What's Out There and Where Do I find it: Enterprise Metacard Builder Resource Portal

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NDIA Systems Engineering Conference
San Diego. CA
26-27 October 2011

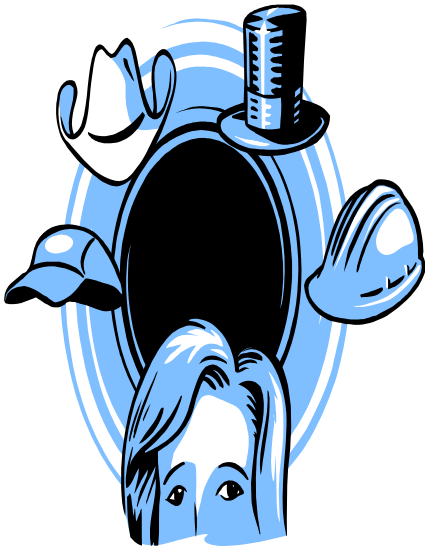
M&S Driving Issues

Growing Demand for LVC Interoperability

Redundancy of Tools, Data, Gateways & Repositories

Numerous, Parallel Architectures (HLA, DIS, CTIA, TENA)

Legacy Systems vice Innovation



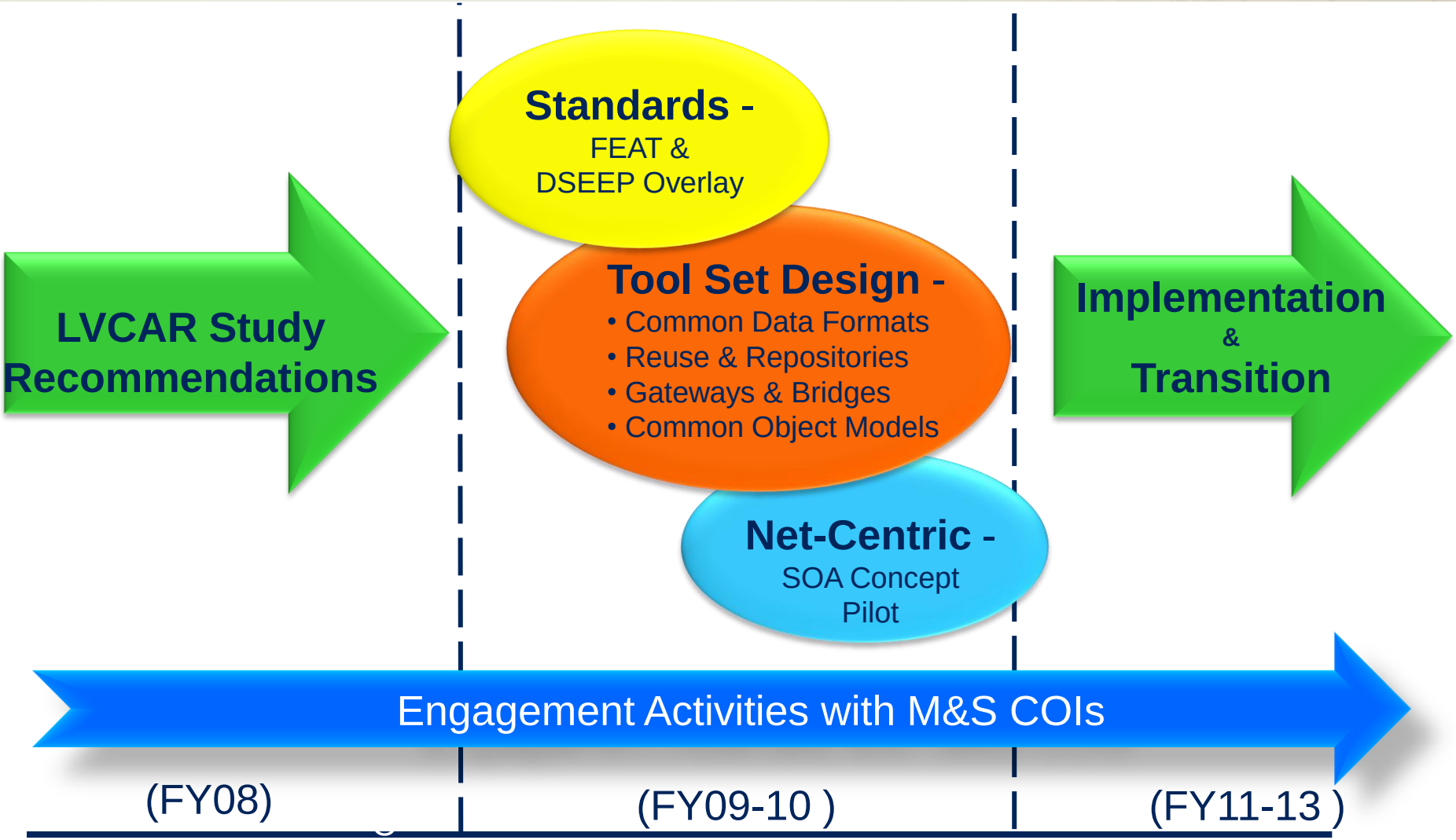
LVCAR-I Project Framework

- ***Purpose:***
  - **"Develop a future vision and supporting strategy for achieving significant interoperability improvements in LVC simulation environments."**

- ***Focus:***
  - **Technical Architecture**
  - **Business Models**
  - **Standards Evolution**
  - **Management Process**

- ***Precepts:***
  - **Do no harm**
  - **Interoperability is not free**
  - **Start with small steps**
  - **Provide central management**

LVCAR-I Progression



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LVC Asset Reuse: Objectives

- **LVC Asset Reuse Implementation Plan identified three objectives:**
  - **Enhancement of discovery and acquisition of reusable M&S assets (Transactional Mechanisms)**
  - **Exploration of improved collaboration to improve reuse (Social Marketing Mechanisms)**
  - **Enhancement of M&S systems engineering processes and guidance (Process-based Mechanisms)**

- **The EMBR Portal:**
  - **Facilitates the implementation of the DoD Netcentric Data Strategy for communities enabled by M&S**
  - **Addresses the immediate need for improvement of M&S Asset reuse (Discovery, Acquisition of Existing M&S Capabilities)**
  - **Complements other related DoD M&S Enterprise resources and tools (Collaborative Sharing of M&S Resources)**

Capabilities and Services for Supporting M&S Discovery/Reuse

Tool

EMBR Portal

- A way to create metacards (MSC-DMS)
- Provides cloud-based data locker
- Edit / Collaborate / Search / Track Metacards
- Post / Evaluate Feedback
- Submit Metacards to Storehouse
- Localized or Web-Based Deployment

Standard

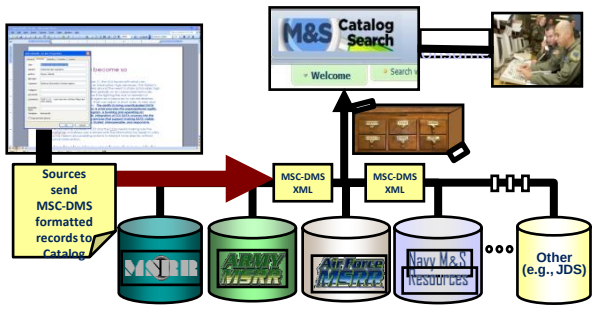
M&S COI Discovery Metadata Specification (MSC-DMS)

- A way to describe M&S resources
- Consistent w/ DoD Net Centric Data Strategy
- Represents an M&S COI extension of the DoD Discovery Metadata Specification (DDMS)

Storehouse

M&S Catalog

- A way to search across the enterprise
- Sources send MSC-DMS formatted records to Catalog
- User interested in a resource can learn of availability from multiple repositories w/ single query



Making Assets Discoverable Through Metacards

Producers and consumers need a common specified way to *label* and *describe* M&S assets.

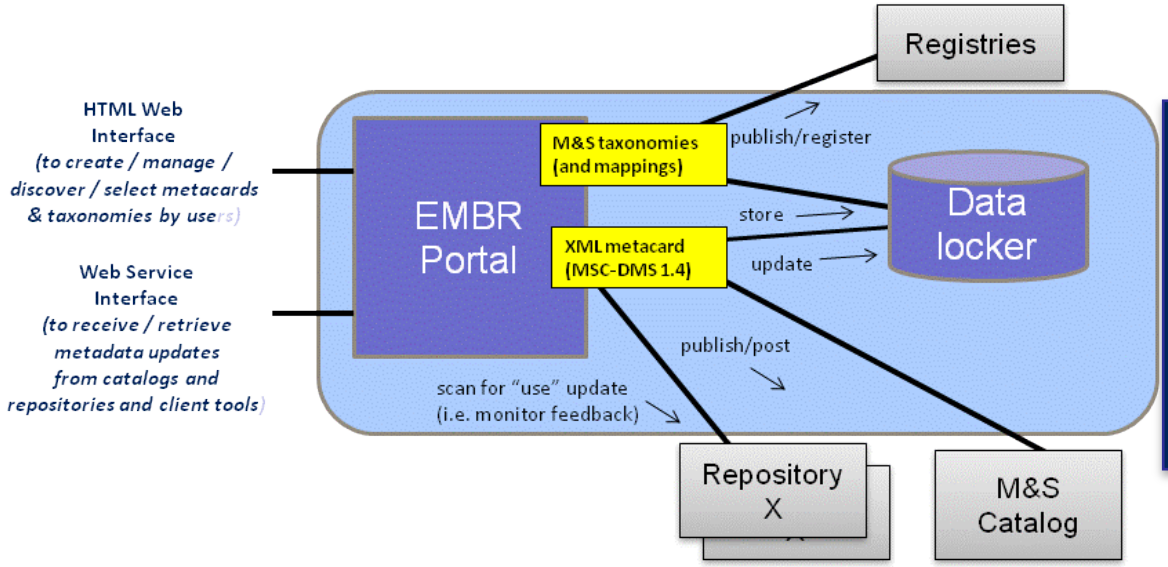
Metacard Upload Process

```
If (Asset == (Built | Updated | Transformed))  then
{
      CreateMetacard(Title,Type,Description,POC,Keywords)
      ;
      UploadMetacard(LVCAF-Repository);
}
```

Metacard Feedback Process

```
If (Asset == Used)  then
{
      UpdateMetacard(Usage.Experience);
}
```

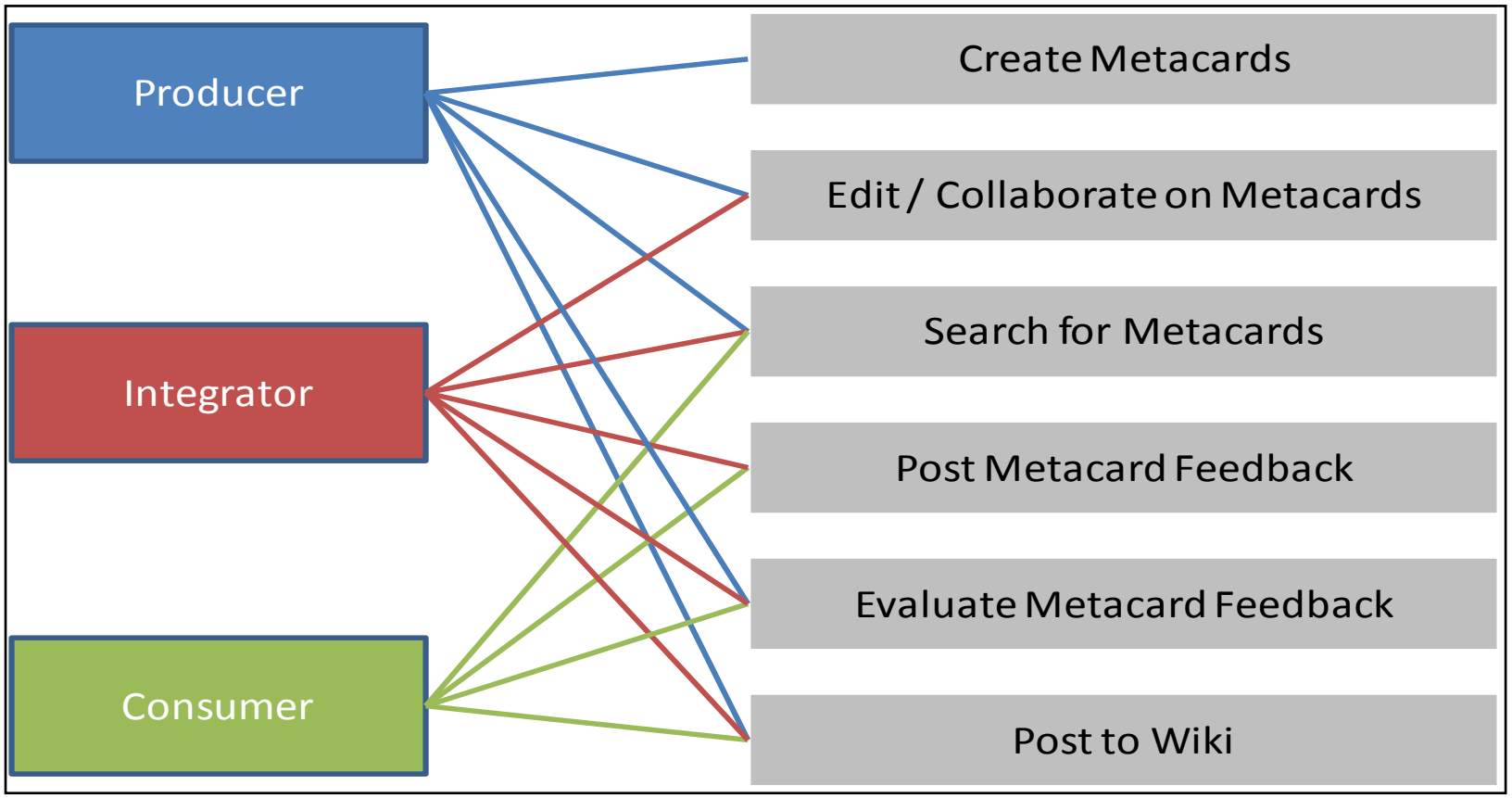
EMBR Portal Concept



The EMBR Portal provides a means for M&S producers and consumers to collaborate on metadata content and to exchange information and feedback on M&S usage.

