

Notes from ITR Meeting on 3/28/2005

- Current research status
 - Dr. St. Amant's team:
 - Created mapping of QA task based on GDTA.
 - Model will be entered into SHAKEN, a knowledge base authoring environment. SHAKEN can represent the model graphically and textually (in Lisp).
 - KANAL, a knowledge analysis tool can then be used to identify ambiguities, inconsistencies, repetition, etc. in the task. Will optimize the plan and establish plans for specific activities and critical paths. If information requirements of the task are available, this tool can be used to determine the probability of errors, time to complete cognitive activities, and whether the task presents a cognitive overload.
 - Dr. Chow's team:
 - Current focus on modeling of separate lines, rather than entire supervisory control system.
 - Lines will be modeled using a Petri net, a graphical and mathematical tool for modeling, analysis, and design of discrete event systems. Petri nets can model low-level errors (e.g. the probability of a robot mishandling a plate). They can handle parallel activities, such as two lines working together (one line preparing test plates from a sample plate and the other – testing the compounds).
 - The screening tasks will be modeled using simulation software such as Arena, Stateflow, or Simulink. Data from Rostock on these tasks is currently not available. Error classification scheme will be needed.
- Contact
 - Kristin
Timing of information, when its' available, and when its' needed.
 - Steffen
Probability of different errors in the system.
- For next meeting
 - Dr. Chow's team
Initial development of a Petri net model of a screening line.
 - Dr. Kaber's team
Finalize CTA; Prepare a hierarchical task analysis of QA task using SA Technologies software.
 - Dr. St. Amant's team
Input model into SHAKEN.
- Important dates
 - Next meeting – 4/5/2005 at 3:00.
 - 6/20 to 7/23 – Dr. Kaber in Rostock.
 - 7/27 to 8/6 – Kristin in Raleigh.