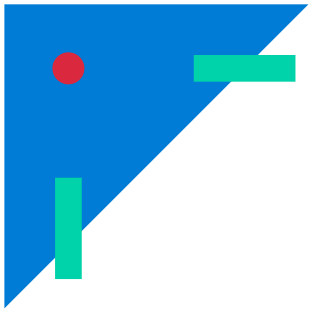

Semantic Hypermedia Design Method

(MBUI Workshop, Rome, May 2010)

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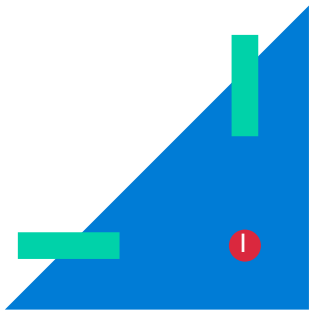
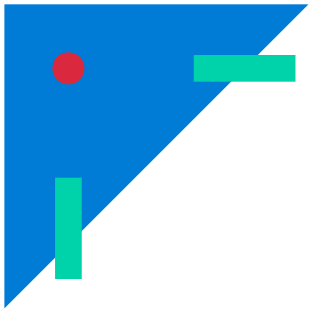


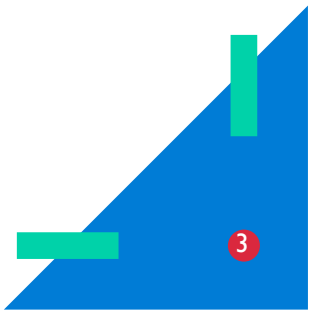
History

- Web applications seen as part of men-machine teams that solve problems
- Started with Hypermedia Design Model - HDM (1990)
- Evolved to Object Oriented Hypermedia Design Model – OOHDM (1995)
- Now Semantic Hypermedia Design Model – SHDM (>2004)



Model Based Approaches

- Leverage abstractions
- Provide specialized "richer" descriptions of particular aspects of artifact
- Semantics enable automated translation into other models (eventually reaching executable ones)
- In general, several models are needed to completely characterize the desired artifact