Capability	Developer	Integrator	Consumer
To develop/modify a metacard	create / update	update / augment	augment (use experience)
To discover metacard instances	see how it has proliferated	proliferation/ availability	see what's available
To evaluate application use	gather feedback (for update)	feedback / learn	learn how it's been used

Role-Based Collaboration



The EMBR Portal provides a shared space for both structured and unstructured review of discovery metadata in MSC-DMS format

EMBR Portal GUI and Functions: Overview

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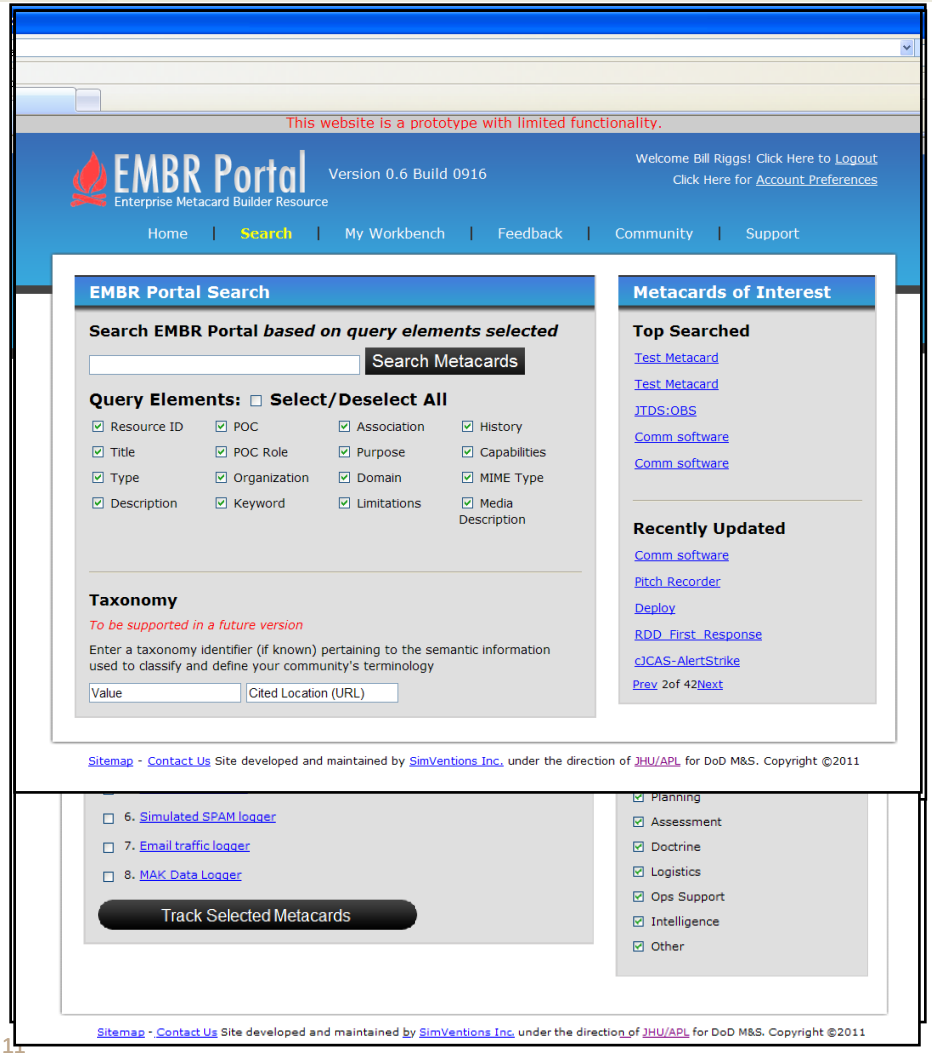

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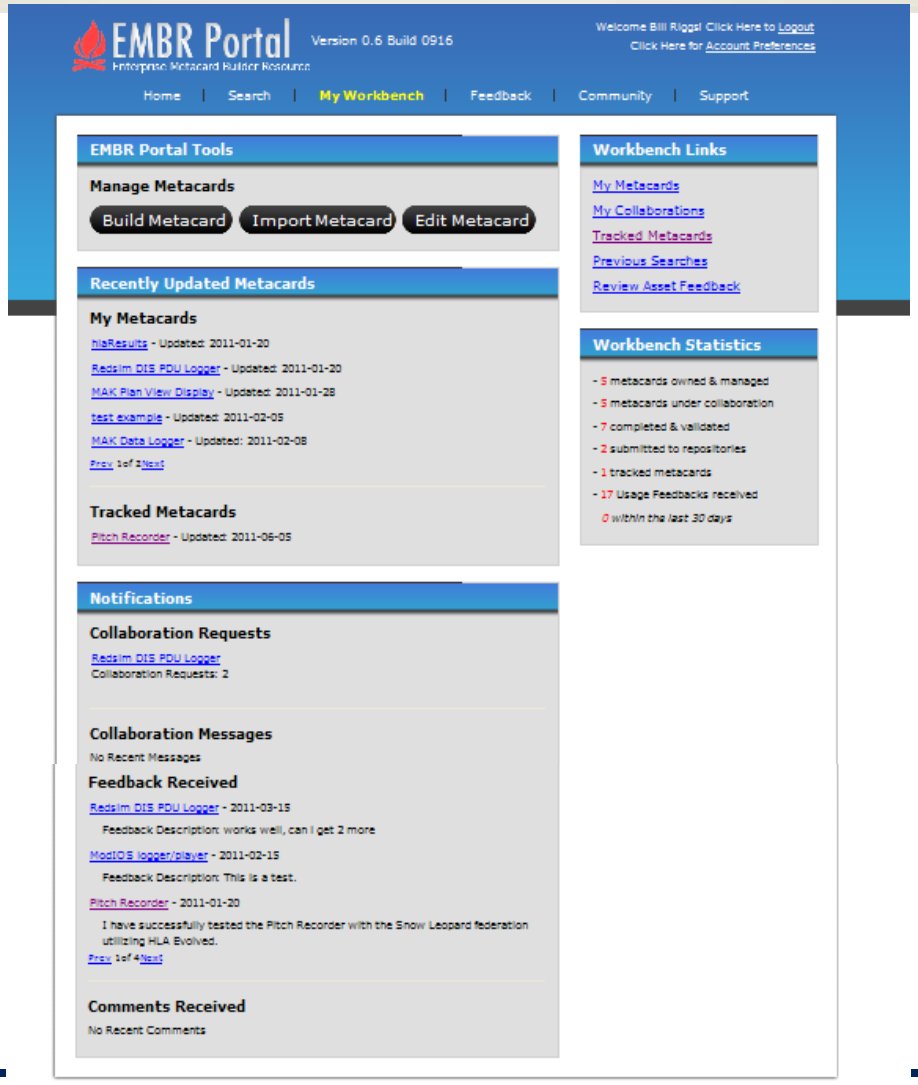
EMBR Portal GUI and Functions: Workbench



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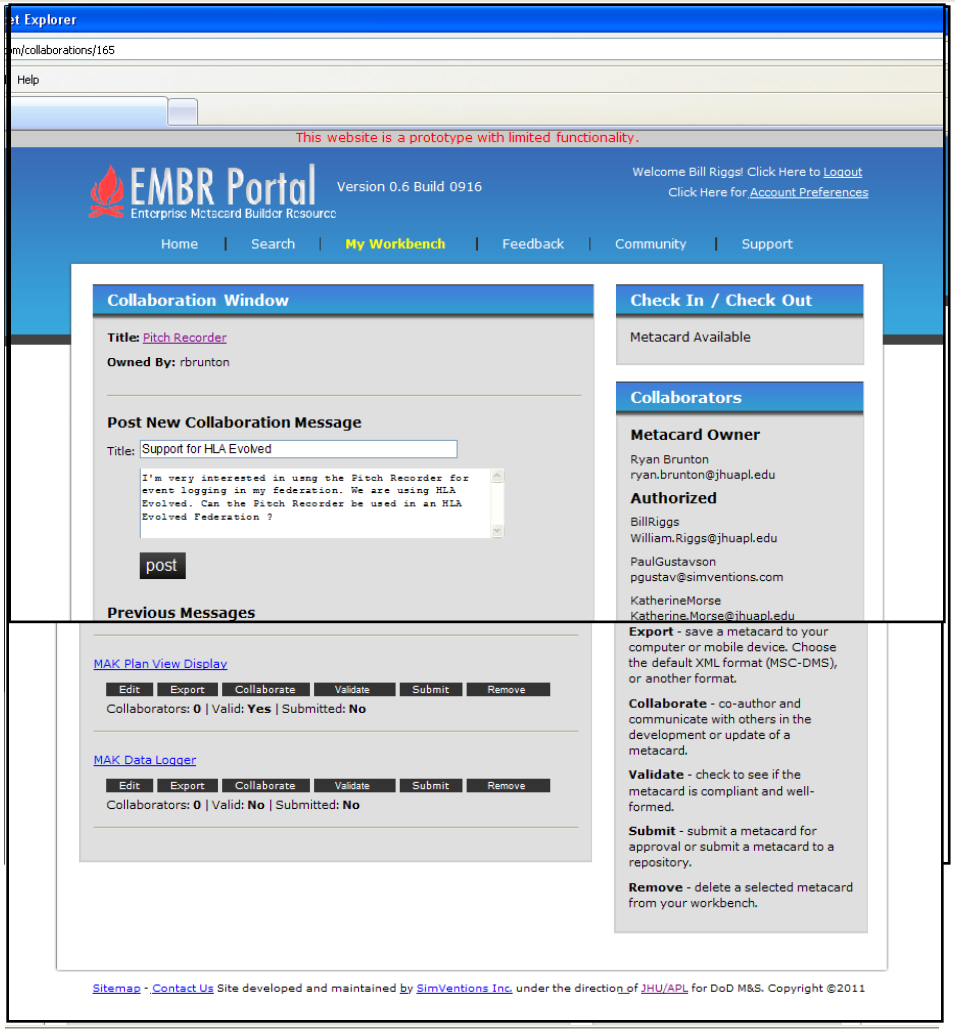

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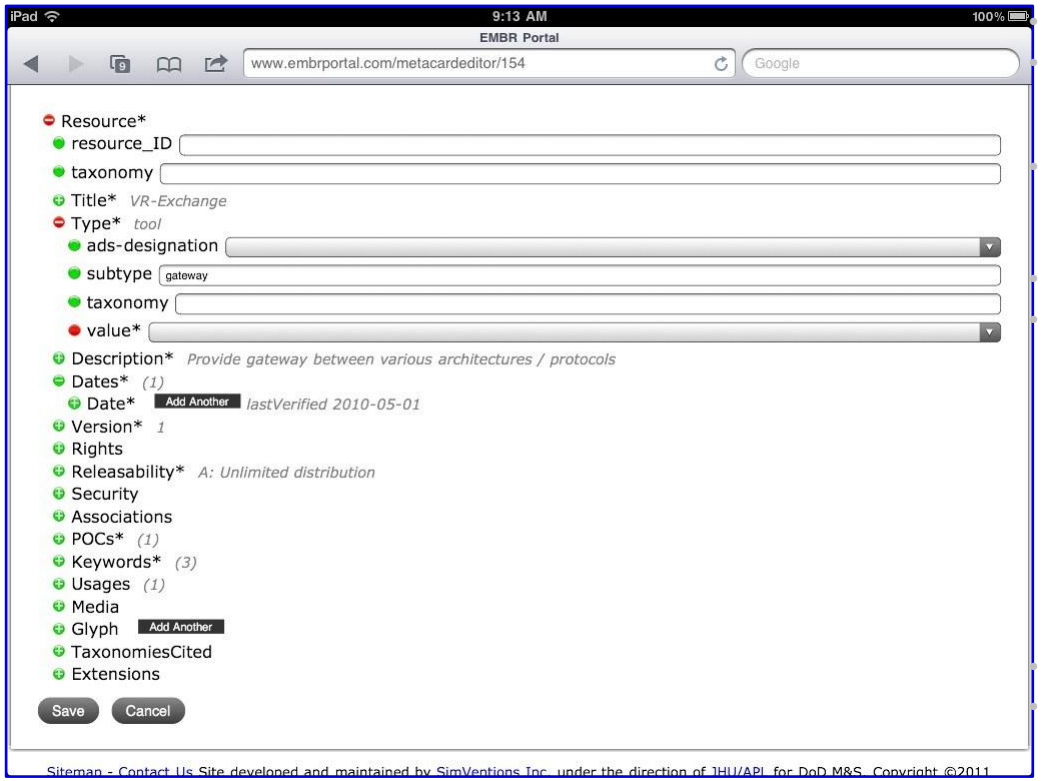
EMBR Portal GUI and Functions: Metacard Building and Editing



