

IE Team Meeting Notes 10/19/07

I Review Finished Interfaces

- A Make sure EID principles are reflected in the EID interface design
 - 1 Develop table of principles:

Fundamental EID principles (Burns)	Vicente (1999) Interface Design	Traditional Supervisory Control Interface	EID VSCI	ENG VSCI
Principle 1	✓	X	✓	X
⋮	✓	X	✓	X
Principle n	✓	X	✓	X

II Cognitive Task Flow Diagrams

- A Expand to incorporate detailed monitoring task differences
 - 1 Reflection of transport and station state changes
 - 2 Decision: Process state is acceptable
 - 3 Color/State changes
 - 4 Projection of later states based on interface information

III Theoretical Basis of 2ndary Experiment

- A EID better than traditional (engineering) interface design (especially the implications on SA). Objective is to provide a cognitive explanation of why EID is better.
 - 1 Cognitive task flow diagrams demonstrate the underlying cognitive steps driving EID improvements
 - 2 GOMS/L models provide explicit hypothesis of cognitive steps for interface differences
 - 3 Performance and physiological data demonstrate the validated cognitive explanation of EID

IV Experimental Studies

- A CELISCA study
 - 1 Provide experimental materials (w/ plan) to CELISCA experimenters at LSA conference
- B Local study
 - 1 Add SA measure in the form of probes
 - a 12 probes for each level to be administered during workload stops
 - 2 Identify solution for polar heart rate monitor (check for other chest straps or contact Polar for information about replacing chest strap battery)