Designing visual interfaces

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

Fig. 1: Search in System Preferences in MAC OS X.

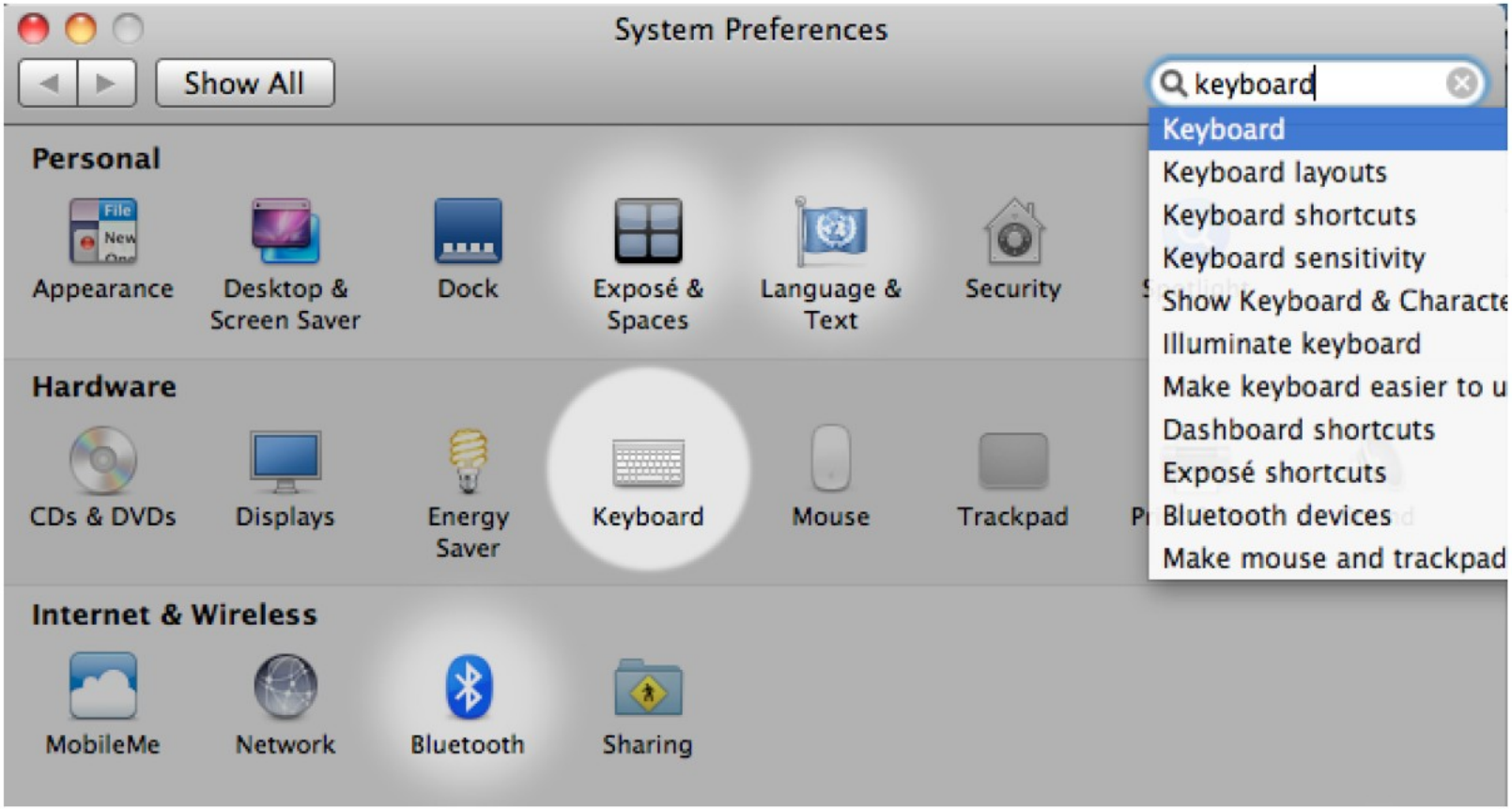
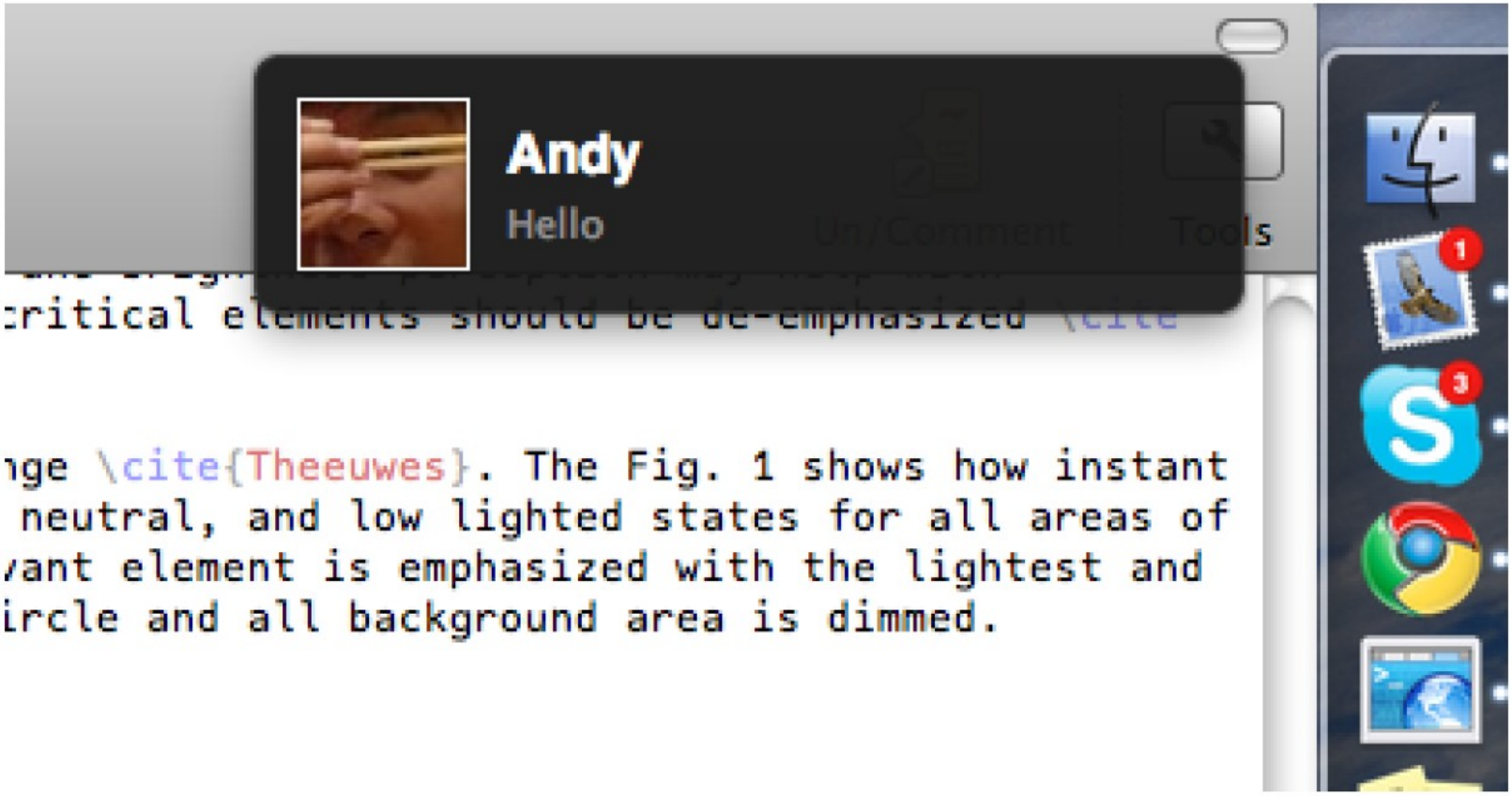