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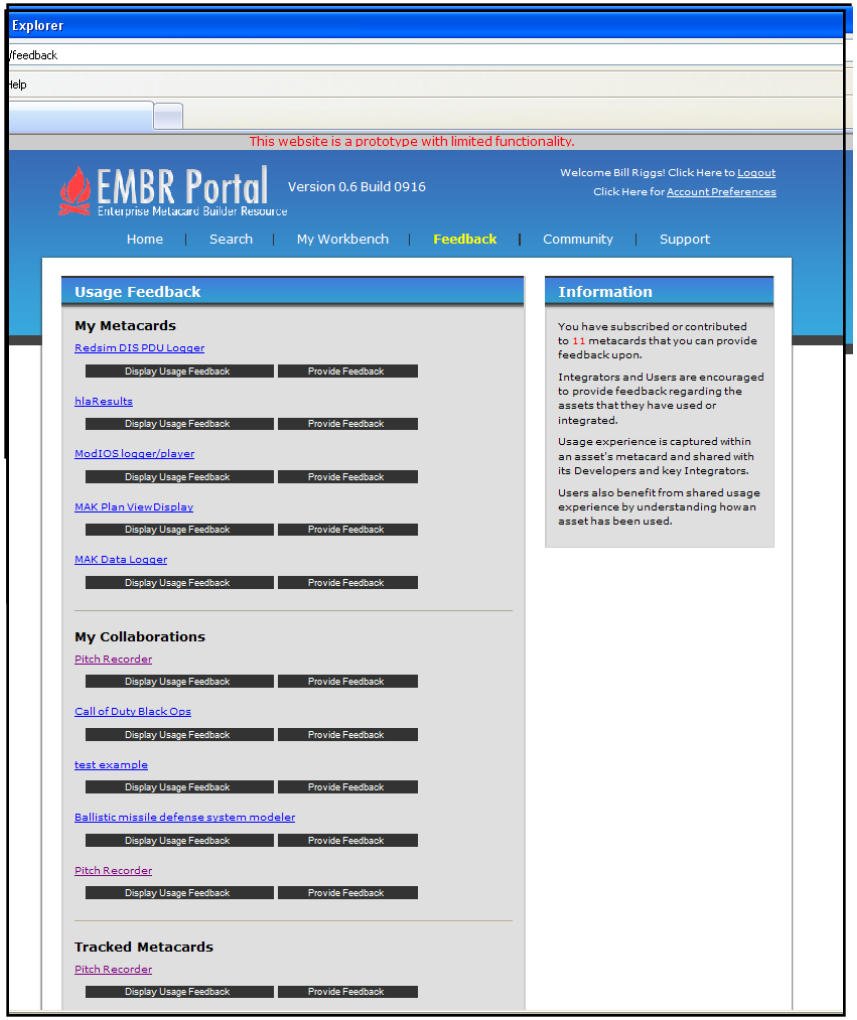

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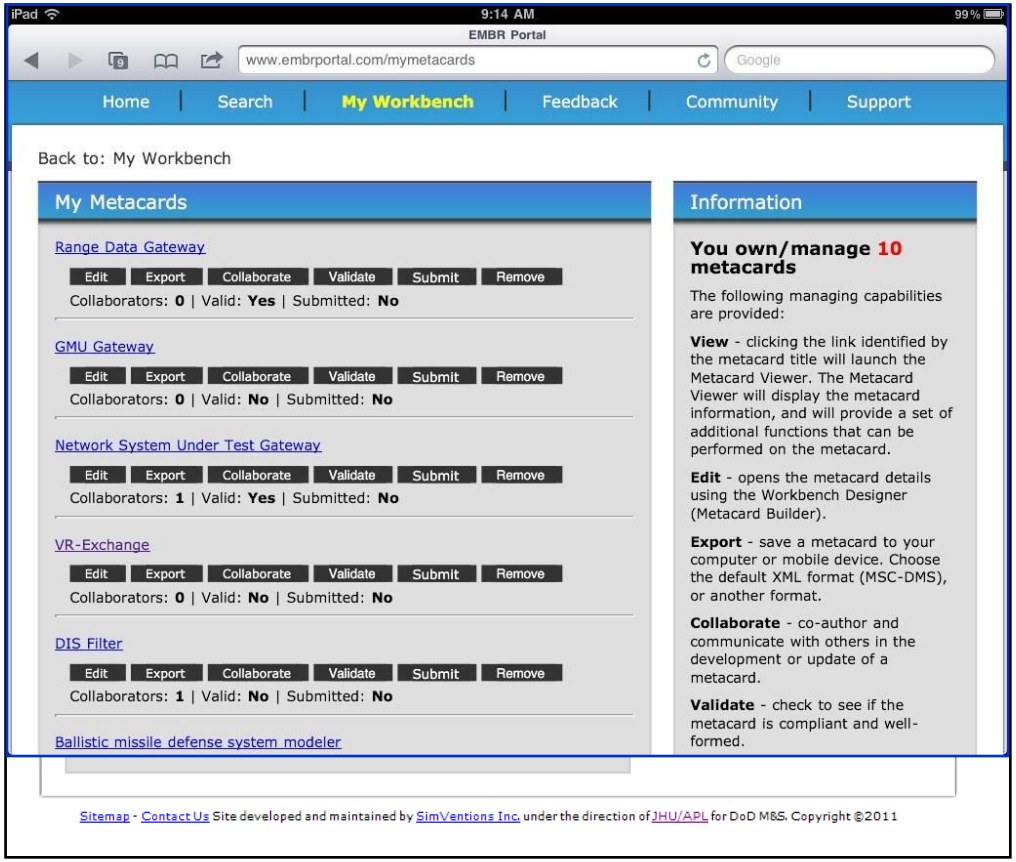
EMBR Portal GUI and Functions: Validation and Publication



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What's New in EMBR

- **Updated site to use HTTPS**
- **Updated to MSC-DMS version 1.4 (Contact and Taxonomy Metacards)**
- **Incorporated numerous minor bug fixes and content changes**
- **Added configuration capability to allow custom site tailoring**

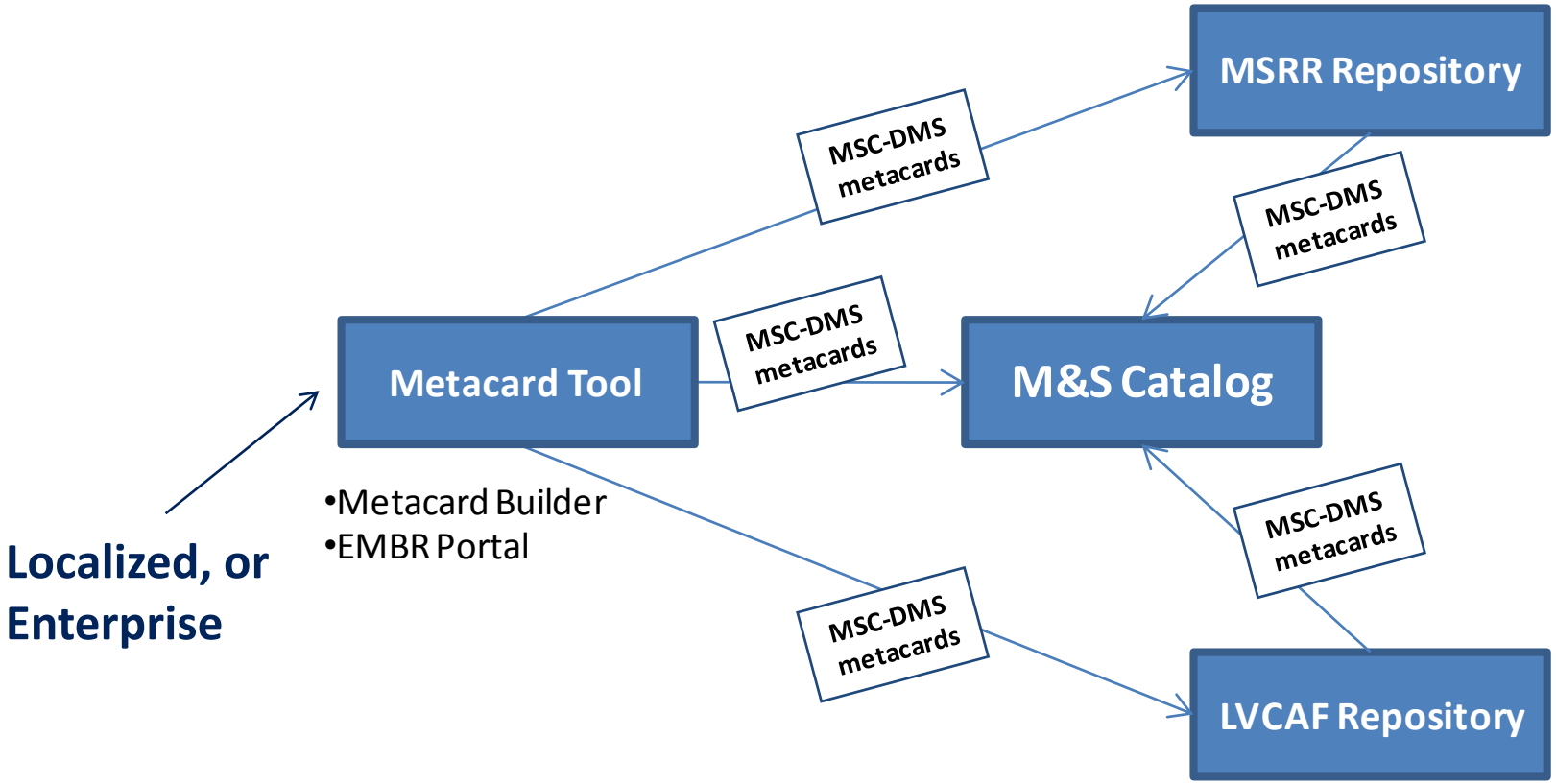
Questions and Feedback

EMBR Portal Backup Slides

Value of the EMBR Portal

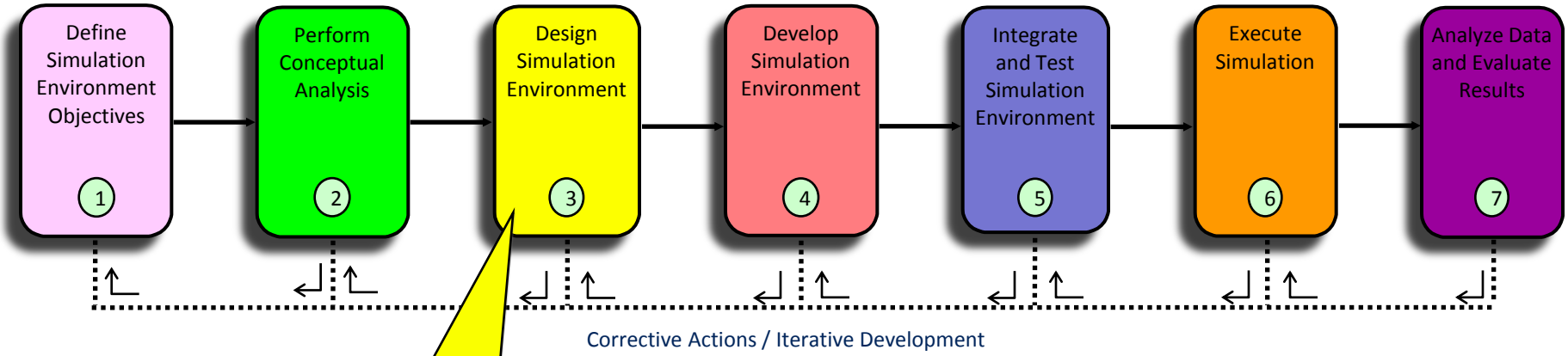
- **Make it easy to build and share M&S asset metacards**
  - **No need to be an XML expert**
  - **Compliance with MSC-DMS standard automatic**
- **Help facilitate MSRRs and M&S Catalog to reflect more asset of interests**
- **All on the web / access controlled**
- **Can be configured for local organizations / networks**

Metadata Flow: An Example



Localized – Creation and Discovery starts at home
Enterprise – Distribution and Cataloging is on the web

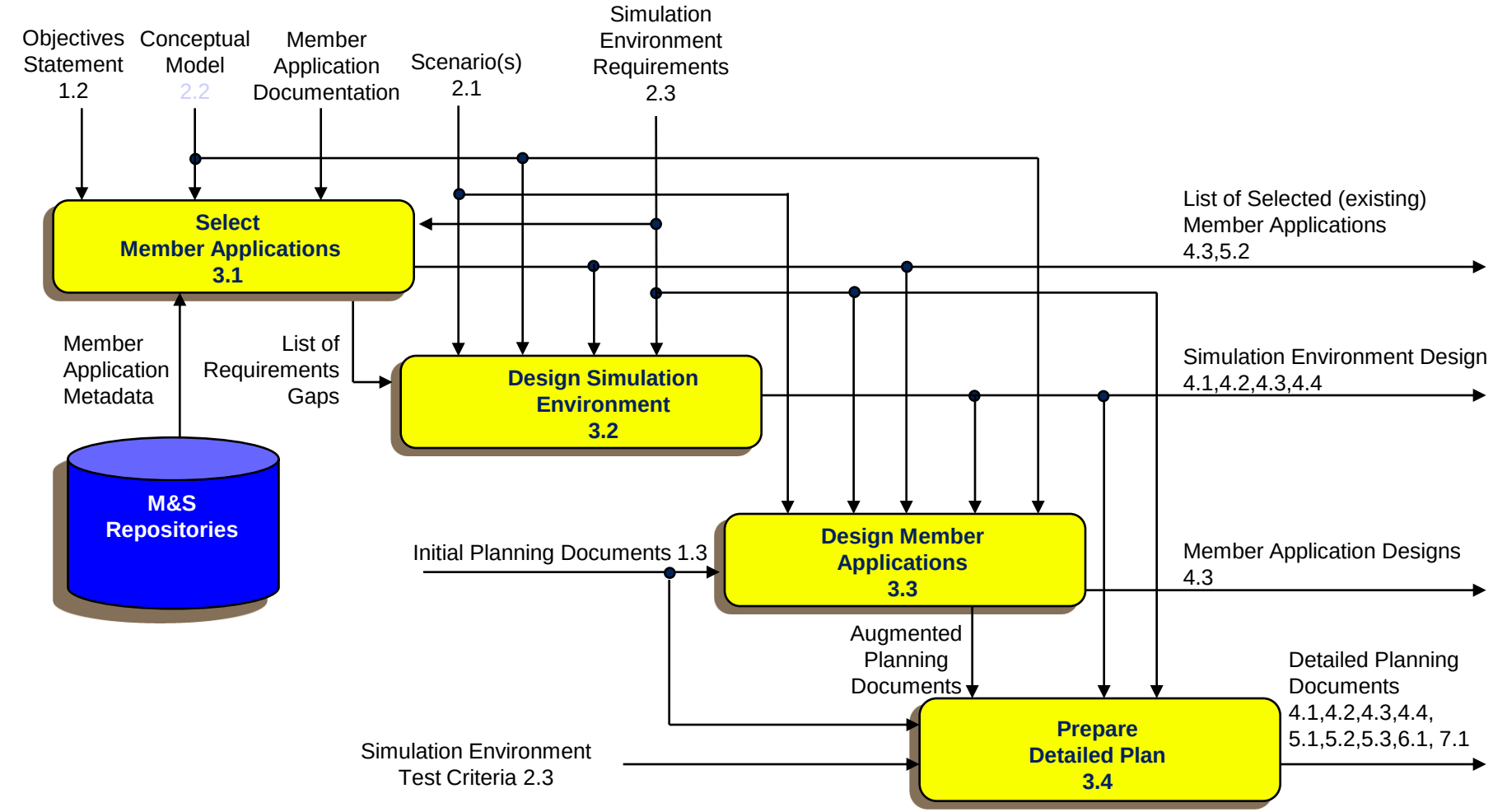
Vignette 1:
Design Simulation Environment



