

The Gadgetware Architectural Style

Computer Technology Institute

What is it?

GAS is a conceptual and technological framework for describing, creating and using “families” of Gadgetworlds that share common architectural aspects.

GAS defines:

- a vocabulary of entities and functions (eGadget, Plug, Synapse, Gadgetworld...),
- a set of configurational rules (for interactively establishing inter-eGadget Synapses, (re)storing Gadgetworlds...), and
- a technical infrastructure, the GAS-OS (algorithms, protocols, interfaces...)

“Where” is it?

Parts of GAS lie:

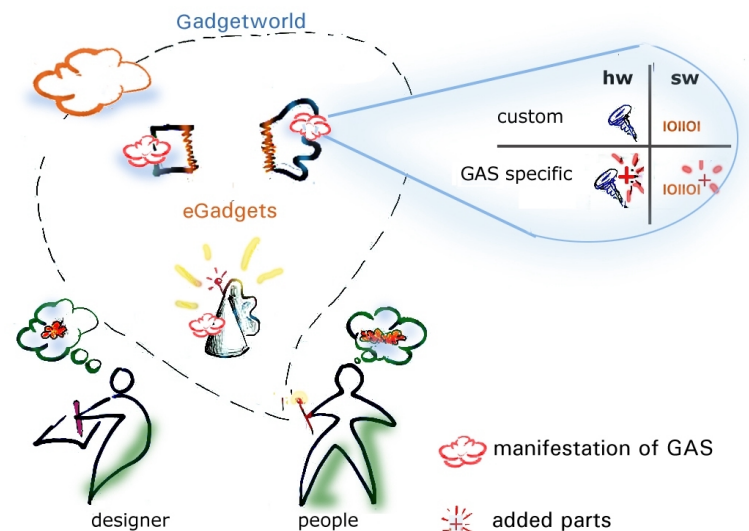
- in the head of eGadget manufacturers in the form design guidelines and APIs,
- in the head of people-Gadgetworld designers in the form of configurational rules and constraints for composing Gadgetworlds,
- in the collaboration logic of eGadgets in the form of communication protocol semantics and algorithms.

Why do we need it?

As a consistent conceptual and technical referent among eGadget designers and people-Gadgetworld designers which allows the former to provide the building blocks and rules for the latter to build “proper” and “valid” constructions.

As conveyor of design semantics from design experts to people-Gadgetworld designers. Design options and compositional constraints can be embedded in eGadgets in the form of configurational rules which guide and inform the composition and use of Gadgetworlds.

As a vehicle for transforming people from passive consumers to creative shapers of their environment, by supporting the creation of new and emerging functionalities out of pre-fabricated eGadgets by people-Gadgetworld designers.

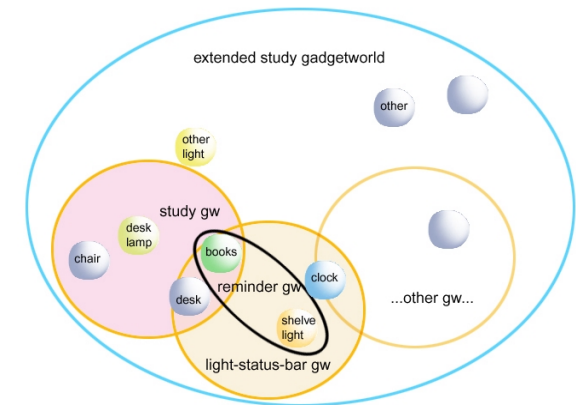


What are eGadgets?

eGadgets are everyday objects augmented with computational and communication abilities, onto of which a GAS-specific logic is implemented rendering them GAS-compatible. eGadgets have a dual nature, physical and digital, which can co-exist or be detached. eGadgets can be “associated” with other eGadgets to form Gadgetworlds. Established inter-eGadget associations are called Synapses. Associability characteristics are manifested through eGadget Plugs.

What are Gadgetworlds?

Gadgetworlds are people-composable clusters of associated eGadgets aimed to perform collective functions.



Once composed, Gadgetworlds are identifiable entities which can be “saved and restored”, “carried along” and “operate”.