

Chris Cargile	CSCI656	March 11, 2014	Ch.8 HW Questions
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This homework assignment (plus reading) required 3.25 h. Answering questions from the assigned section required 1.25h

8.10.2) The four C's of architectural analysis are consistency, compatibility, correctness, and completeness.

8.11.1) There are three components in the Rapide ADL model (pg. 293), which may arguably be identified as: DataStore, Calculation, and UserInterface. For the named components, services required were identified, using the operations listed beneath each component being associated with the 'action' and 'in' keywords, respectively as: SetValues(); SetBurnRate(); and NotifyNewValues().

For each component, services provided were identified using the operations listed beneath each component, as associated with the 'action' and 'out' keywords, respectively as: NotifyNewValues(); DoSetValues(); and DoSetBurnRate().

Between the services required and the services provided, **DoSetBurnRate/DoSetValues** are potentially source(s) of naming inconsistency. The system-level service-level modeling of Lunar Lander in Rapide seems to contraindicate such a coincidence. The services at this viewpoint, found under 'connect,' capture the services' naming differences, so it is likely to be a difference attributable to the conventions of the modeling language vs. architectural oversight.

There is inconsistency found in the naming of the components themselves that does not seem inconsequential. Except for the model's formulation of the last component, all component names begin and end congruently. The last component begins named as 'Player' and ends named 'UserInterface.'

8.11.2) As described above, the pre- and post-conditions associated with each component identified using the Rapide ADL model of Lunar Lander (pg. 293) are captured in two places. The pre-/post- conditions are identified at the component-level and system-level views within the formalization of system differ in that the names for the setter methods are prefixed by 'Do-' in one portion of the model vs. the other. This is an inconsistency between the names of the services provided but could be considered an inconsistency under the auspice of behaviors as well.

Most significantly, one might examine all views for consistency, such as by examining the operations as associated with the keywords 'action' and 'behavior' at the component-level view or those under the system-level view, but one would not find any further inconsistencies, otherwise. Syntax dissimilarities within the model may be revealed such as that in- conditions are not always list prior to -out conditions and that indentation plays a role, while loops themselves and procedural statements under the 'begin' keyword may also be indicated noteworthy via a double semi-colon. But the behaviors in the model are not inconsistent.