3.1: Select Member Applications
3.2: Design Simulation Environment
3.3: Design Member Applications
3.4: Prepare Detailed Plan

The purpose of this activity is to determine the suitability of individual simulation systems to become member applications of the simulation environment. ***Metadata describing reusable and available member applications may be leveraged to discover candidate assets within existing M&S repositories.***

DSEEP Step 3: Design Simulation Environment



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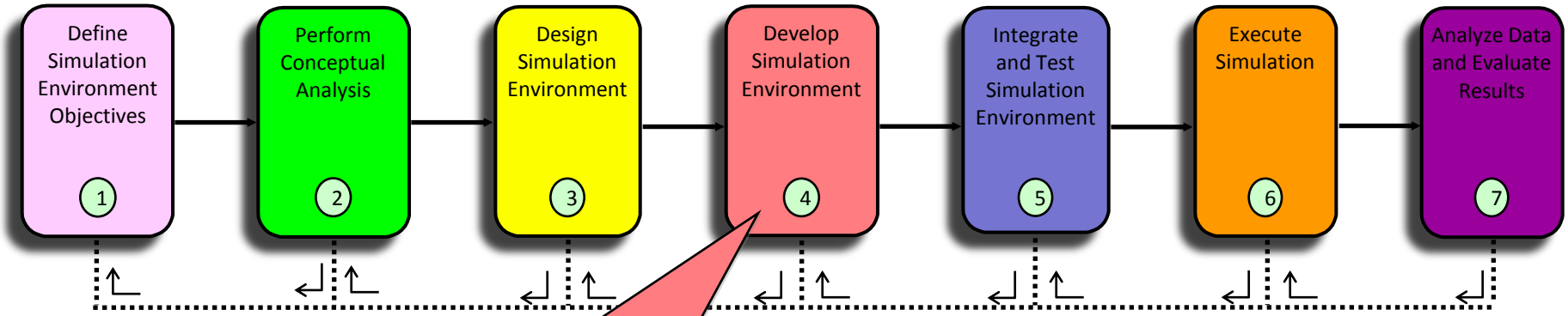
Vignette 2:
Build Simulation Environment



4.1: Develop Simulation Data Exchange Model
4.2: Establish Simulation Environment Agreements
4.3: Implement Member Application Designs
4.4: Implement Simulation Environment Infrastructure

Reuse of an existing simulation data exchange model is the most expeditious approach, if one can be found within a repository.

This involves the…installation and configuration of supporting software on all computer systems.

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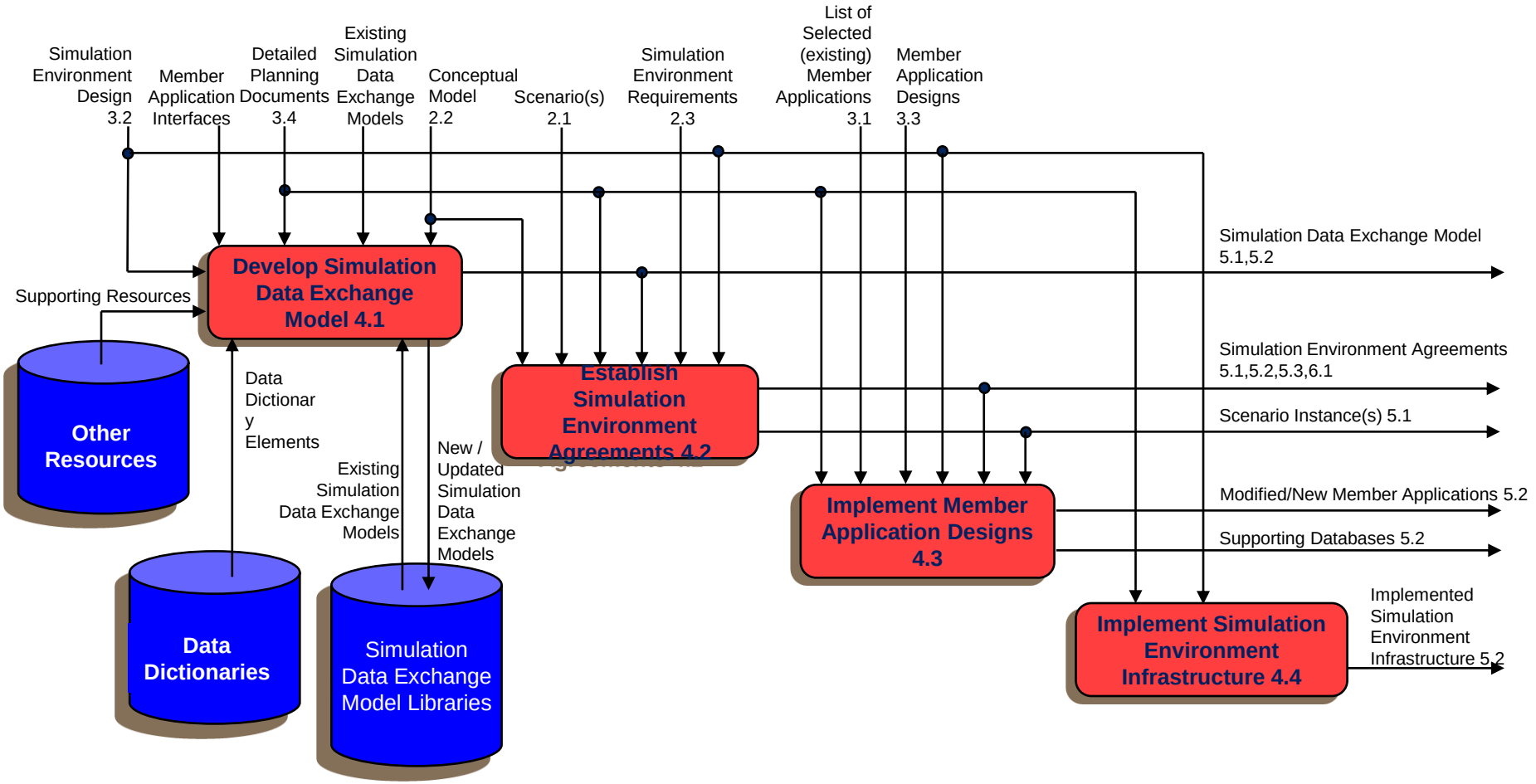
DSEEP Step 4: Develop Simulation Environment



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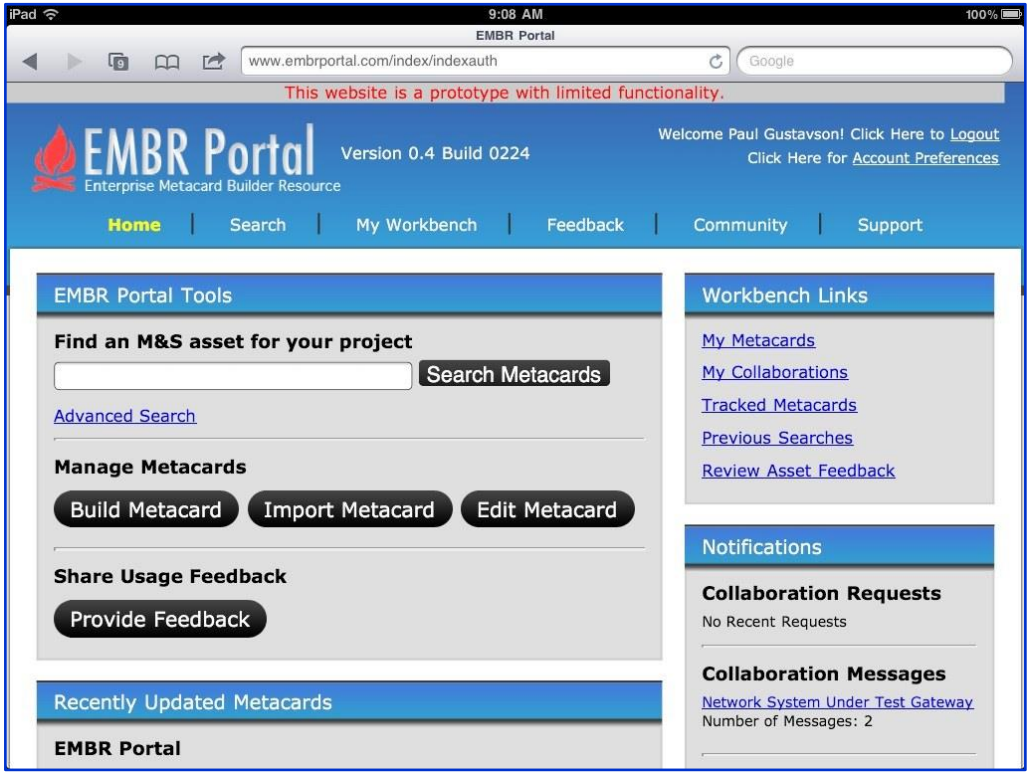

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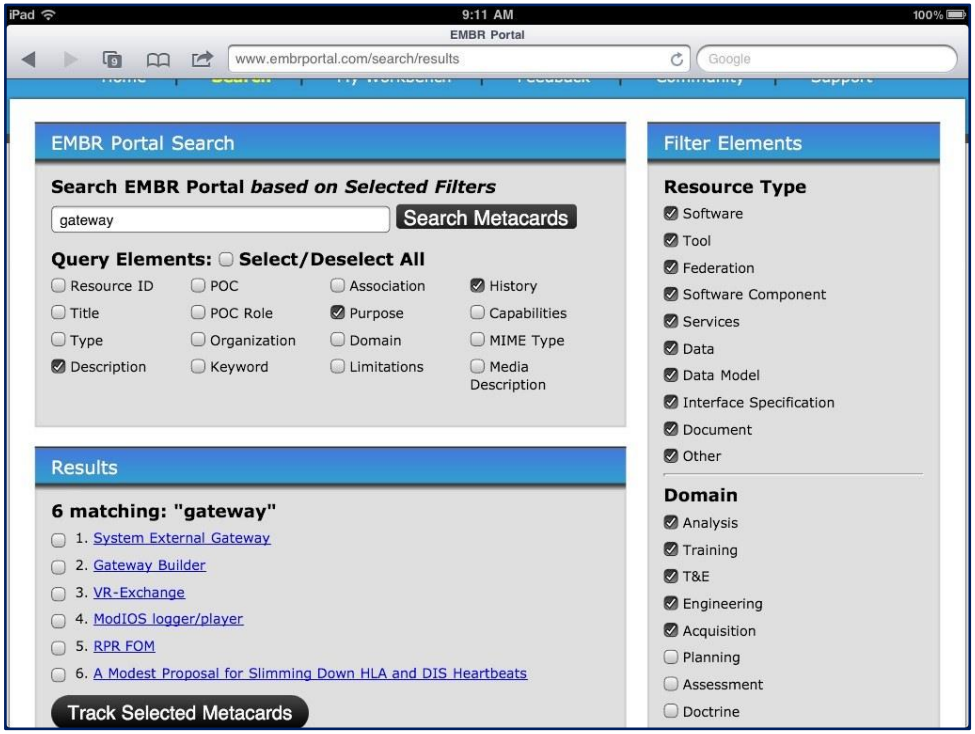

