

Graphic Design – Part 2

Outline

- ➔ Graphic design philosophies
- Design guidelines

Graphic design philosophies

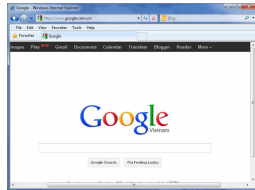
- Aesthetic appeal does not automatically confer usability
- UI design must balance the meaning of its visual elements that conform the mental model of operation
- Preferences
 - ❑ Simple and natural user's "language"
 - ❑ Economy of visual elements
 - ❑ Clean, well organized
 - ❑ Less is more

Guidelines for good graphic design

- Basic principles
 - ❑ Metaphor
 - ❑ Simplicity and Clarity
 - ❑ Consistency
 - ❑ Organization/Alignment/Proximity/Grid
 - ❑ Legibility and readability
 - ❑ Color/Contrast

Simplicity

- “Keep it simple, stupid.” (KISS)
- “Less is more.”
- “When in doubt, leave it out.”
- Every element in an interface should have a reason for being there
 - make that reason clear too



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Techniques for simplicity

- Reduction
 - Decide what essentially needs to be conveyed by the design
 - Examines every element if it serves essential purposes
 - Remove inessential elements



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Nguyenkim.com's registration

- Can you make it more simple?

A screenshot of a web registration form. It has a title bar with 'Đăng nhập' and 'Tạo tài khoản'. The form contains fields for 'Họ và tên', 'Số điện thoại', 'Email', 'Mật khẩu', and 'Xác nhận Mật khẩu'. There are radio buttons for 'Ảnh' (selected) and 'Chị'. A blue button at the bottom says 'TAO TÀI KHOẢN'.

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Techniques for simplicity (cont'd)

- Regularity
 - Use a regular pattern
 - minimize the unnecessary differences between elements with regularity
 - elements provided by the operating system. The users are already familiar them
 - Limit inessential variation among elements
 - use the same font, color, line width, dimensions, orientation for multiple elements
 - irregularities in your design will be magnified in the user's eyes and assigned meaning and significance

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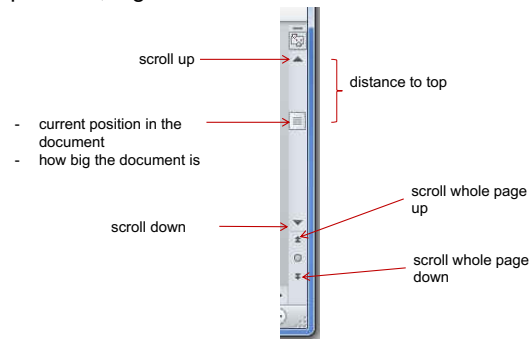
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Techniques for simplicity (cont'd)

■ Combine elements

- Let elements play multiple roles, e.g.

- Scroll bar
- Title bar



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White space

- Leads the eye
- Provides symmetry and balance through its use
- Allows eye to rest between elements of activity
- Used to promote simplicity, elegance, class, refinement
 - margins to draw eye around design
 - don't crowd controls together

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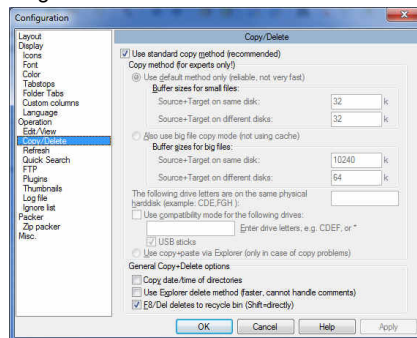


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White space (cont'd)

■ Crowded dialog example

- Controls are tightly packed together
- Lack of margins between texts/labels



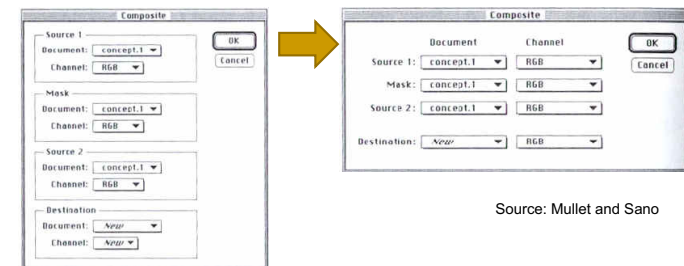
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White space (cont'd)

- Put labels in the left margin with white space leading and highlighting them
- Put labels on left of the controls, not above
- Use placeholders



