The Future of ACT-R

Christian Lebiere
Human-Computer Interaction Institute
Carnegie Mellon University
cl@cmu.edu
ACT-R 5.0

- Out in beta on the web site
- Taught at the 2002 summer school
- Substantially similar to the version introduced at the 2001 PGSS
- Declarative module rolled back to 4.0
- Ability to define new modules/buffers
- Buffers defined by =lhs, +rhs, =rhs, -rhs fcts
ACT-R 5.0

Environment

Intentional Module (not identified)

Declarative Module (Temporal/Hippocampus)

Goal Buffer (DLPFC)

Retrieval Buffer (VLPFC)

Productions (Basal Ganglia)

Matching (Striatum)

Selection (Pallidum)

Execution (Thalamus)

Visual Buffer (Parietal)

Manual Buffer (Motor)

Visual Module (Occipital/etc)

Manual Module (Motor/Cerebellum)
ACT-R 6.0

- Substantially similar to 5.0 (same as 3.0/4.0)
- Thorough code reimplementation
  - The current code is 3.0 vintage (circa 1994/95)
  - Time to jettison some backward-compatibility
- Modular design
  - Split up procedural and declarative modules
  - Provides parts of theory as desired (e.g. DM)
  - Smaller grain size of modularity? (e.g. CLIPS)