

Designing visual interfaces



- "To design is much more than simply to assemble, to order, or even to edit; it is to add value and meaning, to illuminate, to simplify, to clarify, to modify, to dignify, to dramatize, to persuade, and perhaps even to amuse."
- Paul Rand

Elegance & Simplicity

- Elegance = design that solves a problem completely yet in a highly economical way
- Economy = minimisation of components & simplification of the relationship between parts
- Best design is the result of a continuous simplification process
 - Learnability
 - Recognisability
 - Immediacy
 - Usability

[http://www.nngroup.com/articles/
recommended-books-visual-design/](http://www.nngroup.com/articles/recommended-books-visual-design/)

[http://lawsofsimplicity.com/
/2006/07/23/law-1-reduce/](http://lawsofsimplicity.com/2006/07/23/law-1-reduce/)

[http://webdesign.tutsplus.com/articles/design-theory/
an-introduction-to-color-theory-for-web-designers/](http://webdesign.tutsplus.com/articles/design-theory/an-introduction-to-color-theory-for-web-designers/)

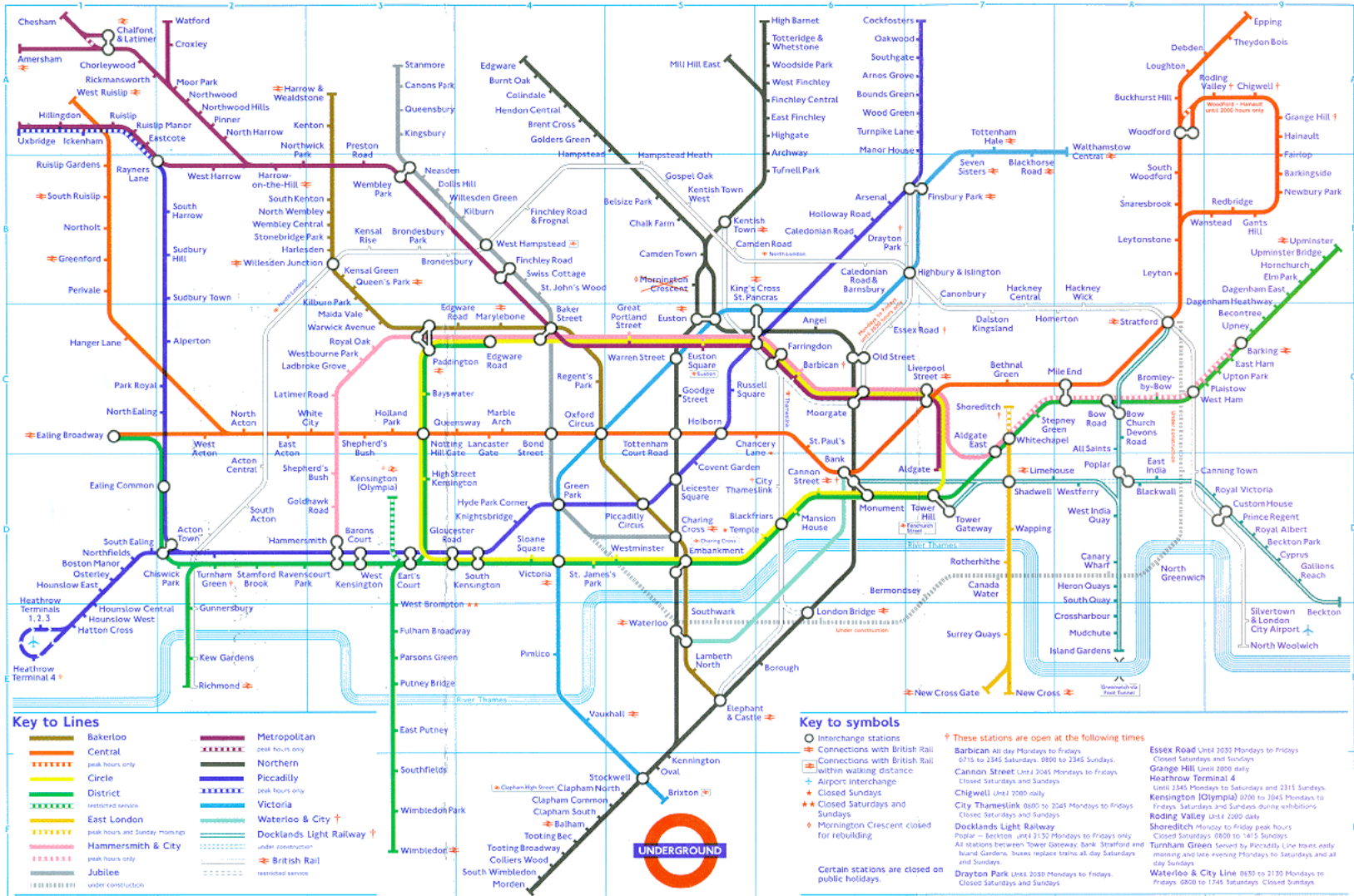
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web-design/web-2-0-design-style-guide/](http://www.webdesignfromscratch.com/web-design/web-2-0-design-style-guide/)

