display design — visible language

◆ layout
◆ typography
◆ color and texture
◆ imagery
◆ animation
◆ sequencing
◆ sound (or other output like force-feedback)
◆ visual identity

basic principles of display design
(from Marcus, plus Mullet & Sano, 1995)

◆ organize
  – clear and consistent conceptual structure
  – scale, contrast, hierarchy
  – grouping, hierarchy, balance
  – overall visual style and the design “program”

◆ economize
  – maximize effectiveness of minimal set of cues
  – elegance and simplicity

◆ communicate
  – match presentation to users’ capabilities, backgrounds
  – abstraction and immediacy of visual elements
organizing info in a display

◆ clear and consistent conceptual structure
  – internal, external, real world (know when to deviate)
◆ scale, contrast, and proportion
  – fonts, highlighting (color), visual shapes & sizes
◆ grouping, hierarchy, balance
  – similarity, proximity, continuity, symmetry (Gestalt)
  – guide users’ attention (in task-relevant ways)
  – the crucial role of “visual weight” and white space
◆ overall visual style and your design “program”
  – repeated visual elements, grid-based layout

effective use of color

◆ be conservative; limit the number of colors
  – interestingness is fine but be careful!
◆ leverage color as a task-based coding technique
  – ie to support grouping, attention, feedback, etc.
◆ require no extra work, plus let users be in control
◆ beware of color “affect” and prior use
  – domain analysis, psychological impact of colors
  – good strategy: think about design for monochrome first
economizing on visual detail

◆ maximize effectiveness of minimal set of cues
  – back to minimalism: does each element contribute?
  – (unless intending to entertain, beautify, etc.)
◆ iterative process to get elegance and simplicity
  – try to design implicit structures (e.g., spatial not boxes)
  – unify screens by designing individual elements that contribute to more than one communication goal
  – reduce complexity through successive refinement
  – carry a single visual language throughout a design

effective communication

◆ design for users’ capabilities, backgrounds
  – legibility, especially given known physical conditions
  – cultural or developmental abilities, expectations
  – consider multiple views (for different users or uses)
◆ abstraction and immediacy of visual elements
  – selection: icon (resemblance-based), index (association-based), symbol (convention-based), or text
  – OK to invent UI symbols, especially in supporting simple and frequent user interactions
  – abstract and generalize (progressive refinement) to gain simplicity and visual impact