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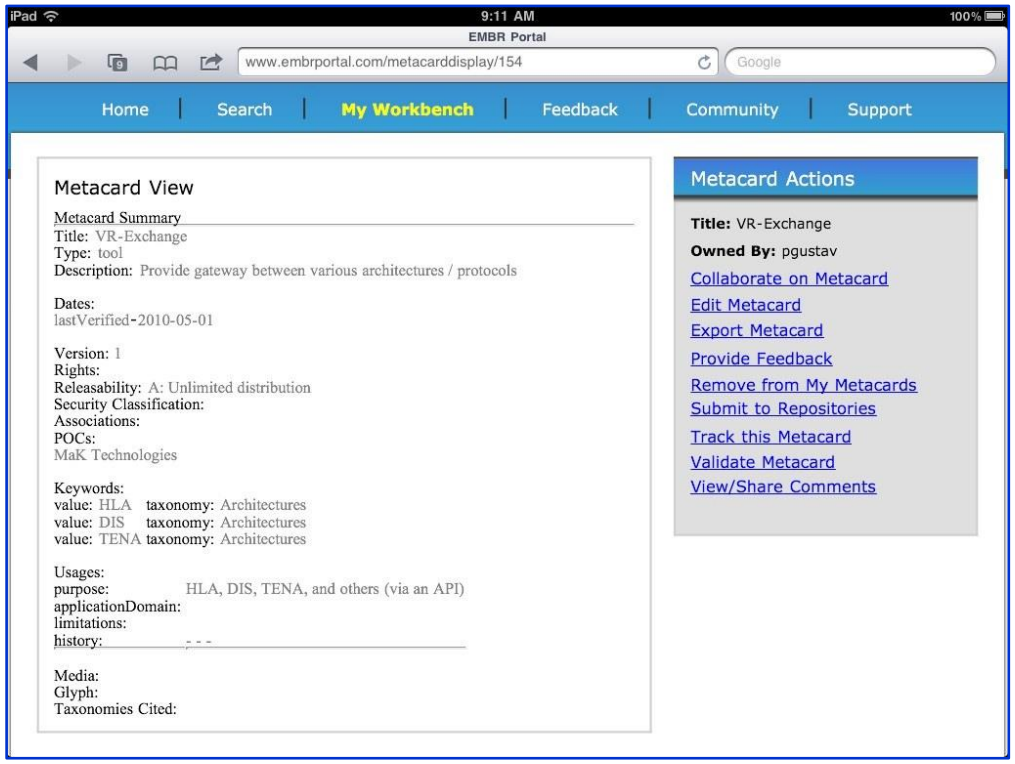

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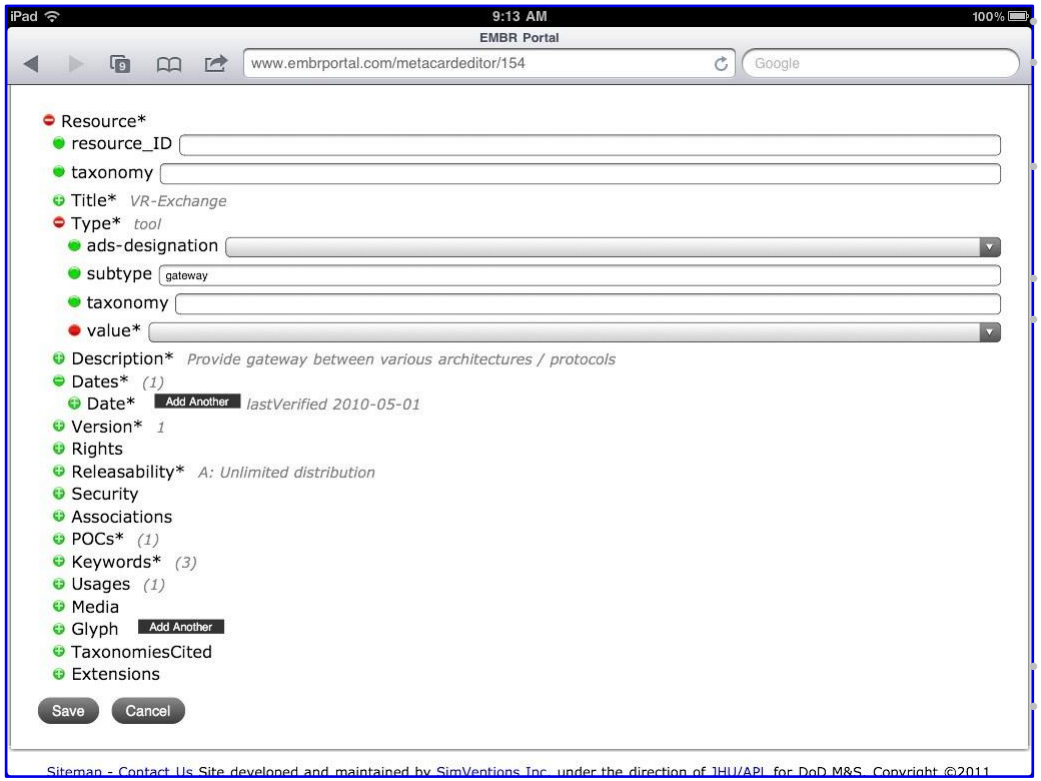

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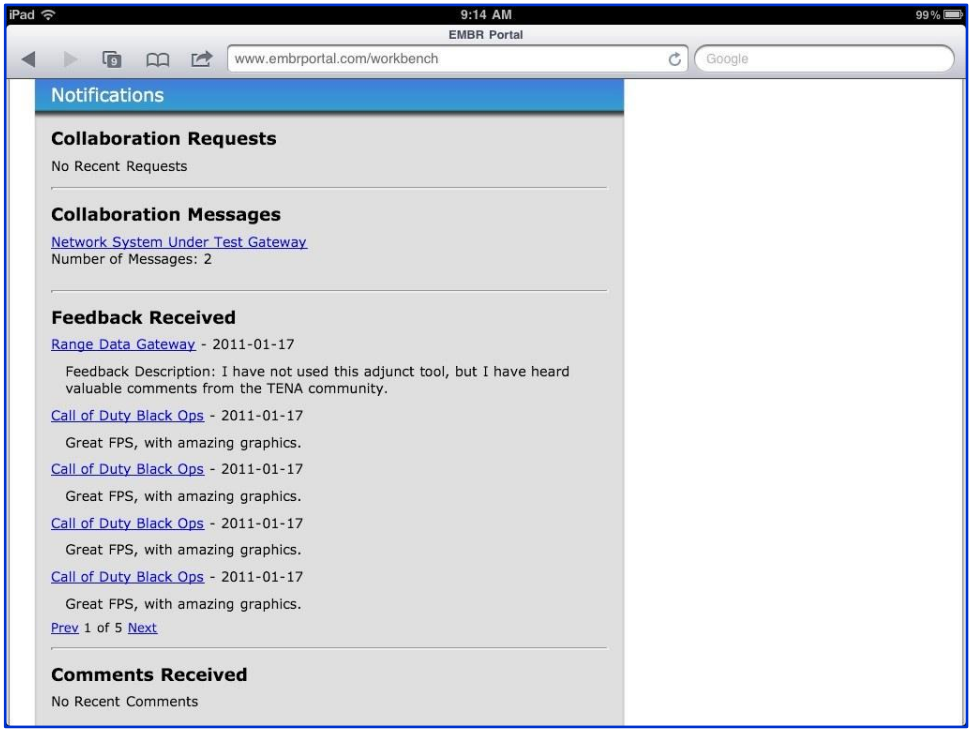

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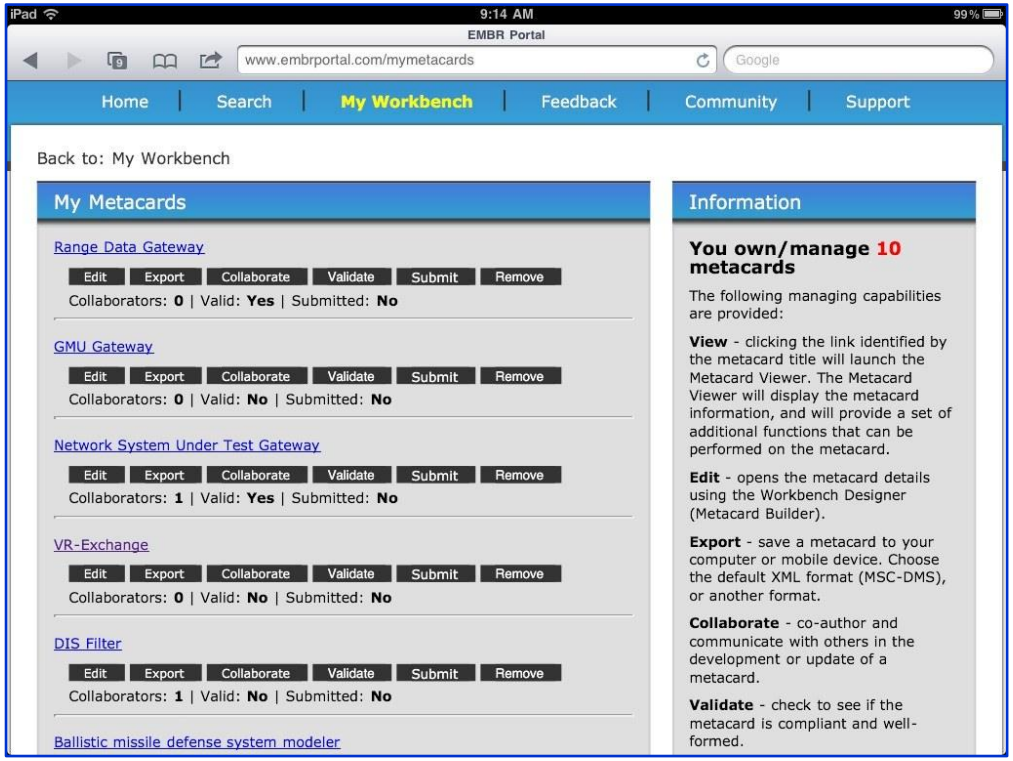

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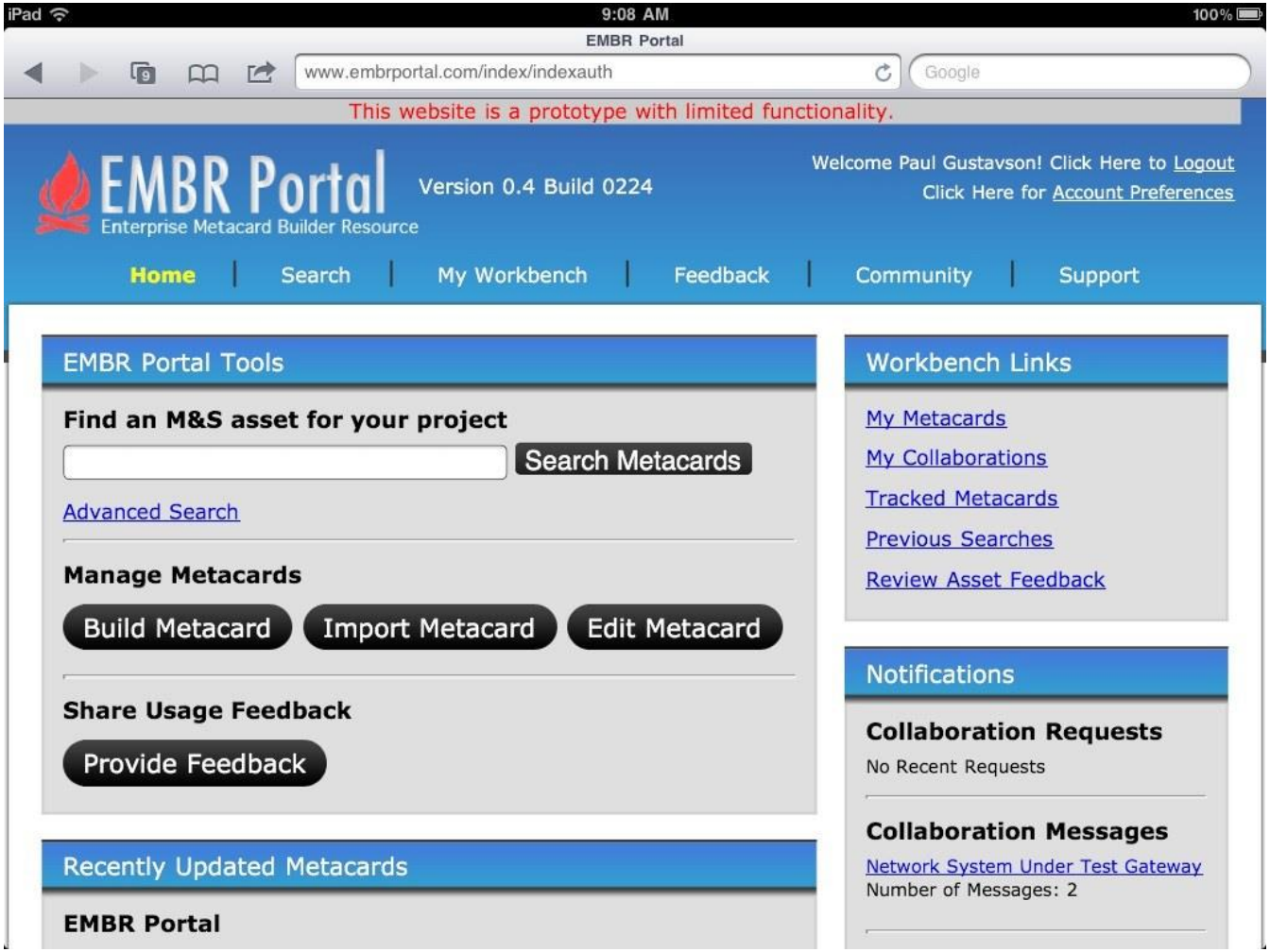
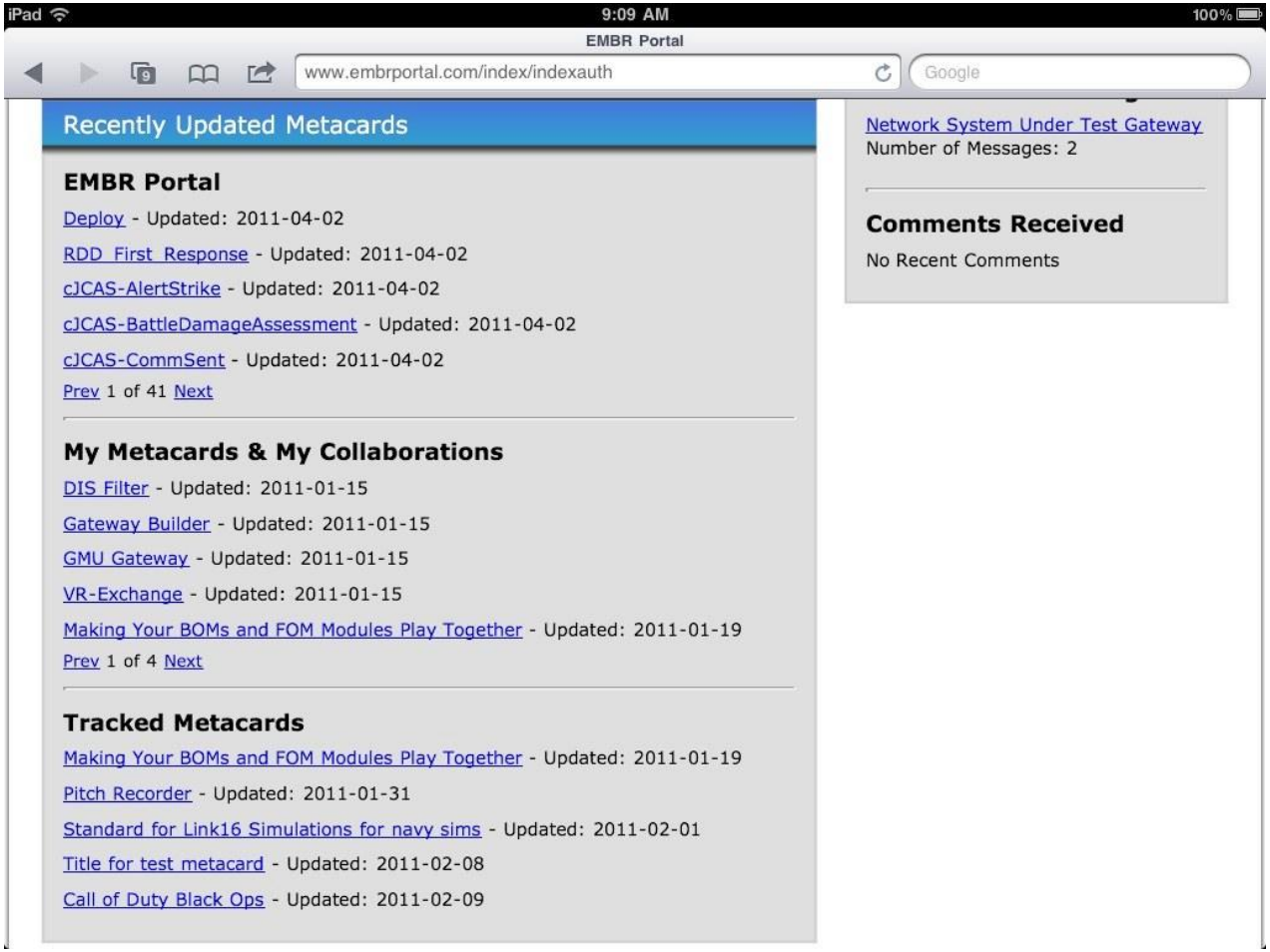
- **External interfaces to exchange data with existing catalogs, repositories, and registries**