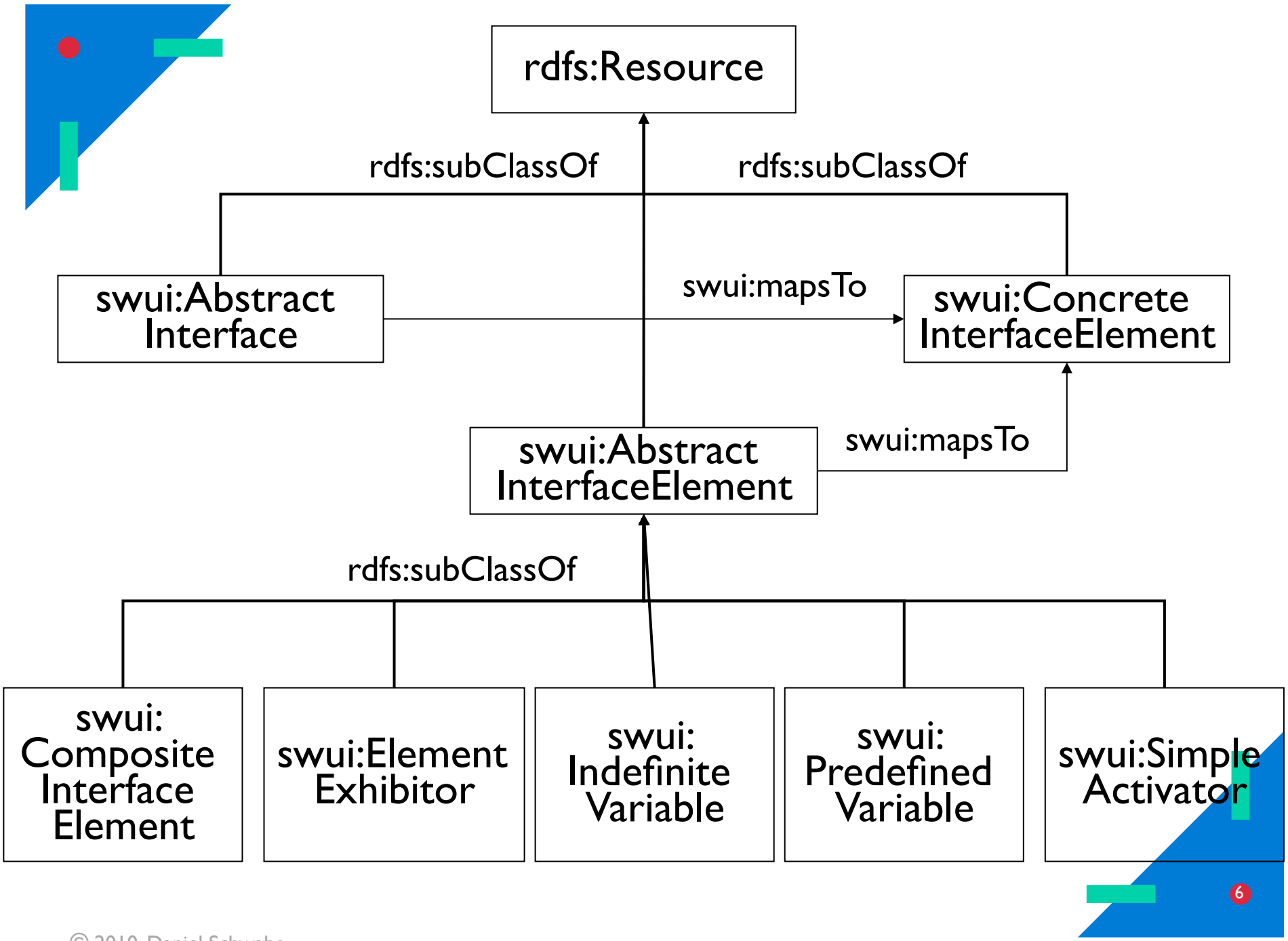


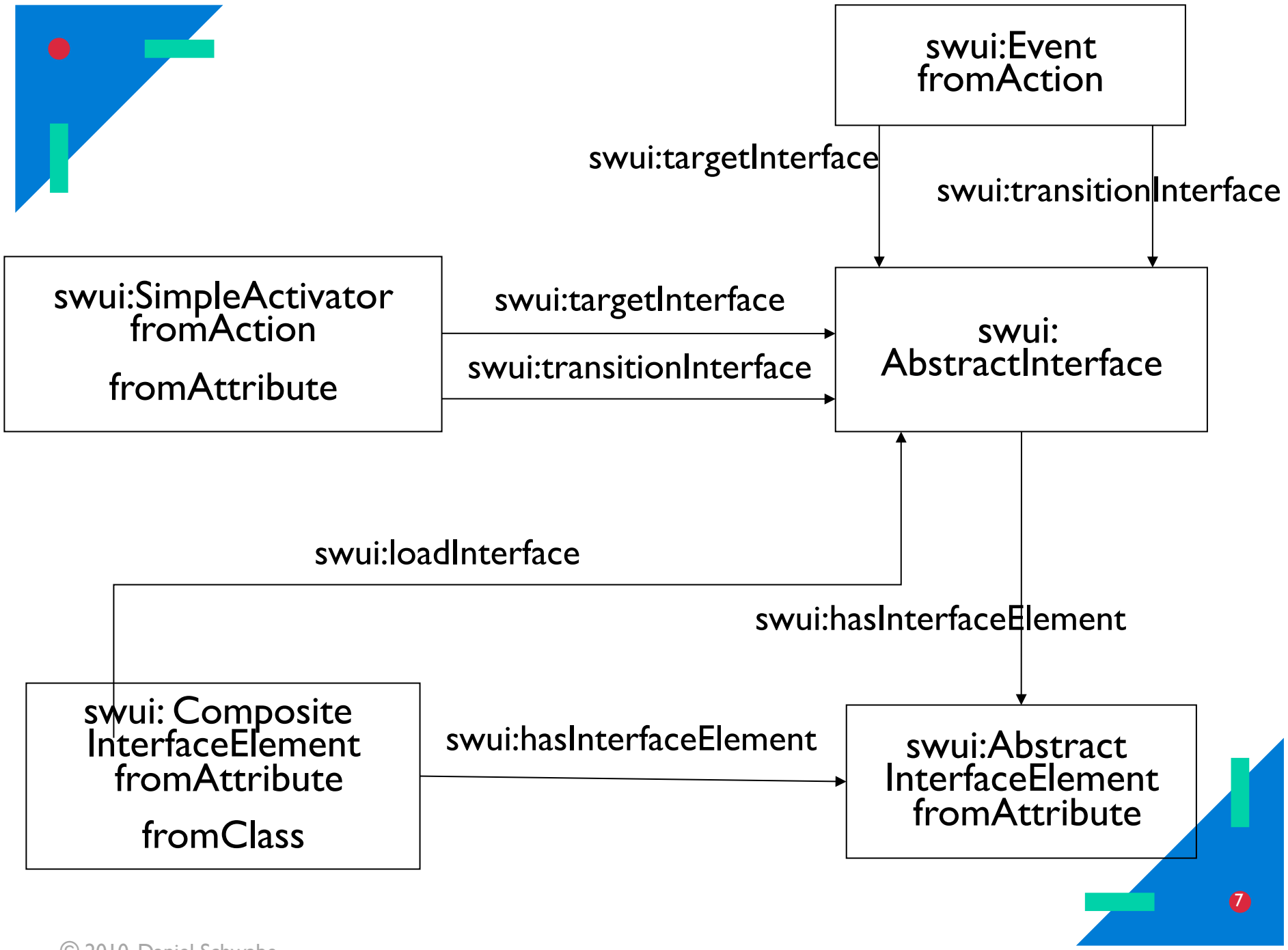
SHDM Models

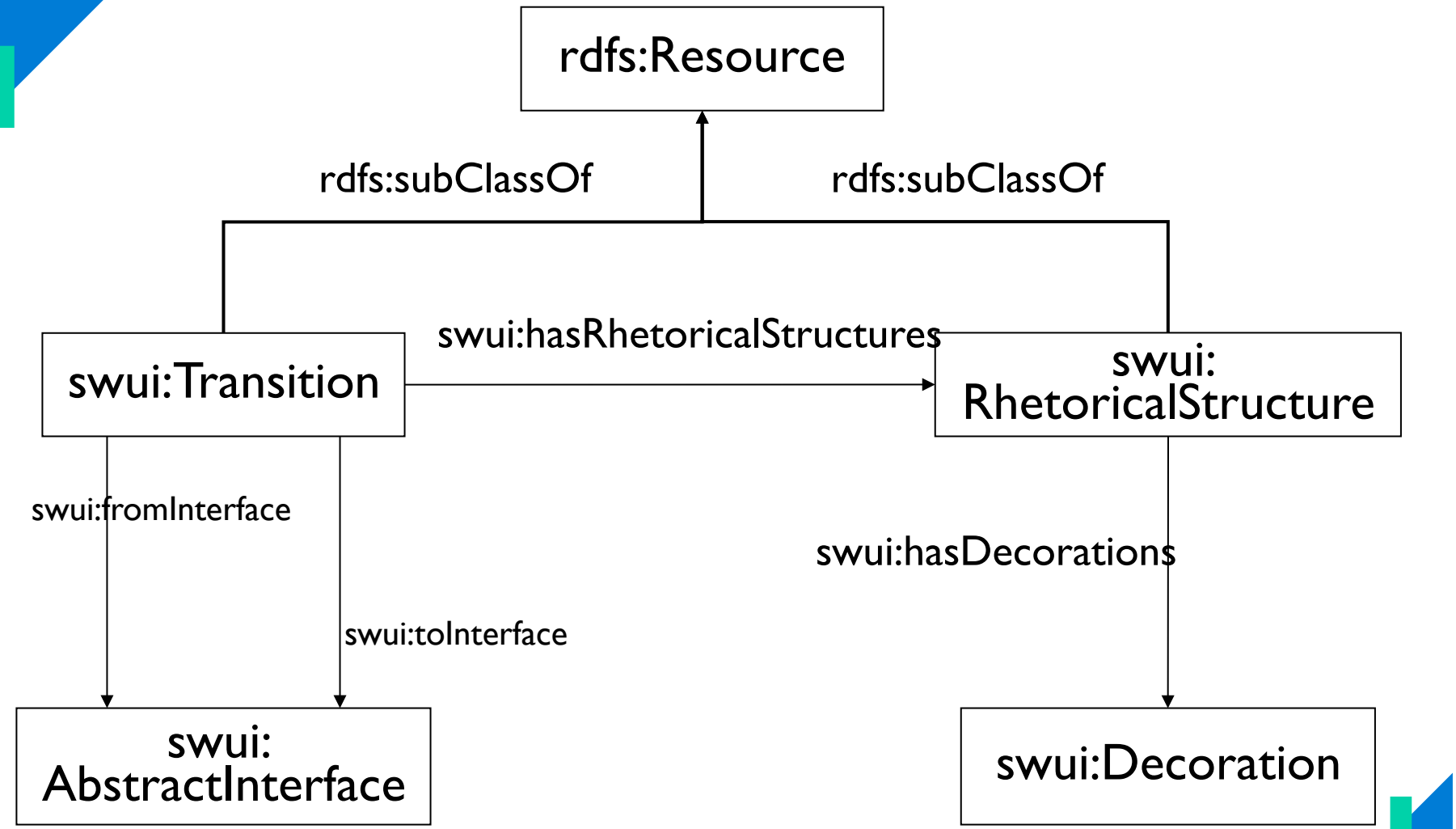
- Requirements Model
- Domain Model
- Navigation Model (part of task model?)
  - Navigation is seen as a functionality of the application whose semantics is previously known
  - Navigation is different from "changing interfaces"!
- Interface Model
  - Abstract Interface
  - Concrete Interface (including interface behavior)
  - Rhetorical Structure
- Application Behavior Model
- Access Rights ("security") Model
- Adaptation Model
  - Context, including user
  - Adaptation and Meta-Adaptation

