Building a User Environment Design

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The UED, an Intermediary Representation

Vision → ? → Design
Intermediary Representation

• An intermediary representation of system
  – Allows us to represent coherent chunks of work process
  – Allows us to define functionality necessary to perform those coherent chunks of work
  – Want to define the intent of the system independently of how system will meet that intent

• Intermediate representation preserves freedom
  – Can still explore alternative implementations
Breaking up System Design

• Every system has *places* where user can work
• Each place has a set of *functions* available
• Each place has *links* to other, related places
• User Environment Design (UED) is like a floor plan for *what* work will be performed *where* and *on what*
User Environment Design Elements

• Focus areas (the places)
• Links between focus areas
• In each focus area:
  – Name
  – Purpose
  – Functions provided
  – Objects that are manipulated
• UEDs have logical places within the system
  – Screens, views where work
  – No h/w or s/w constraints
• A user-centric view
Another Example

1. Main menu
   See what I can do
   
   Links
   > Shop
   > Member services
   > Tips for working moms
   > Refer a friend
   > AHA online
   > Peapod Pantry
   > New on Peapod

16. Peapod Pantry
   Join a community of shoppers
   > See shopping tips
   > See recipe aisle

17. Recipe aisle
   See different kinds of recipes available
   > Recipe of month
   > Lost recipes
   > Found recipes
   > Write the Peapod Pantry

21. Recipe of the month
   Read a recipe chosen by the Pantry maintainers
Benefits of UEDs

• Presents structural issues of system
  – Goal is to produce a system design that keeps users work coherent
  – Formalizes system structure to support work flow, connected activities

• Any system you think of has UED
  – If system seems incoherent, probably poorly structured
  – You can reverse engineer systems using UEDs
    • Competing systems, previous systems
    • Called Reverse UED
UEDs and Contextual Design

• UEDs are used to further identify what functionality your system will provide
• Also shows where users need that functionality
Building your UEDs

• Use Hierarchical Task Analysis (HTA) to capture work redesign useful for UED construction
  – HTA captures steps and sequences associated with new work practice
  – Use HTA steps to construct a UED, going through new activities one by one
UED Tips

• Each focus area a *single, conceptual entity*
  – Should be able to define each focus area’s purpose in single sentence
  – User should be able to glean crisp concept of focus area’s intent from final design

• Use post-it notes to define your UEDs

• Think in terms of *functionality* system provides, rather than *how* that functionality will be provided
  – You are laying out steps for new way of performing work

• Not separated but parallels work redesign

• Look at UED to check redesign
  – Are areas coherent?
  – Do focus areas overlap in purpose

• Textbook suggests using storyboards
  – Do this too, if you feel more comfortable