RAGE

Realising an Applied Gaming Eco-System

Domain Model Asset

T2.2B
created by TUGraz

October 2016
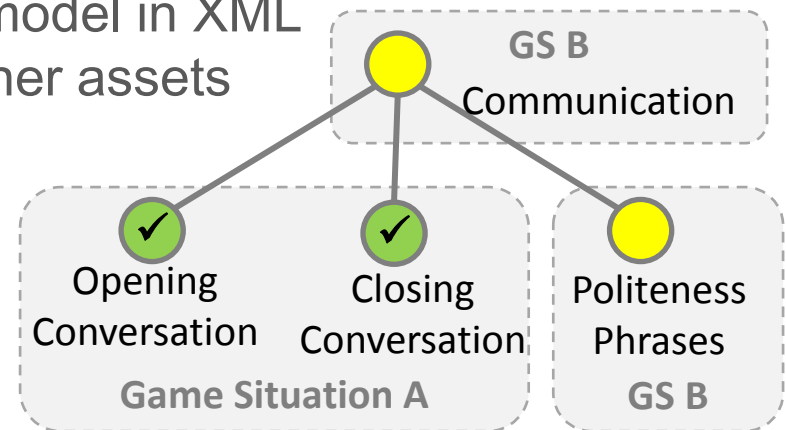
Idea and Pedagogical Value

- Tool for defining the knowledge domain that should be learned with the game
  - Authoring tool to create new domain models
  - Domain model is a strucutre of competences and relations to game situtations
  - Domain models are made available for other assets

- Pedagogical value
  - This domain model represents the learning goal and connects the game topic with the learning content
  - Bassis for meaningful learning paths
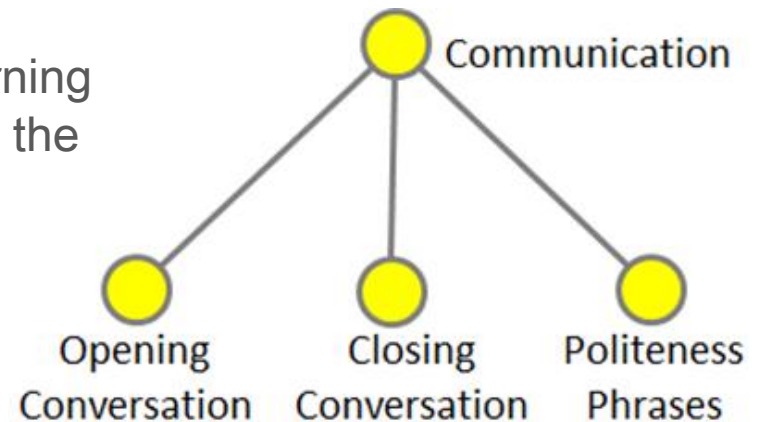
Asset Concept

- Competences are structured in prerequisite relations and related to game situations
  - based on the psychological-mathematical framework of Competence-based Knowledge Space Theory
- An authoring tool allows to define the competences, prerequisite relations and relations to game situations
  - The authoring tool creates an XML file of the domain model
- The asset makes use of the domain model in XML format and makes it accessible for other assets
  - It parses the XML fiel and creates a data object that is provided

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Integration – Setup

Include the asset and specify the location of the domain model:

```
DomainModelAsset dma = new DomainModelAsset();
DomainModelAssetSettings dmas = new DomainModelAssetSettings();
dmas.LocalSource = true;
dmas.Source = "domainmodel.xml";
dma.Settings = dmas;
```

or use a location of the domian model on the Web:

```
DomainModelAssetSettings dmas = new DomainModelAssetSettings();
dmas.LocalSource = false;
dmas.Source = @"http://css-kmi....";
dma.Settings = dmas;
```

Integration – Usage

Request the Domain Model:

```
DomainModel dm = dma.getDomainModel();
```

Infrastructure / Context

- Implemented as Client side asset in C#
- Reads domain model from local file or from web-source (in XML)
- Domain Model creation via supplied software (authoring tool)

Needed/Optional Bridges	Needed/Optional Assets
ILog - optional	-
IDataStorage – needed	-
IWebServiceRequest - needed	-

Added Value

Why should a game developer use the Domain Model Assets?

This asset allows an **easy handling of competences within a game**

- Bringing in a psychological model of competence development into game design
- Competences conveyed by a game can easily be defined, structured, and related to the game and its game situations in advance
- Other assets can easily make use of existing competence structures

Contact and More Information

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- More information on these assets:
  - http://css-kti.tugraz.at/projects/rage/assets/

- Video Demo
  - http://css-kti.tugraz.at/projects/rage/assets/videos/Demonstration-CompetenceBasedAssets.mp4