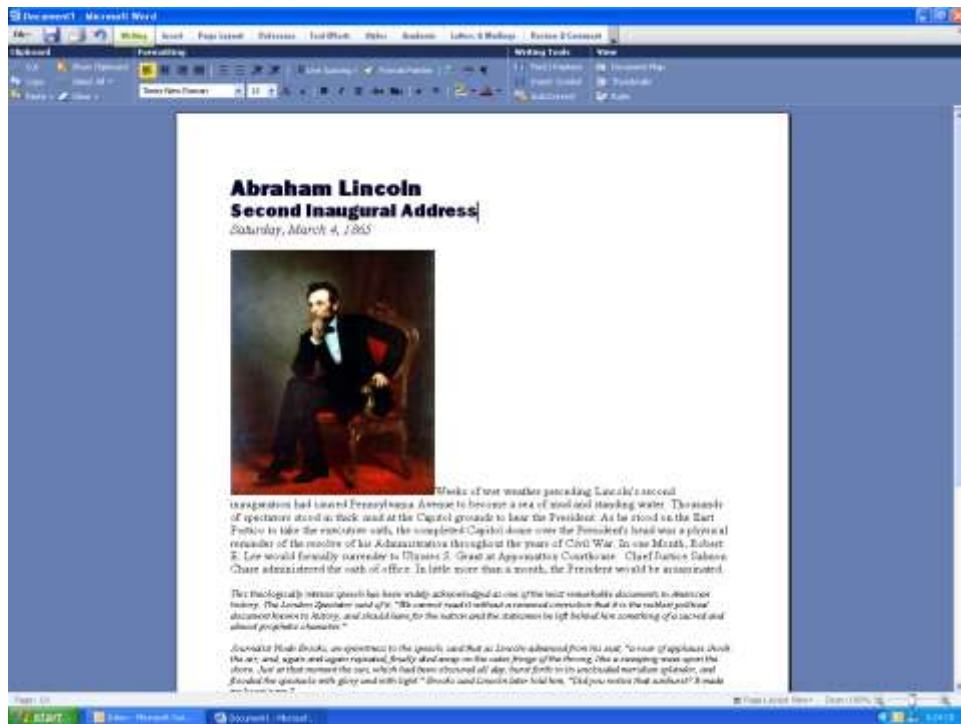


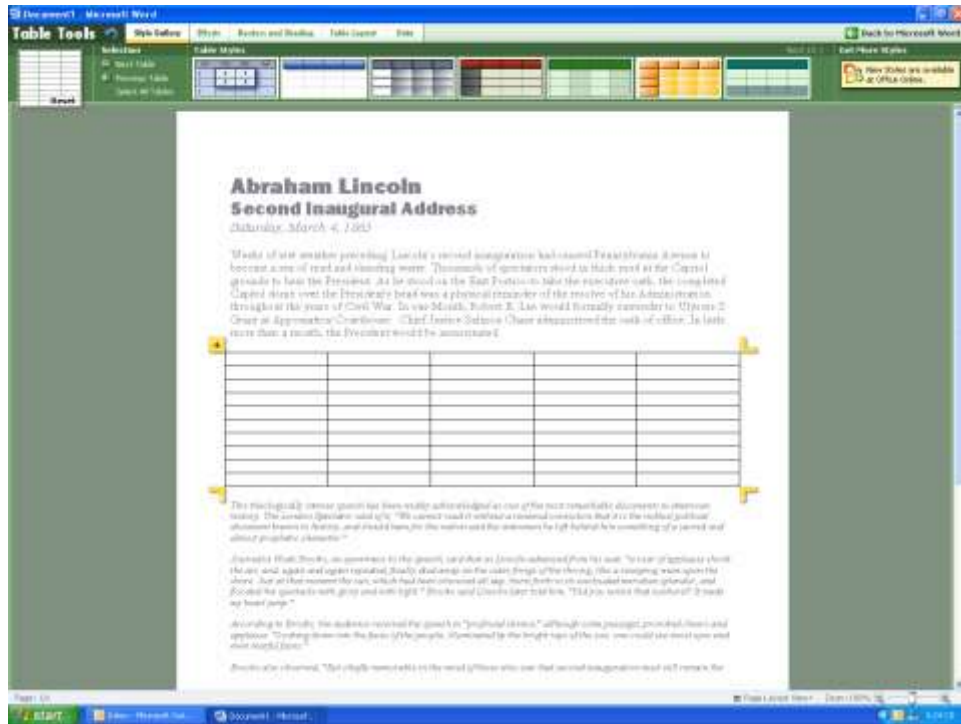




Try 3: Immersive Experiences

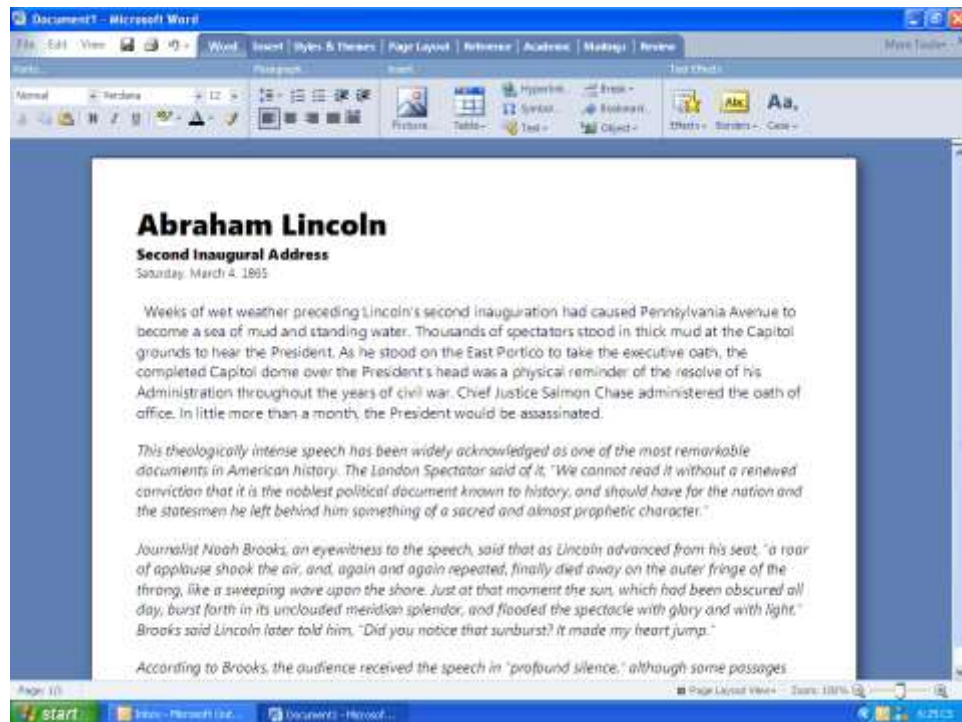
Case Study: Object Formatting

