

## Notes from ITR Meeting on 1/11/2007

- ® Introductions
  - ¡ Welcomed new student to ECE Subteam
- ® Current research status
  - ¡ IE Subteam (Dr. Kaber)
    - Model Development:
      - § Java-based prototypes of SAMI and New bar coder A/C dialog, SAMI Method Editor, and New Cookbook Method Editor
    - GOMSL Model Development:
      - § Discussed some of the common operators employed and difficulties associated with using typing commands in cognitive modeling
      - § Referred to B. John thesis and Salthouse for information relating to typing in cognitive models
    - User Performance Analysis/ Usability Analysis:
      - § Presented usability results from bar coder interface
  - ¡ ECE Subteam (Dr. Chow)
    - Scheduling Life Science High-Throughput Platform under Starvation constraint Using Timed Transition Petri Nets and Heuristic Search
      - § Starvation brought up by research for BDI prompted work on HCH algorithm
      - § Comparison of HCH algorithm with A-Star L1 algorithm
    - Operator Strategy Switching Boundary for High-Throughput Screening Process under Noisy Conditions
      - § Discussed three experiments based on the likelihood ratio, separation knowledge (sensitivity), and different utility functions related to a given decision
      - § Developed a coherent stability region for the use in determining operator strategy and ability in fault situations
    - Sampling Rate Scheduling and Digital Filter Co-design of Networked Supervisory Control System
      - § Replaced Zero Order Hold approach with Digital Signal Processing filtering used in Network Control System Structure
      - § Discussed the comparison of IIR and FIR filtering approaches according to different filter types and orders
  - ¡ CSC Subteam (Dr. St. Amant)
    - PDDL to ACT-R (P2A) for Goal Recognition
      - § Additions of plans within PDDL to create translation to ACT-R model
      - § Hierarchical Task Network translated to Cascading Hidden Markov Model
    - Traditional vs. Markov Models in Usability Modeling
      - § Applied Markov Model to step 1.1.7 in GDTA developed by IE subteam
      - § Usability effectiveness and cost of learning can be predicted
- ® Important Information of Note
  - ¡ Final project report due June 30, 2007
  - ¡ Substantial travel and equipment funds unspent
  - ¡ Dr. Norbert Stoll's visit last week of January '07