Source: Mullet and Sano

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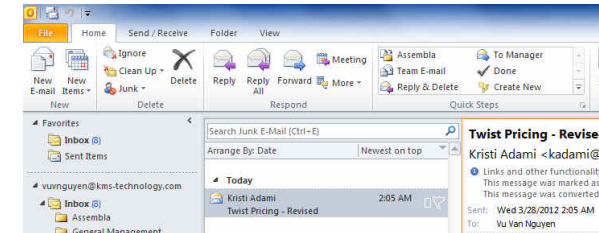
Consistency

- Similar things should work similarly
- Different things should look different
- Consistency types
 - Internal: within the system
 - elements follow same conventions and rules
 - External: across different systems
 - follow platform and interface style conventions
 - Metaphorical: reflecting real-world objects
 - A print icon is a metaphor of the printer



Consistency (cont'd)

- Example
 - Ctrl + F on many Windows applications
 - Ctrl + F on MS Outlook



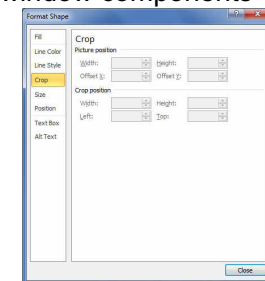
Organization

- Grid system
- Grouping of items
- Order of items
- Alignment of items
- Arrangement between items



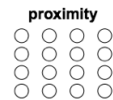
Grid system

- Grid is an essential tool for graphical design
 - A uniform grid (a grid with equal-width columns) is one effective way to achieve both alignment and balance
- Horizontal and vertical lines to locate window components
 - aligns related components
- Consistency
 - location
 - format
 - element repetition



The Gestalt principles of grouping

- Discovered in the 1920s by the Gestalt school of psychologists
- Describe how early visual processing groups elements in the visual field into larger wholes
- **Proximity**
 - Elements that are closer to each other are more likely to be grouped together



You see four vertical columns of circles, because the circles are closer vertically than they are horizontally.

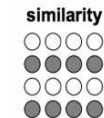
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The Gestalt principles of grouping (cont'd)

- **Similarity**: Elements with similar attributes are more likely to be grouped
- **Continuity**: The eye expects to see a contour as a continuous object



You see four rows of circles, because the circles are more alike horizontally than they are vertically



You primarily perceive this as two crossing lines, rather than as four lines meeting at a point, or two right angles sharing a vertex

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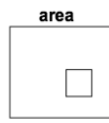
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The Gestalt principles of grouping (cont'd)

- **Closure**: The eye tends to perceive complete, closed figures, even when lines are missing
- **Area**: When two elements overlap, the smaller one will be interpreted as a figure in front of the larger ground
- **Symmetry**: The eye prefers explanations with greater symmetry



We see a triangle in the center although edges aren't complete



We see a small square in front of a large square rather than a hole



We perceive two overlapping squares, rather than three separate polygons

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The Gestalt principles of grouping (cont'd)

- IBM logo



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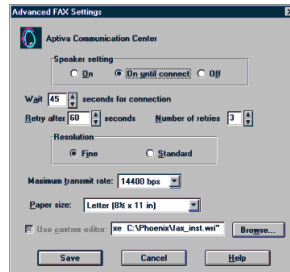
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Alignment

- Aligning elements horizontally and vertically
 - Improve the simplicity of a design



GHNXFD



Source: Interface Hall of Shame

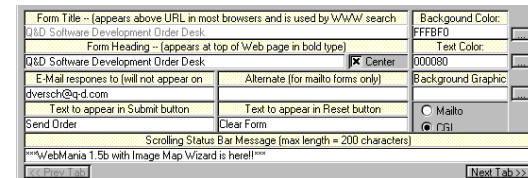
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Alignment (cont'd)

- Bad alignment
 - no flow, causing the eyes to zig-zag around the screen as the user attempts to locate a field of interest
- Poor contrast
 - cannot distinguish colored labels from editable fields
- Poor repetition
 - buttons do not look like buttons
- Poor explicit structure
 - blocks compete with alignment



Source: Interface Hall of Shame

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Balance and symmetry

- Choose an axis (usually vertical)
- Distribute elements equally around the axis
 - Equalize both mass and extend

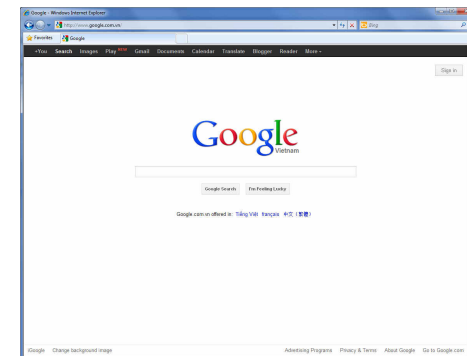
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Balance and symmetry (cont'd)

- Example



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Economy of visual elements

- Less is more - unless more is more...
- Minimize number of controls
- Include only those that are necessary
- Appropriately arrange the size, layout of controls, e.g., text fields, combo boxes, checkboxes
- Minimize clutter
 - so information is not hidden

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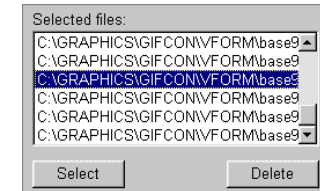


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Economy of visual elements (cont'd)



Overuse 3D effects



You know what to choose?