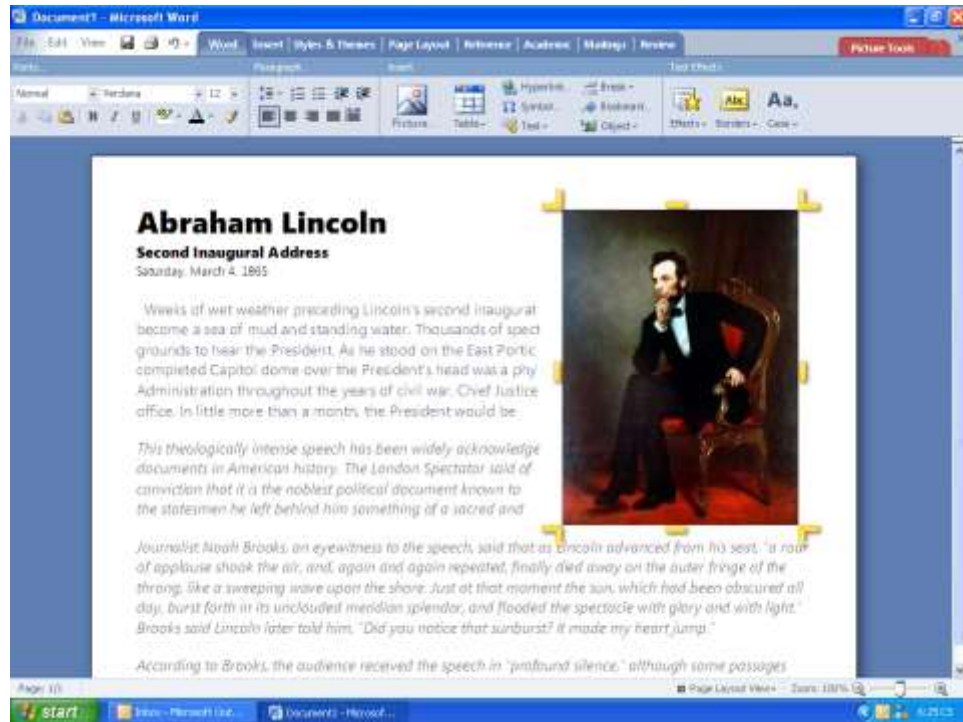


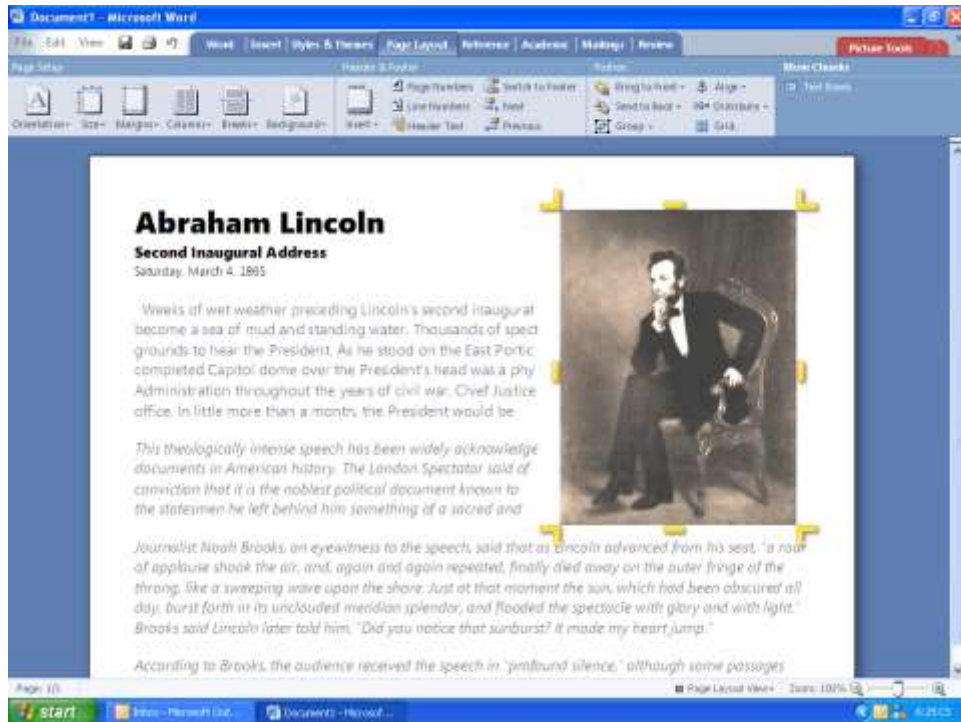


Try 4: Contextual Tabs

Case Study: Object Formatting







Contextual Tabs in DF4 (September 2005)

demo

Try 5: Contextual Tabs with Eat Dismiss Clicks

Case Study: Object Formatting

Contextual Tabs in Office 2007 RTM

demo

How does the story
end?

