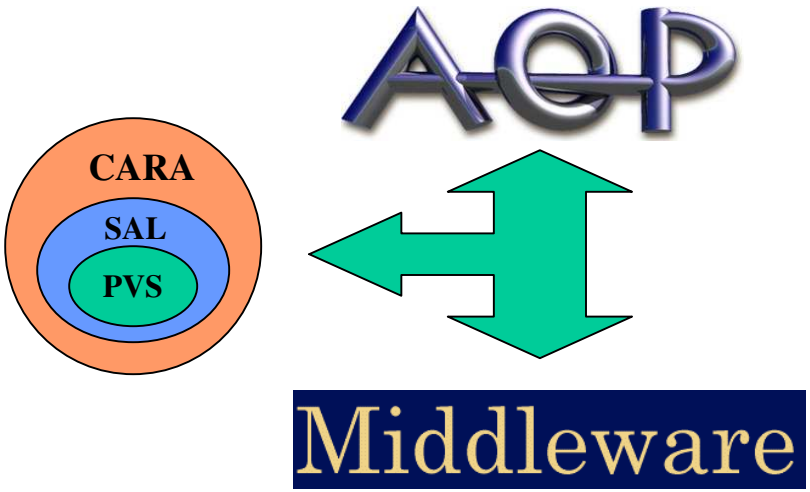
CARA: Composition, Abstraction, and Refinement for Aspects



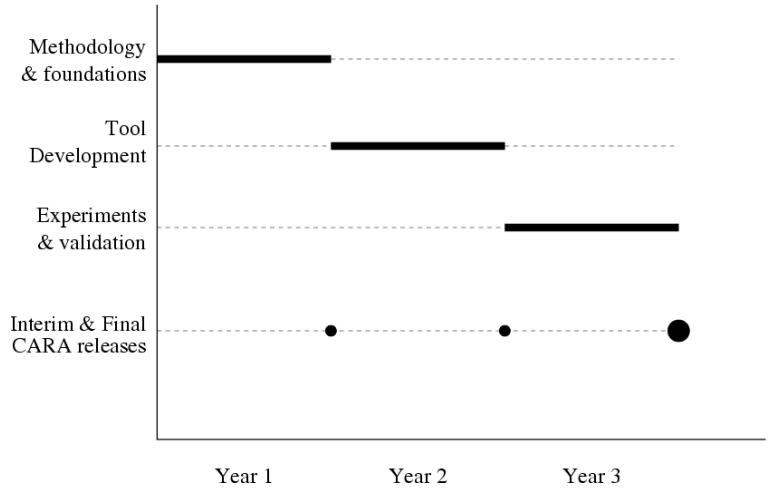
New Ideas

- Treatment and analysis of aspects is brought forward from implementation time to specification and design time
- Lazy Composition allows interdependencies among components to be resolved at the natural time—during refinement
- Aspects realized through architecture and middleware mapping and event-triggered services as well as by weaving

Impact

- Order of magnitude reduction in effort required to provide formal assurance for individual critical aspects of an embedded application
- Ability to provide formal assurance and analysis for multiple aspects of an embedded system
- Order of magnitude reduction in effort required to add a new aspect to an existing embedded system

Schedule



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