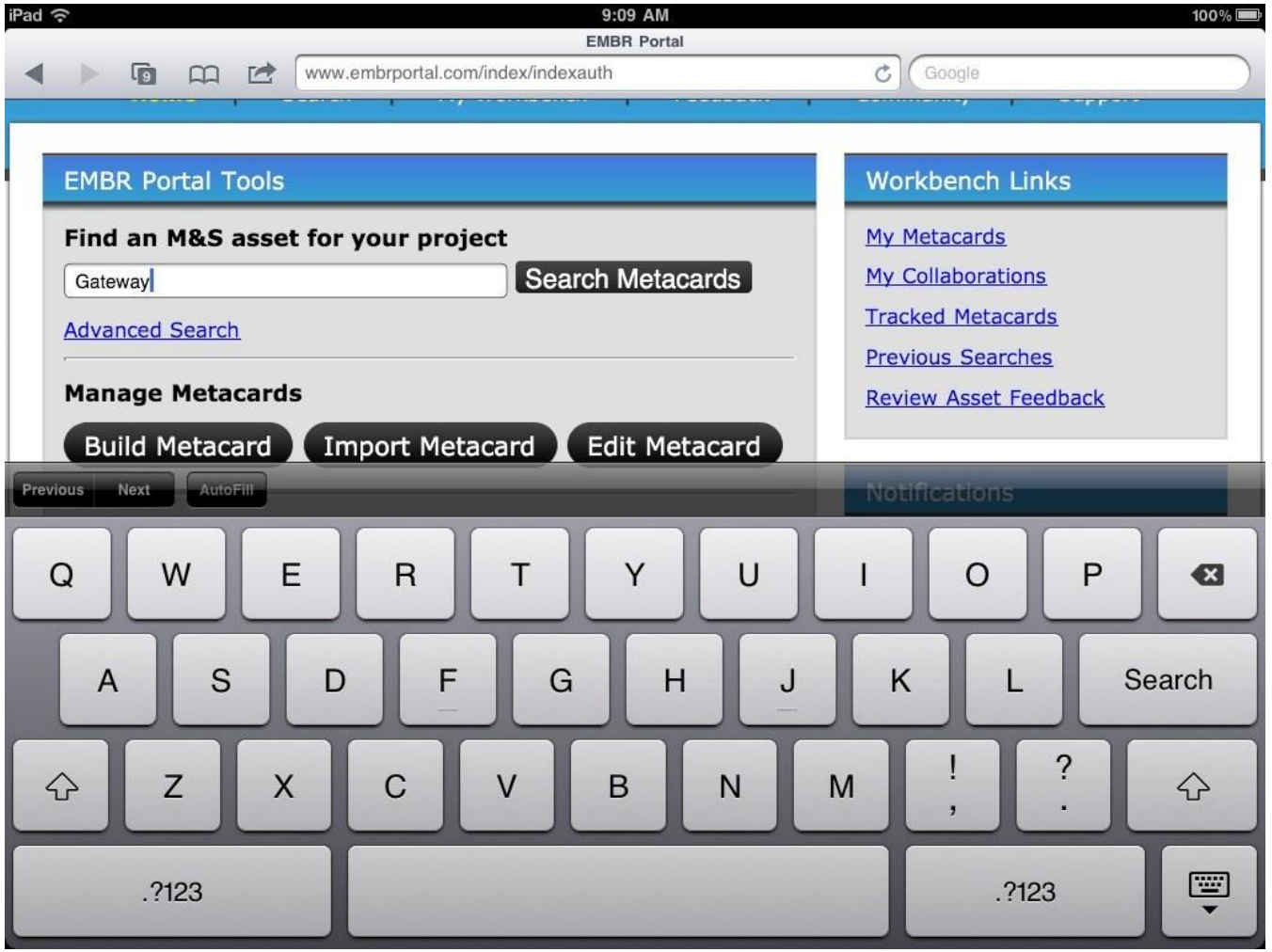
EMBR Portal


iPad
9:08 AM
100%
EMBR Portal
www.embrportal.com/index/indexauth
Google
This website is a prototype with limited functionality.
EMBR Portal
Version 0.4 Build 0224
Enterprise Metacard Builder Resource
Welcome Paul Gustavson! Click Here to Logout
Click Here for Account Preferences
Home | Search | My Workbench | Feedback | Community | Support
EMBR Portal Tools
Find an M&S asset for your project
Search Metacards
Advanced Search
Manage Metacards
Build Metacard
Import Metacard
Edit Metacard
Share Usage Feedback
Provide Feedback
Recently Updated Metacards
EMBR Portal
Workbench Links
My Metacards
My Collaborations
Tracked Metacards
Previous Searches
Review Asset Feedback
Notifications
Collaboration Requests
No Recent Requests
Collaboration Messages
Network System Under Test Gateway
Number of Messages: 2

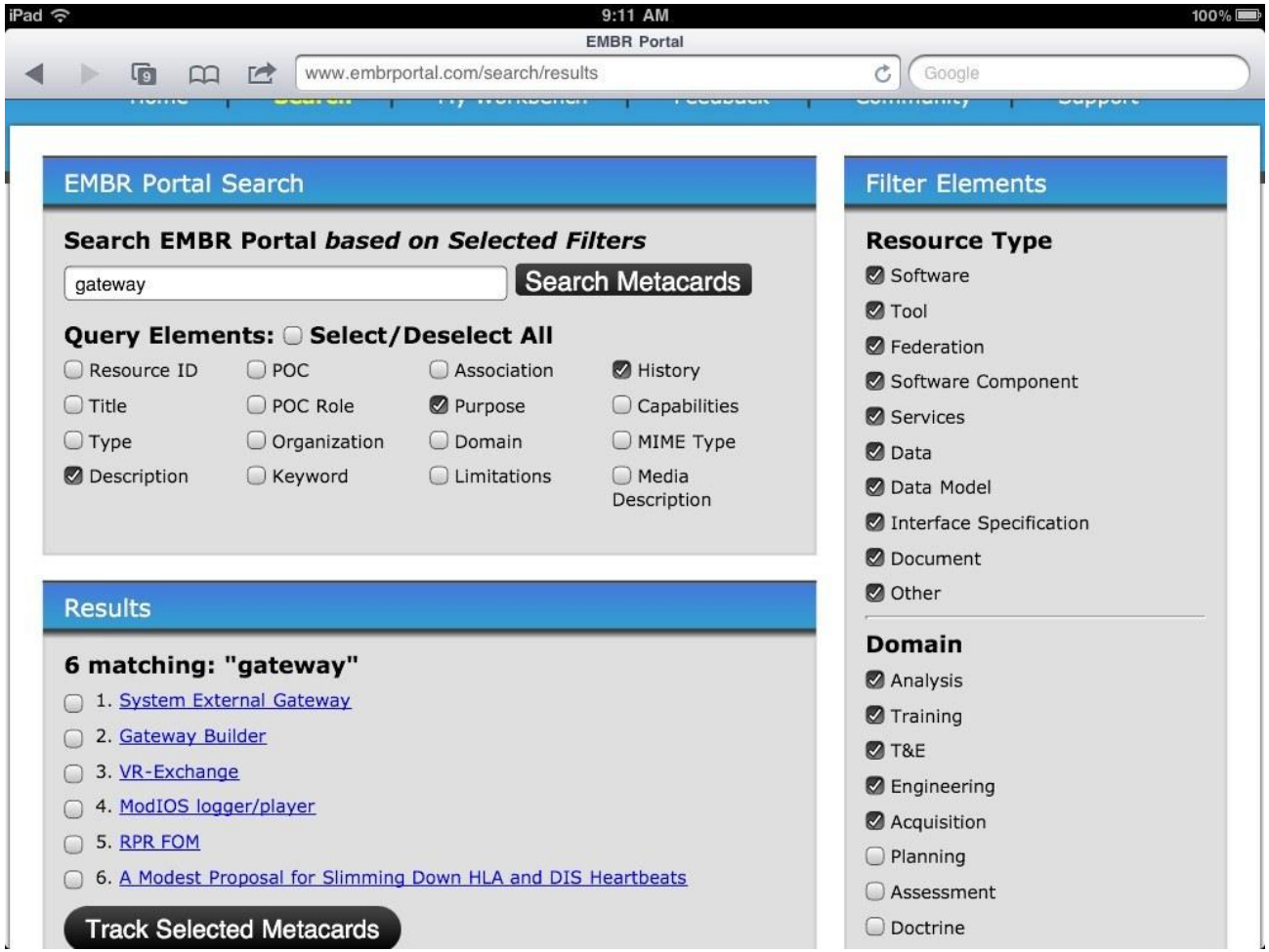
EMBR Portal Home Page (Cont.)



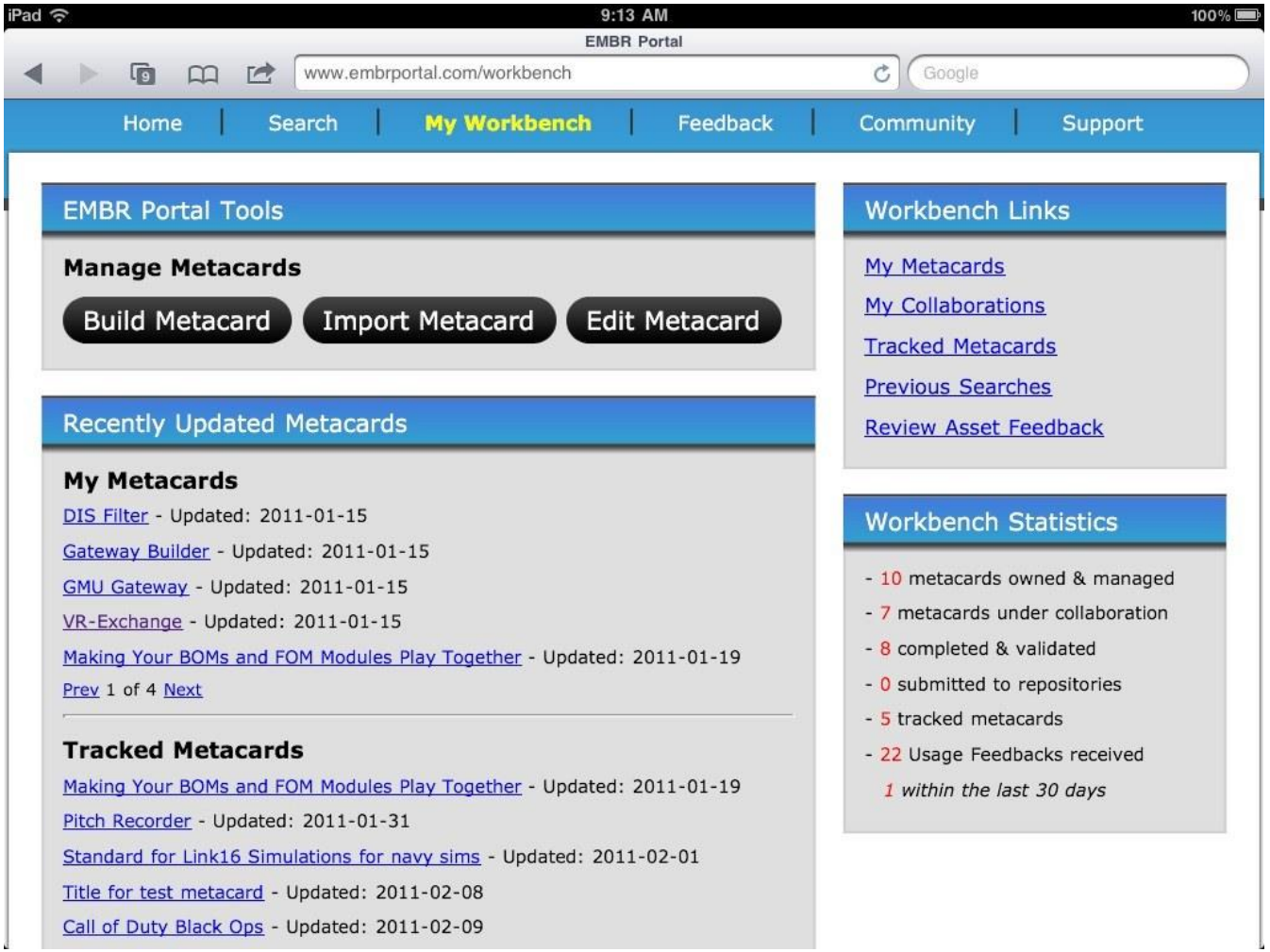
EMBR Portal: Metacard Search Utility (I)