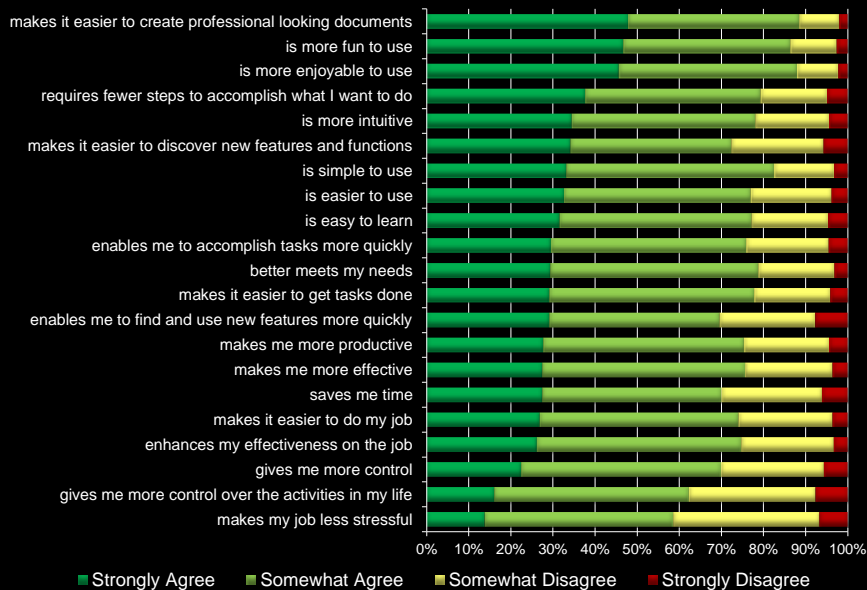
Attention to Design Pays Off

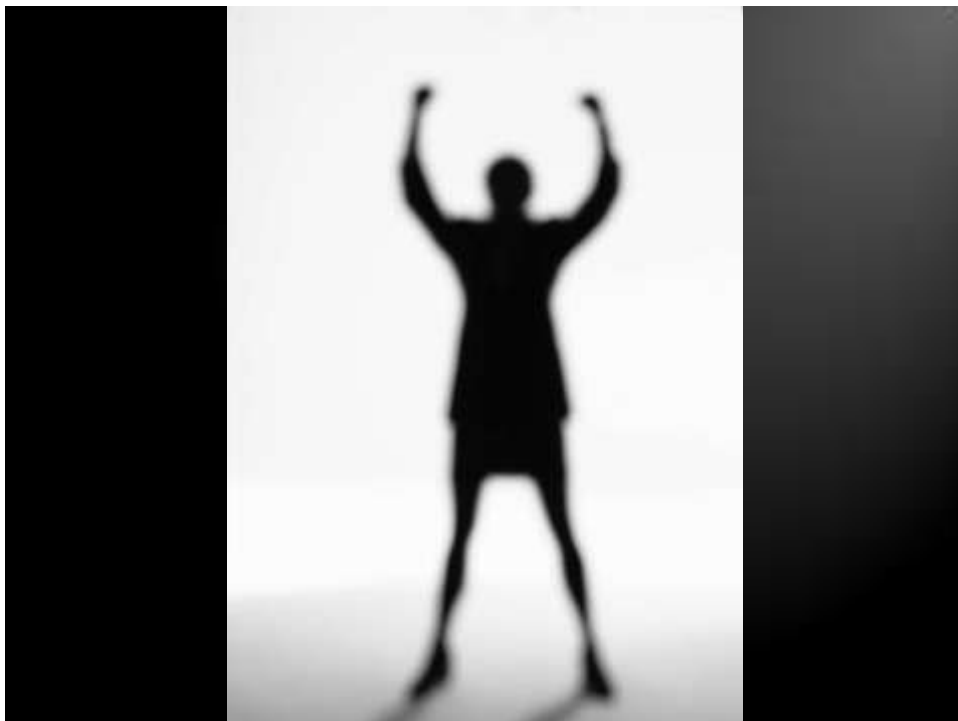
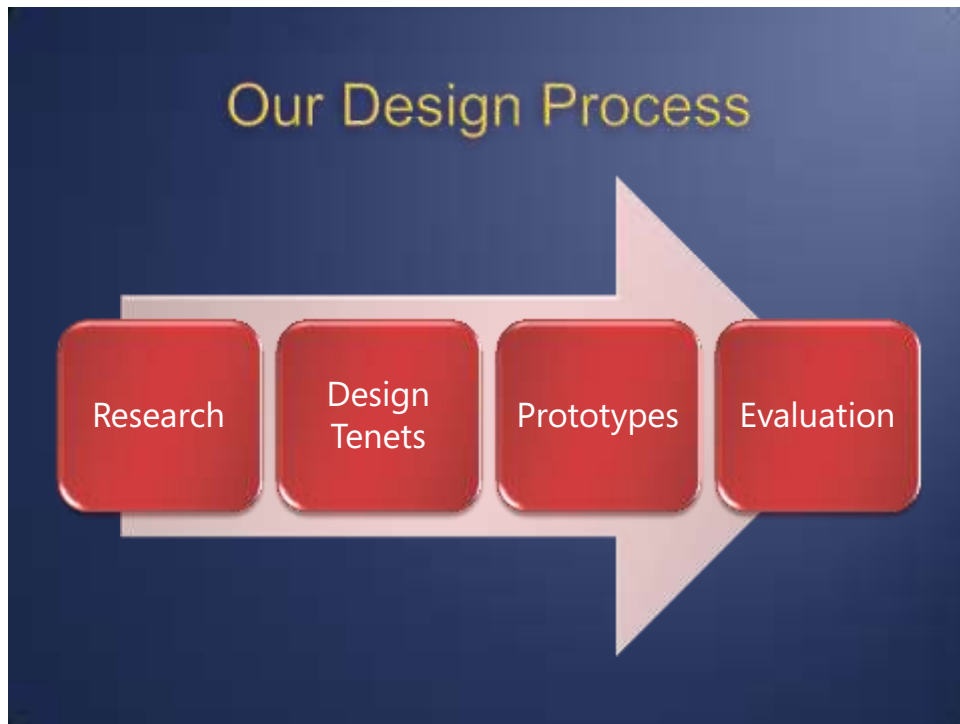
- PC World:
#1 Most Innovative Product of 2007
- Consumer Electronics Show (CES):
2007 Innovations Award in Software
- Office 2007 #1 on Amazon.com software

Flashback: UI Redesign Goals

- Make the software easier to use
- Help people save time
- Help people to discover more of the power of Office
- Help people create beautiful, powerful documents

Office 2007 Survey *(4 countries, all skill levels, 2+ months use)*





The End

Questions and Answers

My Office User Interface Blog:
<http://blogs.msdn.com/jensenh>

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Your potential. Our passion.™

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