inBloom

Learning Map and inBloom Index System

Data Model and Server

USE CASES

Schema and Template

22 Jan 2013

Applied Minds, LLC

1209 Grand Central Ave Glendale CA 91201

Background

The Learning Map Data Model

The Bill & Melinda Gates Foundation (the Foundation) supports the implementation of the Common Core State Standards for US K-12 education. The Foundation awarded a contract to Applied Minds, LLC (AMI) to develop a Learning Map Data Model (LMDM) with the goal of it becoming a standard for educational technology infrastructure. The Learning Map will provide the organizing framework that maps the relationship between learning objectives, including dependencies and higher level groupings. It will also allow educational media resources, such as courses, books and web content to be linked to learning objectives. Curricula aligned to the standards will exhibit great diversity in highlighting paths through the Learning Map, and a suite of tools will allow authoring and visualization of the Learning Map. We believe that this data model will eventually enable the creation of online learning tools that are more responsive to the individual needs of a student. The LMDM is inspired by and based on the philosophy of the more general Knowledge Web (See: http://edge.org/conversation/aristotle-the-knowledge-web).

inBloom Technology

The Foundation has, in collaboration with the Carnegie Corporation, initiated an ambitious effort, Shared Learning Infrastructure (SLI), now inBloom Technology, to provide a new technology infrastructure that supports the Common Core Standards and the Foundation's vision, to be implemented by inBloom. AMI has been contracted by inBloom to build an implementation of a Learning Map and inBloom Index System, suitable for third-party software developers to populate content and develop applications.

inBloom has developed lists of use cases that they seek to support using the various components of the inBloom Technology that AMI has refined as part of Task 1 of the project.

Use Cases Schema and Template

To provide a more structured way to support SLC's use cases as we implement the LRI Developer Server, the AMI team created a schema for our collected use cases relevant to the SLC project. This document is a form presenting an overview of the fields we would like to collect information for with each additional use case, along with several fields for internal use by AMI. These may be useful for us in the following ways (among others):

1. As a reference (for example, if we want to check which use cases are affected by a particular feature)
2. Providing the form to people who have use cases to share, as a template explaining the information we need
3. Incorporating & integrating future use cases (there is a field in the schema for mapping use cases to one another)

Use Case

Title: Name of Use Case		Unique ID (AMI-assigned)
Date	Author	Organization
DD/MM/YYYY	Name of person submitting	Affiliation when applicable

Actors Involved

Primary Actor	Dependent Actors
Main actor performing actions in use case	Actors affected by actions in use case

Use Case Details

Precondition	Post Condition
Contextual data & functionality requirements; What must be true before the use case is started?	What must be true after the use case is completed

Action Steps	Variations	Exceptions
Describes steps needed within the use case	Variations which can occur in how a step is performed	How each step in the Action Steps can be extended, or how things can go wrong

Summary
User-provided overview of the desired flow of the use case – describes the “normal” processing path, aka, the Happy Path

For Applied Minds Use

Infrastructure/Technology Framework	Third Party (non-AMI) Applications
Components required and responsible party, if possible	Applications required from third party developers (developers named as possible)

Content Required	Data Model Functionality
Corpi of content required	Optional field; likely determined by AMI

Mandatory Objects	Optional Objects
Data entities / objects necessary for the completion of the use case; initially list description and later link to existing Spec as possible	Data entities / objects that may participate in the use case; initially list description and later link to existing Spec as possible

Administrative

Interpreted Need/Expectations
AMI internal interpretation/explanation of expectations for use case, as distinct from user-provided summary

Open Issues	Mapping	Disposition
Any issues with the use case that have not yet been resolved	Mapping of use cases to each other; "This use case aligns to use cases A, B, and C."	If we will not be addressing the use case at this time, explain why