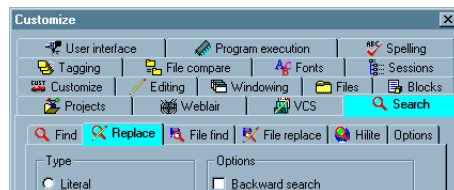
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Economy of visual elements (cont'd)

- Tabs
 - excellent means for factoring related items
 - but can be overdone



Source: Interface Hall of Shame

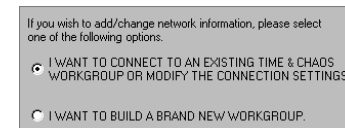
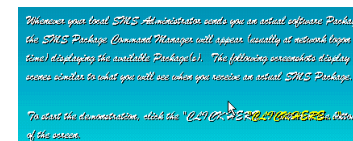
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Legibility and readability

- Characters, symbols, graphical elements should be easily noticeable and distinguishable



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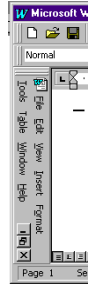
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Legibility and readability (cont'd)

- Text orientation is difficult to read
 - Don't try too hard to harm your neck



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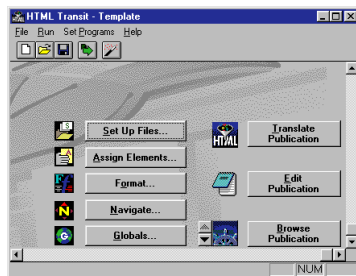
Imagery

- Signs, icons, symbols
 - right choice within spectrum from concrete to abstract
- Meaningful icon design are hard!
 - except for most familiar, always label them
- Consistent and relevant image use
 - identifies situations, offerings, etc.
- Avoid 'eye candy' unless it supports a message
- Motion attracts attention
 - useful if important, otherwise distracting



Imagery (cont'd)

- Can you guess these icons?

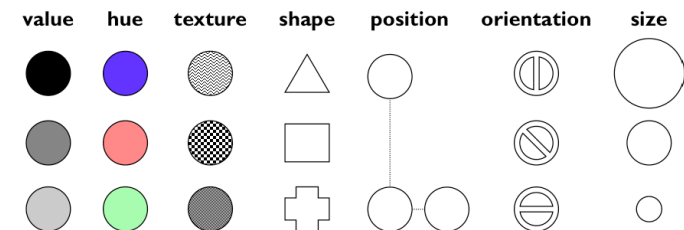


Source: Interface Hall of Shame



Color and contrast

- Contrast encodes information along visual dimensions



Contrast problems

Form Title ~ (appears above URL in most browsers and is used by WWW search engines)		Background Color: FFFBF0
Q&D Software Development Order Desk		Text Color: 000080
Form Heading ~ (appears at top of Web page in bold type)		
Q&D Software Development Order Desk		<input checked="" type="checkbox"/> Center
E-Mail responses to (will not appear on dversch@q-d.com)		Background Graphic:
Text to appear in Submit button:		<input type="radio"/> Mailto
Send Order		<input checked="" type="radio"/> CGI
Text to appear in Reset button:		
Clear Form		
Scrolling Status Bar Message (max length = 200 characters)		
WebMania 1.5b with Image Map Wizard is here!		
Go Prev Tab		Next Tab >>

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<http://www.webdirect.com/~f1>
Collection of TrueType fonts from the net

[TrueType Font Archive of Sadkine](#) 100 Fonts
<http://voyager.cns.ohio.edu/>
Shareware and freeware fonts

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<http://www.gul.uva.es/~explore>
Shareware and freeware fonts from the net

[California State University - Sacramento Archive](#)
<http://coyote.csusa.edu/cwis/>
Many foreign fonts, some utilities, no for

Source: Interface Hall of Shame

Summary

- Graphic design philosophies
- Design principles
 - Metaphor
 - Clarity and simplicity
 - Consistency
 - Organization/Alignment/Proximity/Grids
 - Legibility and readability
 - Color and contrast

