Graphical Screen Design
CRAP – contrast, repetition, alignment, proximity
Grids are an essential tool for graphical design
Other visual design concepts
- consistency
- organization
- navigational cues
- familiar idioms
- relationships
- legibility and readability
- appropriate imagery

The Plan: Cheese Sampler
CRAP
Grids are an essential tool for graphical design
Other visual concepts include
- visual consistency
  - repetition
- visual organization
  - contrast, alignment and navigational cues
- visual relationships
  - proximity and white space
- familiar idioms
- legibility and readability
  - typography
- appropriate imagery

Tool 1: CRAP for understanding

Contrast
- make different things different
- brings out dominant elements
- mutes lesser elements
- creates dynamism

Repetition
- repeat design throughout the interface
- consistency
- creates unity

Alignment
- visually connects elements
- creates a visual flow

Proximity
- groups related elements
- separates unrelated ones
  -
  -
  -
  -
  -

Really????
People often focus on content.
(Have you seen DanCo’s web page?)

But over-focus just on beautiful graphic design is just as bad.

And though not everyone is a great graphic designer,

Everyone can CRAP.
Tool 2: Make interface, tasks parallel
provide initial focus and main path

direct attention as appropriate to important secondary, or peripheral items as appropriate

order should follow a user’s conceptual model of sequences

Ordering exercise

Tool 3: Guidelines and grids
Many (most?) UI toolkits support CRAP
- Hierarchical organization for grouping
- Grids for alignment
- Consistent look and feel for widgets
- Consistent font choices
- A “Look and feel” that matters

This is part of the answer to “why guidelines?”

Idioms
Familiar ways of using GUI components
- appropriate for casual to expert users
- builds upon computer literacy
- must be applied carefully in walk up and use systems

Visual consistency (repetition)
internal consistency
- elements follow same conventions and rules
- set of application-specific grids enforce this

external consistency
- follow platform and interface style conventions
- use platform and widget-specific grids

deviate only when it provides a clear benefit to user

An iPhone example of inconsistency
Sometimes it's okay to make exceptions

Example: grids (alignment, repetition)
Horizontal and vertical lines to locate window components
- aligns related components

Organization
- contrast for dominant elements
- element groupings by proximity
- organizational structure
- alignment

Consistency
- location
- format
- element repetition
- organization

Example: form organization
Redesigning a layout using alignment and factoring
**Storytelling**

**Mini-break**

**Tool 4: appropriate widget choice**
Partly defined by style guidelines (e.g., Apple UI guidelines)

Radio(option) buttons versus checkboxes  
Gender:  Male

Appropriate controls for data entry  
Grade:

Combo boxes vs. list controls vs. sets of checkboxes

Task-appropriate widgets
- Color pickers
- Calendar widgets

Custom widgets...

**Tabs: proximity power**

**Tool 5: Simplicity**
minimize number of controls

include only those that are necessary
- eliminate, or relegate others to secondary windows

minimize clutter
- so information is not hidden

**Excessive decoration of doooooom**

**Legibility and readability**
Characters, symbols, graphical elements should be easily noticable and distinguishable

**Legibility and readability**
Typesetting
- point size
- word and line spacing
- line length
- Indentation and alignment
- Color
- Whitespace

Limited variety (consistency)
- Small number of fonts, styles, colors, fonts...

**From whitespace to legibility**
Legible imagery
Icon design very hard
- except for most familiar, always label them
- Fitts' law also thanks you for this

Image position and type should be related
- image "family"; toolbar groupings

Signs, icons, symbols
- right choice within spectrum
  from concrete to abstract

Icons: appropriate levels of abstraction
Illegible imagery
Refine your metaphors
Cheese sampled!
CRAP

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