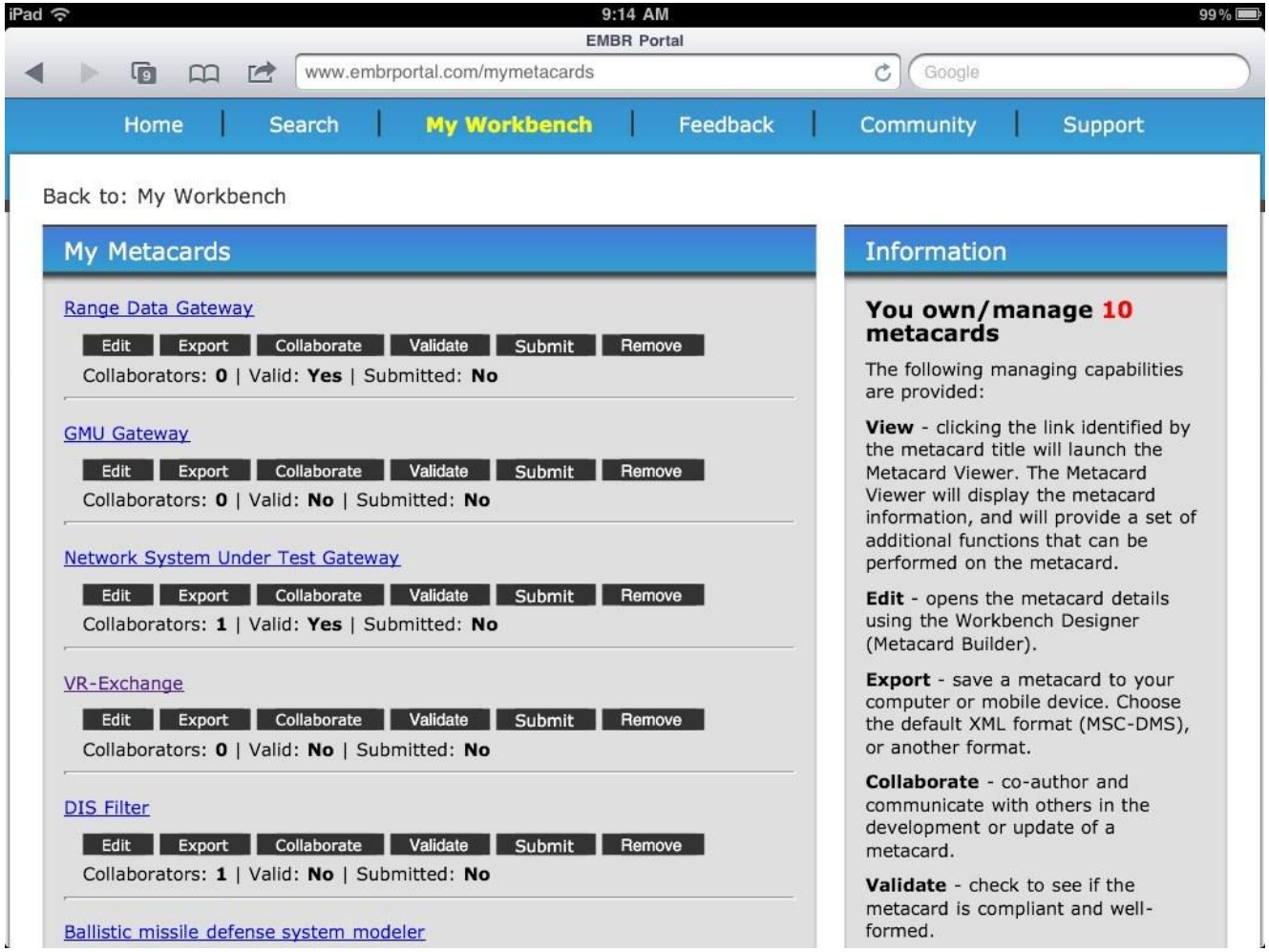
EMBR Portal: Metacard Search Utility (II)



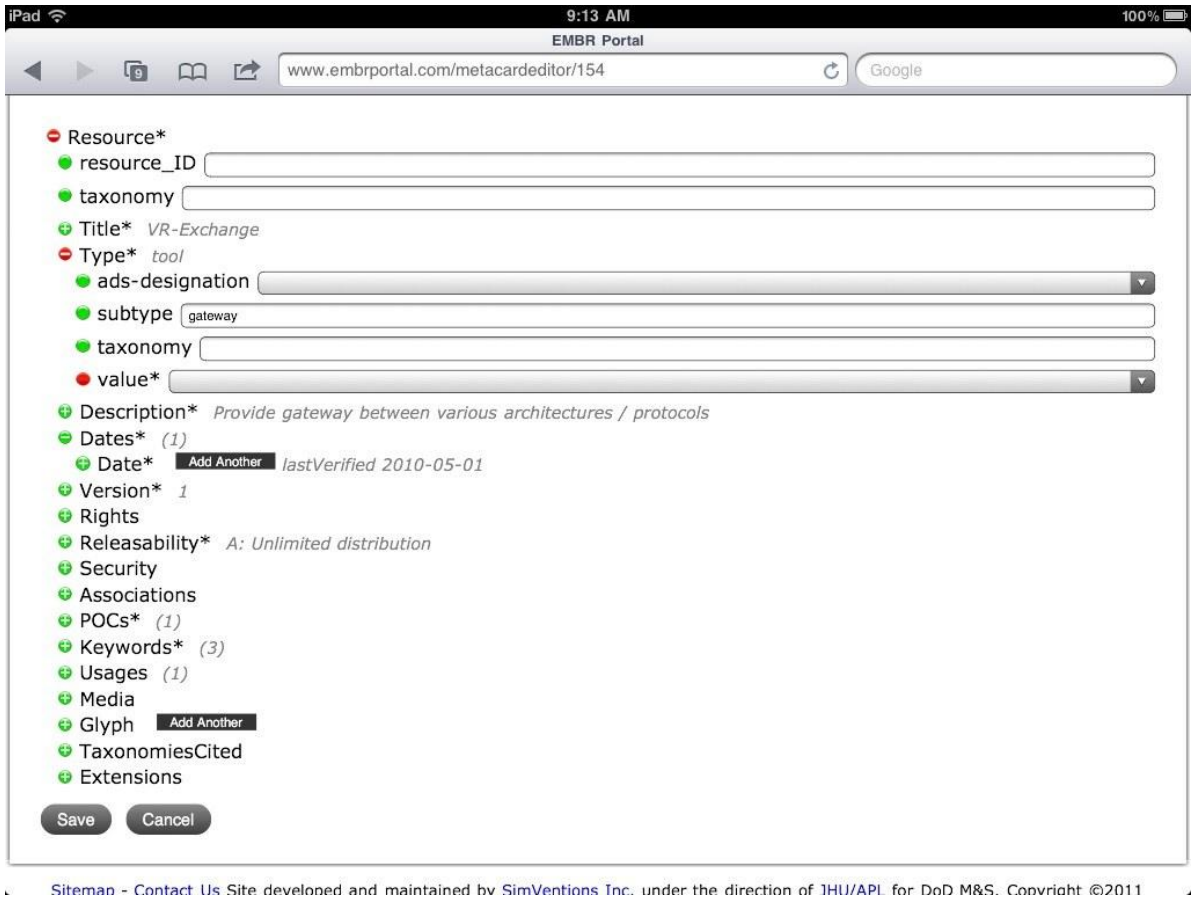
EMBR Portal Workbench (I)



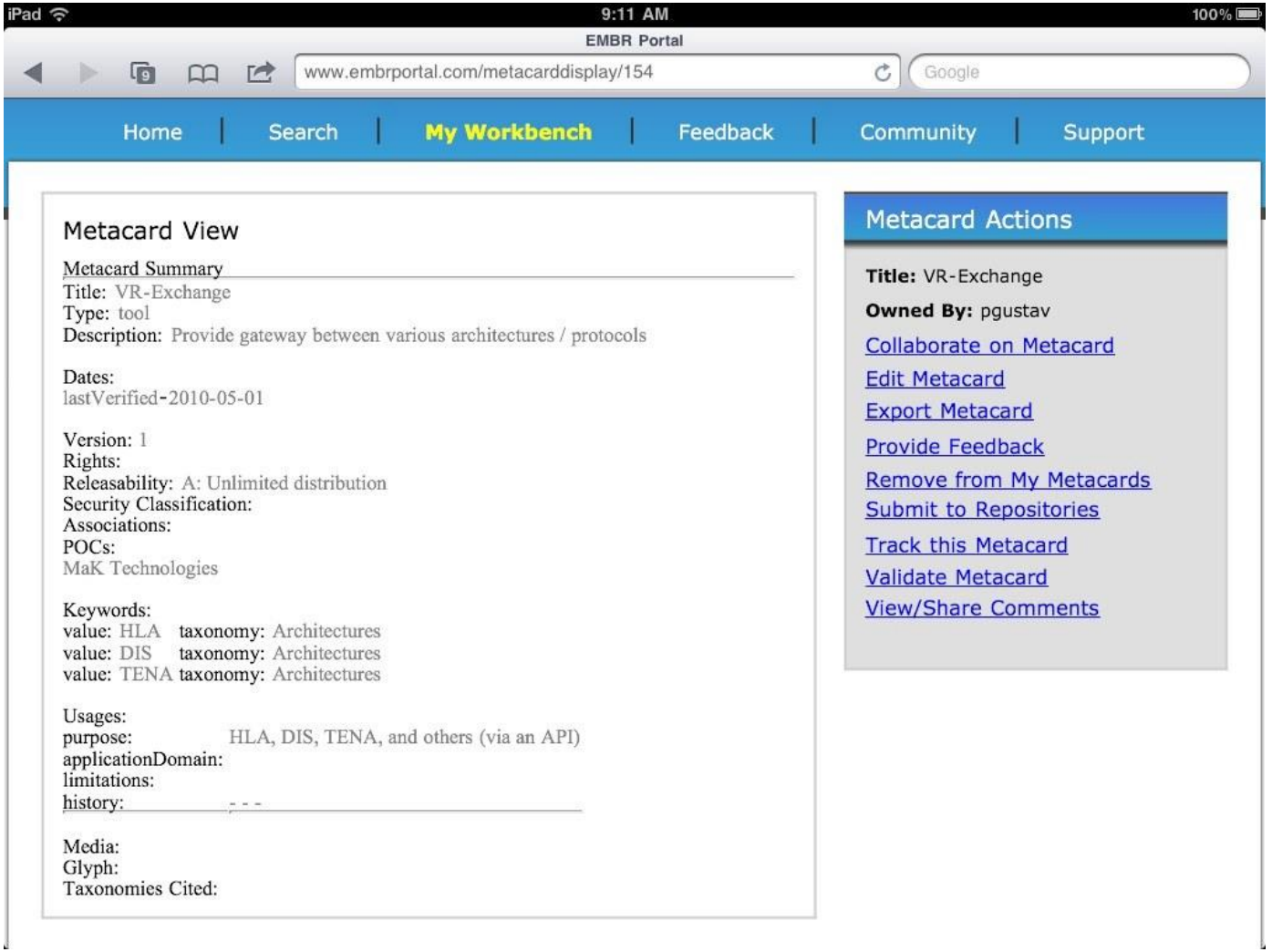
EMBR Portal Workbench (II)