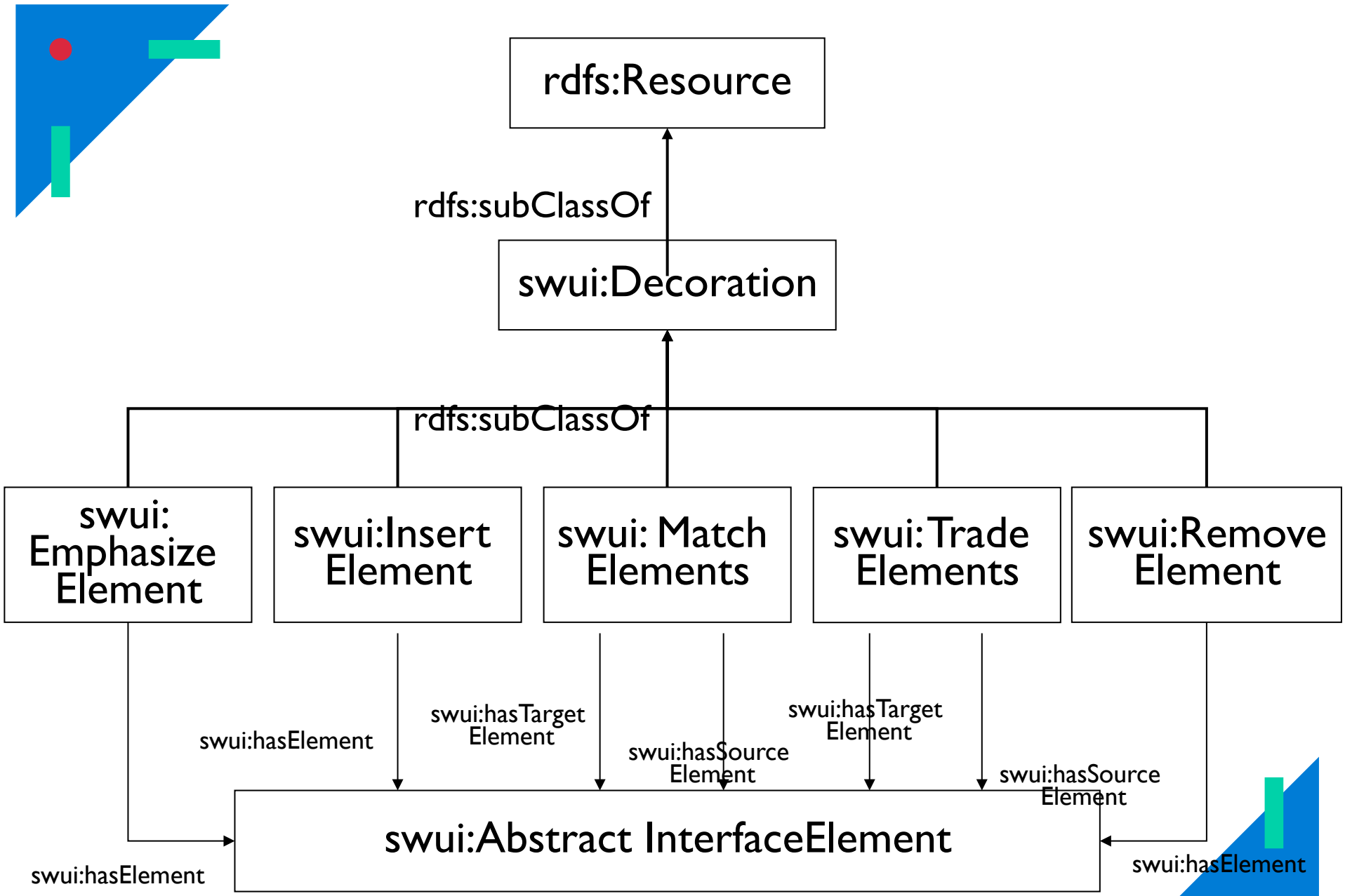
Abstract Interface Model

- Interface is composition of Abstract Widgets
- Focuses solely on the role played by the widget in the interactions
- See http://www.w3.org/2005/Incubator/model-based-ui/wiki/SHDM_-_Semantic_Hypermedia_Design_Method for a short summary.









Rhetorical Structure Model

- Captures time-dependent Interface Behavior
- Several levels, when using multi-modalities
- Separate from pure interface behavior
- Applies to both within-page and between-pages transitions

Ongoing UI-related Research

- Refinement and extension of Rhetorical Models
- Inclusion of multi-modality
- Use of non-speech sound
- Refinement of Adaptation Model
- More generally, look into multi-modal machine mediated support for human communication (semiotic engineering approach).