

Questions and Answers for the Lectures on HCI

Module 6

1. Why we need engineering task models?

Answer: task models are useful in analyzing usability of an interactive system. This analysis can be done by manually creating and inspecting the model (e.g., the hierarchical task analysis or HTA), which is tedious and error-prone. An alternative is to automatically analyze a model. This later approach requires formal specification of the tasks, which the engineering task models provide. Formal notations help to check for completeness in specification (e.g. each non-basic task has at least two children). It also allows us to compare two models in terms of no of tasks, no of basic tasks, allocation of tasks, no of instances of temporal operators, the structure of the task models (number of levels, maximum number of sibling tasks etc.).

2. What are the major characteristics of engineering task models?

Answer: An engineering task model should have the following characteristics.

- a) Engineering task models should have flexible and expressive notations, which are able to describe clearly the possible activities.
 - b) An engineering task model should have systematic methods to support the specification, analysis, and use of task models in the design.
 - c) An engineering task model should have support for the reuse of good design solutions to problems that occur across many applications.
 - d) Finally, it is also important that engineering task models make automatic tools available to support the various phases of the design cycle.
3. Name the task categories supported by the ConcurTaskTree (CTT).

Answer: The CTT model supports six task categories, namely the user task, interaction task, application task, system task, iterative task and optional task (see slides 13-17 of Lecture 2, Module 2).

4. Explain the notion of operators in CTT. What are the different operators defined in CTT?

Answer: In CTT, operators are used to specify temporal dependencies between tasks. There are eight operators defined in CTT, namely, the enabling operator, choice operator, enabling with information passing operator, concurrent operator, concurrent communicating operator, task independence operator, disabling operator and suspend-resume operator (see slides 20-27, Lecture 2, Module 6 for more details on the operators).