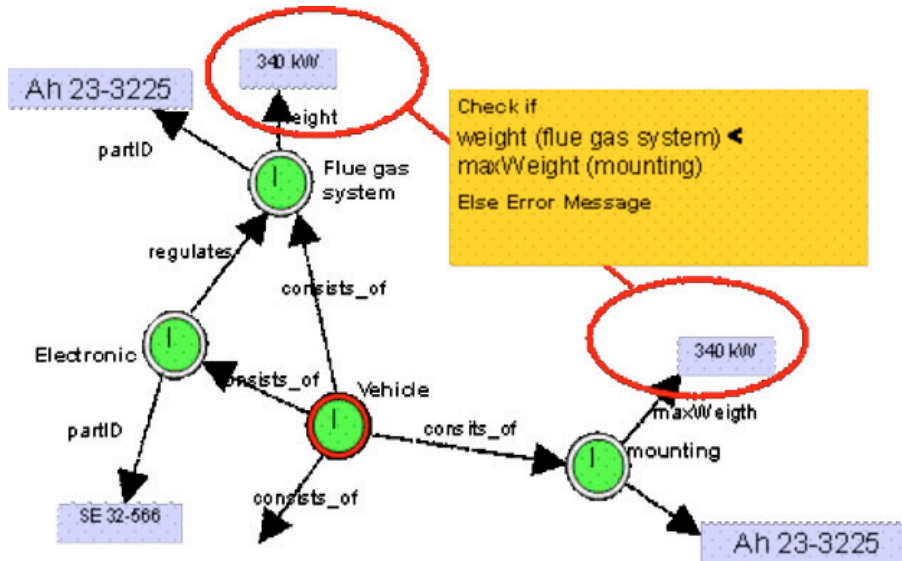**Capability Case:**

Product Design Assistant

Intent:

To support the innovative product development and design process, by bringing engineering knowledge from many disparate sources to bear at the appropriate point in the process. Possible enhancements to the design process include: rapid evaluation, increased adherence to best practices and more systematic treatment of design constraints.

Solution Story:

Audi Semantic Testcar Configurator, Sharing Engineering Knowledge at Ford

Constraints on possible configurations recorded as rules in an ontology

Audi manufacturing engineers design, build and test new prototypes as part of the innovation process. The faster this cycle can be completed, the greater the number of innovations that can be brought to market, and the sooner. AUDI uses a semantic engine from Ontoprise to represent complex design knowledge in electronic form. The engine brings together knowledge from many different sources, and draws logical conclusions from the combined information. Audi uses this capability to provide a computational representation of complex dependencies between components of research test vehicles. These dependencies play a key role in the configuration and development of new vehicles. For example, in order for testing to proceed smoothly, the engineer must know if a selected engine can be built into the chosen chassis, if the brakes are sufficient for the engine performance, or that correct electronics are present in the vehicle.

"We expect a shortening of the development cycle, while at the same time improving development quality," said Thomas Syldatke of Audi. "The electronic advisor shall take care of routine tasks, allowing our engineers to concentrate on creative efforts."

Benefits:

Reduced the overall prototyping cycle time for new car designs, improved development quality, automation of routine tasks, increasing innovation as engineers gained time for creative efforts.

Featured Products:

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Applicable Products:

Cerebra Inference Engine from Network Inference, e2KS from Emergent Systems

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