

## Notes from ITR Meeting on 8/5/2005

- Current research status
  - Dr. Kaber's team:
    - CELISCA visit
      - Dr. Kaber – Development of partnership program proposal as an extension of the current NSF grant. Will travel to Germany on 9/30 or 10/1 to present proposal to Ministry of Science.
      - Becca and Noa – Data collection on biological screening processes:
        - Updated GDTA
        - Reviewed AH models to ascertain their correctness and completeness
        - Videotaped Kristin's data analysis
        - Videotaped Trypsin test
        - Recorded times for each step in Trypsin test
        - Obtained ORCA log files for Trypsin test on 1 and 24 families
        - Took screenshots of software and error messages
        - Took pictures of all devices in HTS line
      - Work on journal article describing development of interface design recommendations based on GDTA and AH models.
  - Dr. St. Amant's team:
    - Thomas is surveying the HRI technology literature at the interface level to present at HRI conference.
    - Translation of GDTA to cognitive models:
      - GDTA will be translated using VPDDL (Visual PDDL) to a PDDL model. The PDDL model will show decomposition, precedence (temporal), and physical/information dependence relationships between tasks and actions.
      - PDDL model will be translated to ACT-R using P2A. The result will be a partial ACT-R model that will only represent operator interaction with software.
    - Lloyd will create digital copies of Trypsin test videos recorded at CELISCA.

- Dr. Chow's team:
  - Zheng is working on paper on adaptive bandwidth allocation and sampling rate of multi HTS control
    - Developed cost function dependent on sampling frequency and bandwidth allocations. Function will be adaptive in the future, e.g. by taking operator requirements into account.
  - Jae working on paper on Petri net application
    - Further developed Petri net for HTS line.
    - Considering use of color Petri nets, in which different types of tokens can be used. This will reduce the size of the model, but may increase its complexity.
    - Four independent Petri nets will be used to represent four HTS lines.
- Research plans for next semester
  - Dr. Kaber's team:
    - Complete journal article and send into review by the end of next week.
    - Develop new interface prototype based on interface design recommendations.
    - Conduct usability testing to evaluate prototype as compared to original interface.
  - Dr. St. Amant's team:
    - Finish work on VPDDL and P2A.
    - Generate partial ACT-R model by the end of the semester.
  - Dr. Chow's team:
    - Work on two papers.
    - Integrate Jae and Zheng's models.