Principles

- Unity: The elements in the design must be unified to produce a coherent whole
- Refinement: The parts (& the whole) must be refined to focus the viewer's attention on their essential aspects
- Fitness: The fitness of the solution to the communication problem must be ensured at every level



Key to Lines

- Bakerloo
- Central
- Circle
- District
- East London
- Hammersmith & City
- Jubilee
- Metropolitan
- Northern
- Piccadilly
- Victoria
- Waterloo & City
- Docklands Light Railway
- British Rail

Key to symbols

- Interchange stations
 - + Connections with British Rail
 - + Connections with British Rail (within walking distance)
 - + Airport interchange
 - + Closed Sundays
 - + Closed Saturdays and Sundays
 - + Mornington Crescent closed for rebuilding
 - + These stations are open at the following times
- Barbican** All day Mondays to Fridays
0715 to 1845 Saturdays, 0900 to 2345 Sundays
- Cannon Street** Lines 3045 Mondays to Fridays
Closed Saturdays and Sundays
- Chigwell** Line 2000 daily
- City Thameslink** 0600 to 2045 Mondays to Fridays
Closed Saturdays and Sundays
- Docklands Light Railway**
All stations between Tower Gateway, Bank, Stratford and Board Garden. Trains replace trains at day Saturdays and Sundays.
- Drayton Park** Line 3030 Mondays to Fridays
Closed Saturdays and Sundays
- Essex Road** Line 3030 Mondays to Fridays
Closed Saturdays and Sundays
- Grange Hill** Line 2000 daily
- Heathrow Terminal 4**
Lines 1845 Mondays to Saturdays and 2315 Sundays
- Kensington (Olympia)** 0700 to 1045 Mondays to Fridays
Saturdays and Sundays during exhibitions
- Redding Valley** Line 2000 daily
- Shoreditch** Monday to Friday peak hours
Closed Saturdays 0600 to 1415 Sundays
- Turnham Green** Served by Piccadilly Line trains early morning and late evening Mondays to Saturdays and all day Sundays
- Waterloo & City** Line 0630 to 2130 Mondays to Fridays
0800 to 1745 Saturdays
Closed Sundays

Techniques

- Reducing a design to its essence
- Regularising the elements of the design
- Combining elements for maximum leverage

Reduction

- Reduce the interface elements to the absolute minimum
- Check
- Are all the elements needed?
- Are all the control necessary?
- Is it there any form of repetition? Redundancy?
- Reduction through successive refinement is the only path to simplicity

Reduction

- Determine the essential qualities (typically a short list of adjectives) that should be conveyed by the design, along with any fixed formal elements (label, an essential control, an image, a logo, a colour)
- Critically examine each element in your design and ask yourself why is it needed, how it relates to the essence of the design, and how the design would suffer without it. If you can't answer any of these questions, remove the element.
- Try to remove the element from the design anyway. What happens? If the design collapses, either functionally or aesthetically, the elements must be replaced. Otherwise, consider omitting it from the final solution.

Regularisation

- When further reduction is no more possible, the remaining elements can be regularised to further simplify the design
- Regularity can be achieved by aligning or reflecting elements along common axes, by standardising or repeating sizes and spacing of components, or by reducing components to basic geometric shapes

Regularisation

- Use regular geometric forms, simplified contours, and muted colours wherever possible
- If multiple similar forms are required, make them identical, if possible in size, shape, colour, texture, lineweight, orientation, alignment, or spacing
- Limit variation in typography to a few sizes to one or two families
- Make sure critical elements intended to stand out in the display are not regularised

Combining elements for maximum leverage

- The most challenging means of simplification is finding point of leverage at which design elements play multiple roles
- It requires insight into the user task
- Effective design utilizes every component to its fullest
- Not all GUI elements need a label

Leverage

- Review the functional role played by each element in the design
- Look for situations where multiple elements are filling (or partially filling) the same role
- Question whether an elements role could be filled as well by an adjacent component, possibly after minor modifications
- Combine redundant elements into a single, simpler unit or replace the lot with a common higher-level unit.
- Careful with modes!!!!

Key point

- Design is achieved through:
 - Reduction
 - Regularisation
 - Leverage