MORALE Cluster Interaction Plan - Update

Georgia Institute of Technology
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Cluster Interaction Scenario

At the Lake Placid meeting, the MORALE project participated in the Rationale Capture and Software Understanding cluster group. This group decided on an integration scenario encompassing several years in the life cycle of a multi-version software system. The early part of the scenario includes the generation and capture of the rationale for making a specific architectural decision. The later stage provides several examples of how the captured rationale might be used to resolve questions concerning system evolution.

The proposed scenario conforms to the general evolution framework that the MORALE project intends to follow. As such, the deliverables outlined in the previous version of the plan still hold. Moreover, there are several additional questions that we will look into related to the nature of the information being captured and how it will be used.

Activities

- The nature of the rationale information being captured should be modeled. Ultimately we need a data model (information content and relationships) for the rationale. This will be stored in the Evolutionary Design Journal that we described in our proposal.
- The exact content and flow among the various MORALE components (inquiry cycle, architectural analysis, and program analysis) should be designed. This can be thought of as a data flow diagram for the composite MORALE methodology.

Interim Efforts

In the scenario proposed at the Lake Placid meeting, a specific software system was mentioned, namely satellite ground control. It was also suggested that we could consider this system as a place holder in more generic scenario which might be replaced by software from another domain, such as distributed simulation. No final decision was made on this issue. As there is a considerable amount of labor involved with analyzing a specific system and its associated domain, these activities (domain knowledge acquisition, software analysis) will ultimately have to be undertaken. However, until the specific software has been selected, we have elected to do a small case study involving the analysis of the Mosaic web browser. What we can do now is to view our case study as a small instance of the scenario. This means looking for architectural issues similar to those in the scenario and envisioning down stream changes to which captured rationale might be applied.