

The TRIPLE Cognitive Architecture: Implementation of Embodied Agents Based on a Cognitive Model

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Abstract: This paper introduces a new model which is intended to combine the flexibility of a cognitive architecture and the power of the new technologies developed for the semantic WEB. The cognitive architecture (called TRIPLE) is hybrid and integrates three modules which run in parallel: a reasoning, a connectionist and an emotion engines. The reasoning engine deals with the current task, processes the perceptual input to the system, and interacts with the memory of the architecture and the other two engines. The reasoning engine can perform inferences and consistency checks on the content of the working memory. The latter is determined by a spreading of activation mechanism performed by the connectionist engine which is also responsible for retrieval of knowledge from memory relevant to the task.