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CArtAgO

CArtAgO (Common ARTifact infrastructure for AGents Open environments) is a general purpose framework/infrastructure that makes it possible to program and execute virtual environments - also said virtual / application / software environments - for multi-agent systems.

CArtAgO is based on the Agents & Artifacts (A&A) meta-model for modelling and designing multi-agent systems. A&A introduces high-level metaphors taken from human cooperative working environments: agents as computational entities performing some kind of task/goal-oriented activity (in analogy with human workers), and artifacts as resources and tools dynamically constructed, used, manipulated by agents to support/realise their individual and collective activities (like artifacts in human contexts). Actually, A&A is based on interdisciplinary studies involving Activity Theory and Distributed Cognition as main conceptual background frameworks.

CArtAgO makes it possible to develop and execute artifact-based environments, structured in open workspaces (possibly distributed across the network) that agents of different platforms can join so as to work together inside such environments. So with CArtAgO, developers of multi-agent systems have finally a simple programming model to design and program agent computational environment, composed by dynamic sets of artifacts of different kinds, aside to the models and platforms used to program agents.

CArtAgO is not bound to any specific agent model or platform: it is meant to be orthogonal with respect to the specific agent model or platform adopted to define agent architecture and behaviour. However, CArtAgO is especially useful and effective when integrated with Agent Programming Languages based on a strong notion of agency - intelligent agents - in particular those based on the BDI-like architecture. Latest CArtAgO distribution (2.0) directly includes a bridge for the Jason agent programming language.

CArtAgO technology is fully open-source, hosted on SourceForge.