Fig. 2: Growl notification system for Mac OS X and "the badge" on icons.



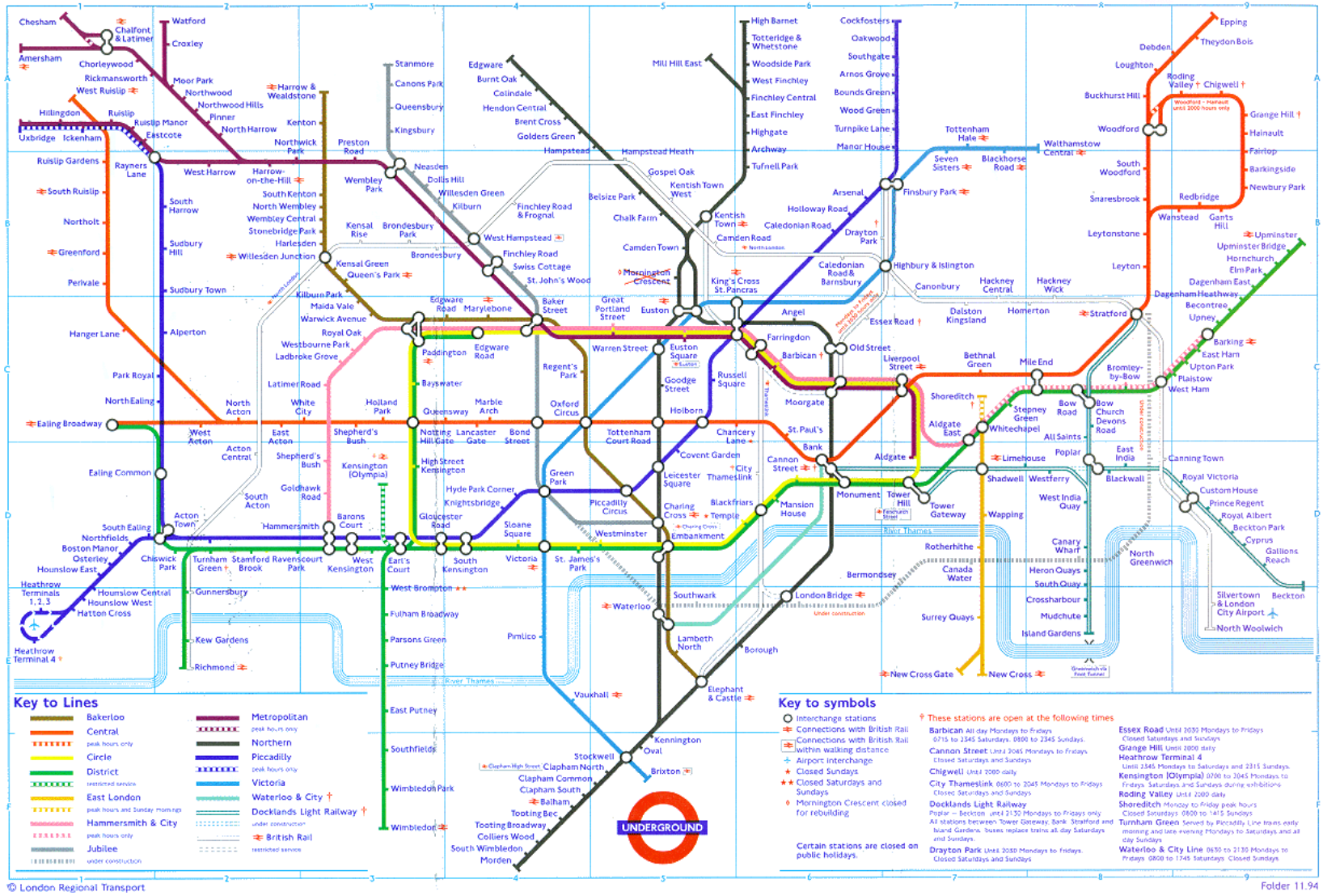
http://free-books-online.org/computers/human-computer-interaction/principles-of-visual-interface-design/

http://dzineblog.com/2009/03/interface-design-inspiration-36-beautiful-login-pageform-designs.html

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
peak hours only
Circle
District
restricted service
East London
peak hours and Sunday mornings
Hammersmith & City
peak hours only
Jubilee
under construction
Metropolitan
peak hours only
Northern
Piccadilly
peak hours only
Victoria
Waterloo & City †
Docklands Light Railway †
under construction
British Rail
restricted service
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
Certain stations are closed on public holidays.
These stations are open at the following times
Barbican All day Mondays to Fridays 0715 to 2345 Saturdays, 0800 to 2345 Sundays.
Cannon Street Until 2045 Mondays to Fridays Closed Saturdays and Sundays
Chigwell Until 2080 daily
City Thameslink 0600 to 2045 Mondays to Fridays Closed Saturdays and Sundays
Docklands Light Railway
Poplar – Beckton Until 2130 Mondays to Fridays only
All stations between Tower Gateway, Bank, Stratford and Island Gardens. Buses replace trains all day Saturdays and Sundays.
Drayton Park Until 2030 Mondays to Fridays. Closed Saturdays and Sundays
Essex Road Until 2030 Mondays to Fridays Closed Saturdays and Sundays
Grange Hill Until 2000 daily
Heathrow Terminal 4 Until 2345 Mondays to Saturdays and 2315 Sundays.
Kensington (Olympia) 0700 to 2045 Mondays to Fridays. Saturdays and Sundays during exhibitions
Roding Valley Until 2000 daily
Shoreditch Monday to Friday peak hours Closed Saturdays 0800 to 1815 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
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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
- <u>Check</u>
- 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!!!!