Background (continued)

-Current design goals and restrictions

The basic goals of this proposal are:

* **To allow modelers to build models by aggregation, composition, or modularly.** These methods are so similar to one another, and the process of creating an SBML package is so involved, that it is not worth it to create one package for aggregation and composition, and a separate one for modularity. Users of this package should be able to use and create models in the style that is best suited for their individual tasks, and exchange and reuse models from other groups simply and straightforwardly.
* **To work cleanly with other packages.** The rules of composition should be such that they could apply to any SBML element, even those not in core that we do not know about.
* **To allow models produced with these constructs to still be valid SBML without them.** Proposed by Nicolas le Novère (<http://www.sbml.org/Forums/index.php?t=tree&goto=6104>)and affirmed by the current SBML Editors (<http://sbml.org/Events/SBML_Editors'_Meetings/Minutes/2010-06-22>), that whenever possible, ignoring elements with the package namespace should result in syntactically correct models that you can 'do things with', even if the mathematics will be wrong (visualize, annotate, edit to add/remove elements, etc.).
* **To not worry about the verbosity of models.** We assume that software will deal with the ‘nuts and bolts’ of reading and writing SBML, so that if there is a clear verbose way of doing things or a tricky concise way of doing things, we will chose the clear verbose way, and let software tools abstract the verbosity for the user. On the other hand:
* **To not be overly complicated in the specification.** Apart from the base elements, any new element or attribute added should have a clear use case that cannot be achieved in any other way.
* **To include most elements of past proposals and discussions.** The names may change, but the design goals should still be achievable.

All of these goals may not be compatible in all situations, but we will do what we can.