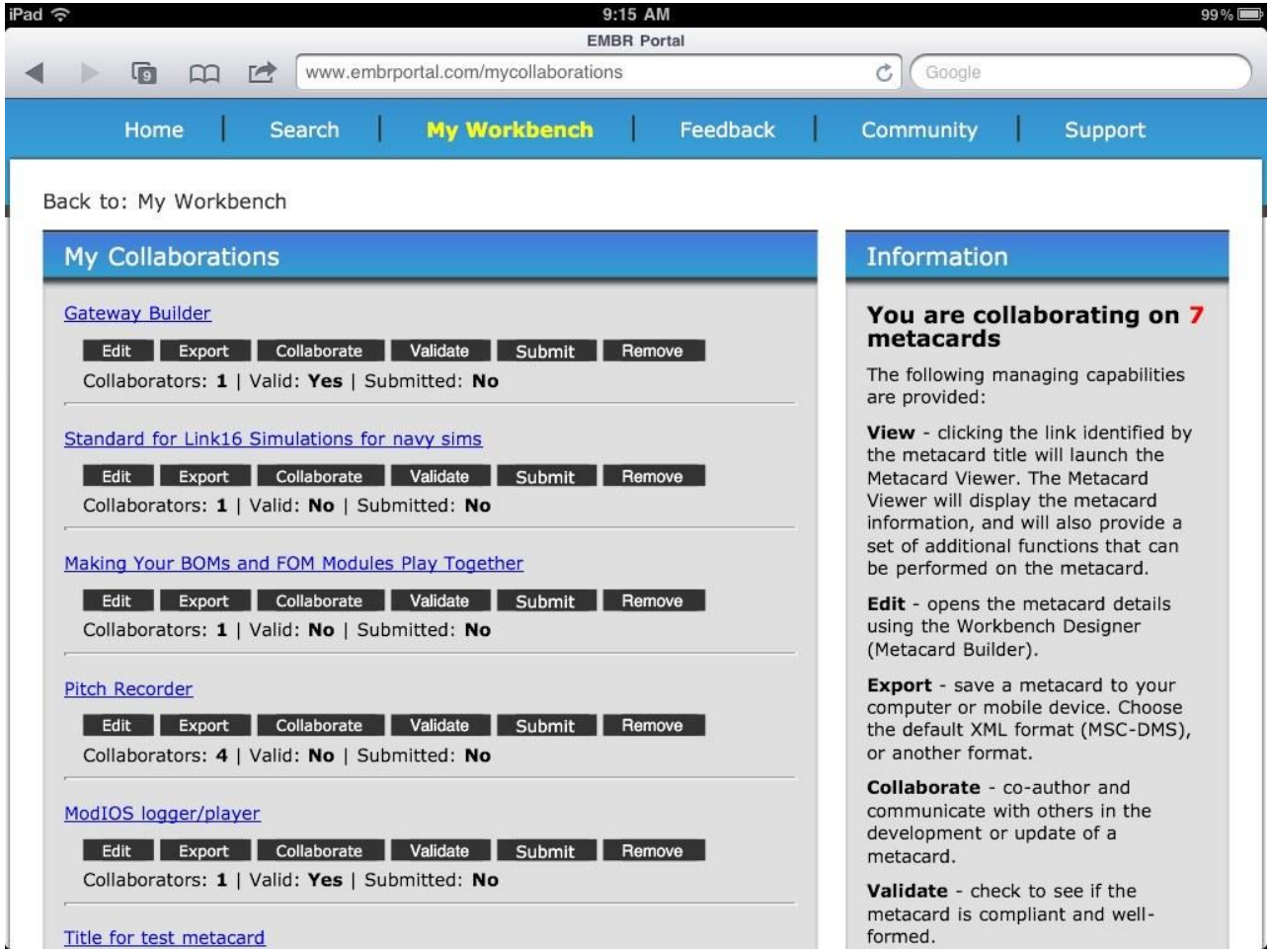
EMBR Portal Metacard Builder



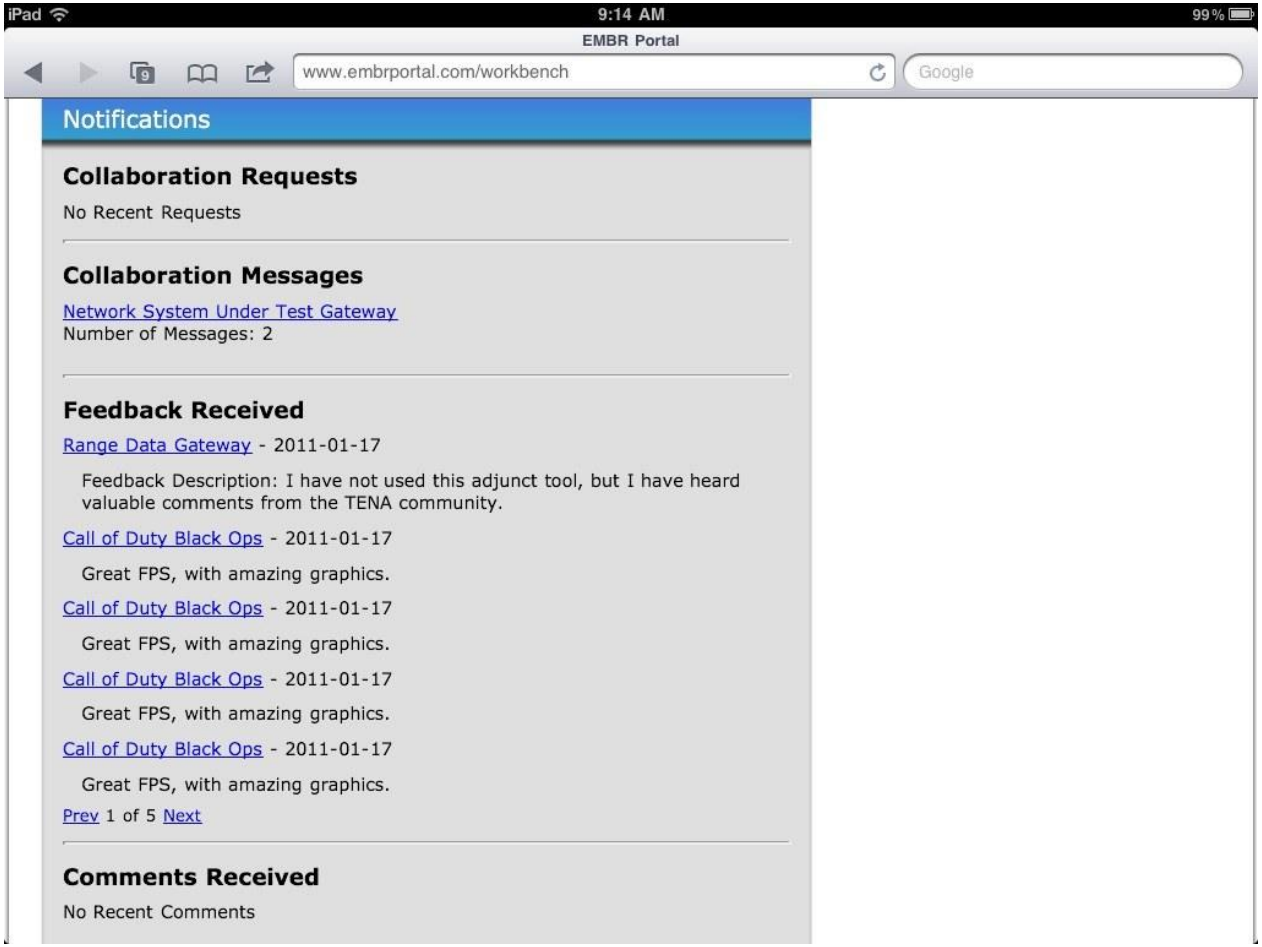
EMBR Portal Metacard View



EMBR Portal Collaboration

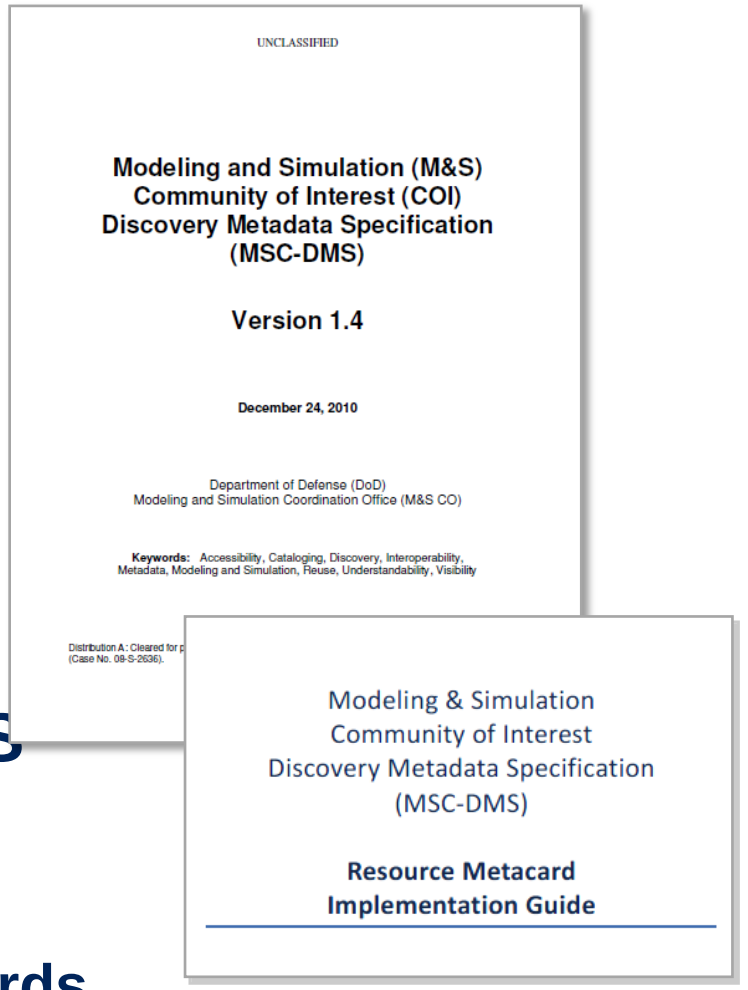


EMBR Portal Feedback

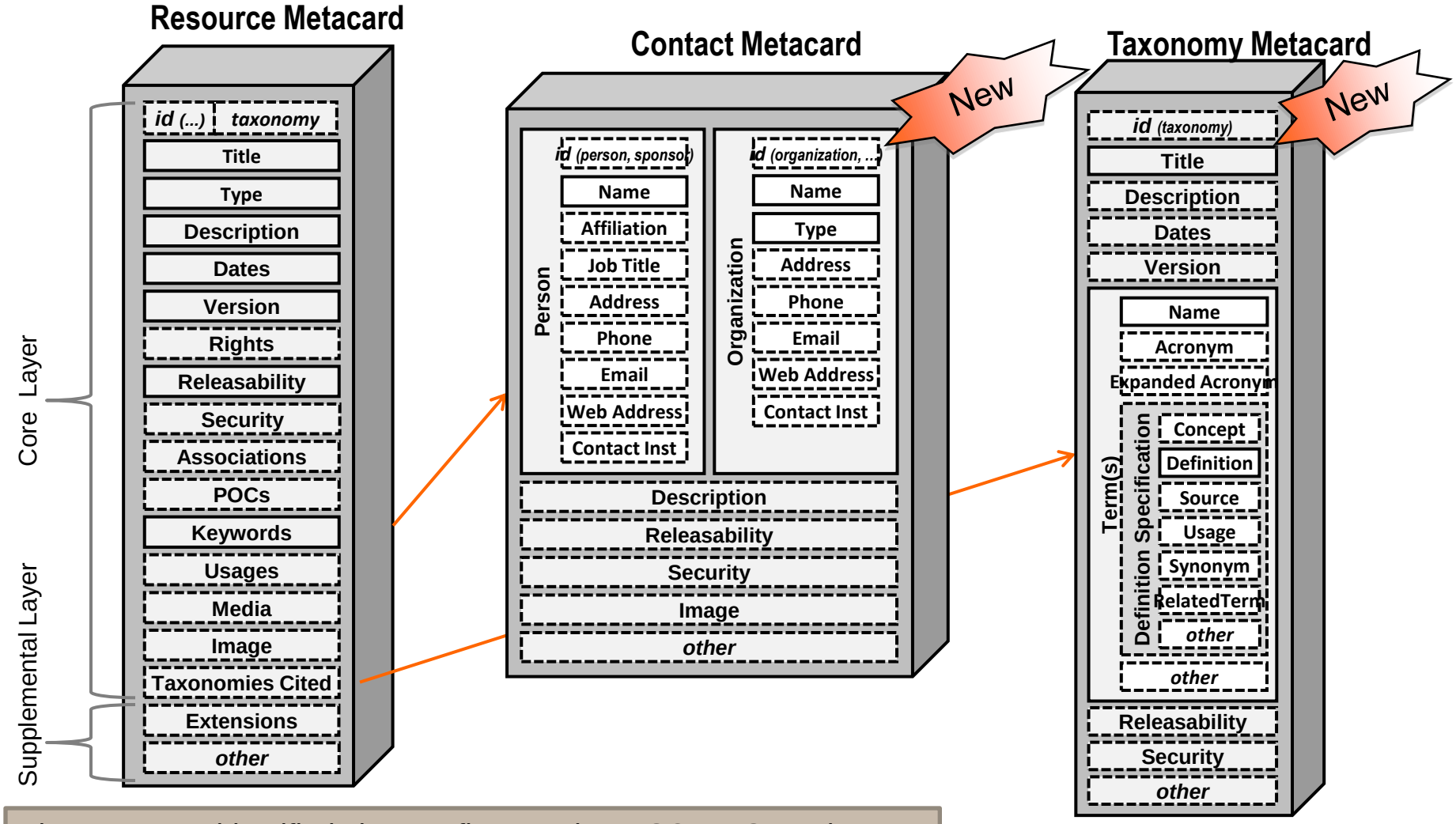


MSC-DMS 1.4
What Latest Version Offers

- **Support for documenting and validating**
  - **Resource Metacards**
  - **Contact Metacards** (New)
  - **Taxonomy Metacards (i.e., glossary of terms)** (New)
  - **Multicards** (New)
- **Improved organization and readability**
- **Improved alignment with DDMS**
- **Includes relaxed schema components**
  - **To support partially built metacards**



MSC-DMS Version 1.4



The structures identified above reflect version MSC-DMS version 1.4

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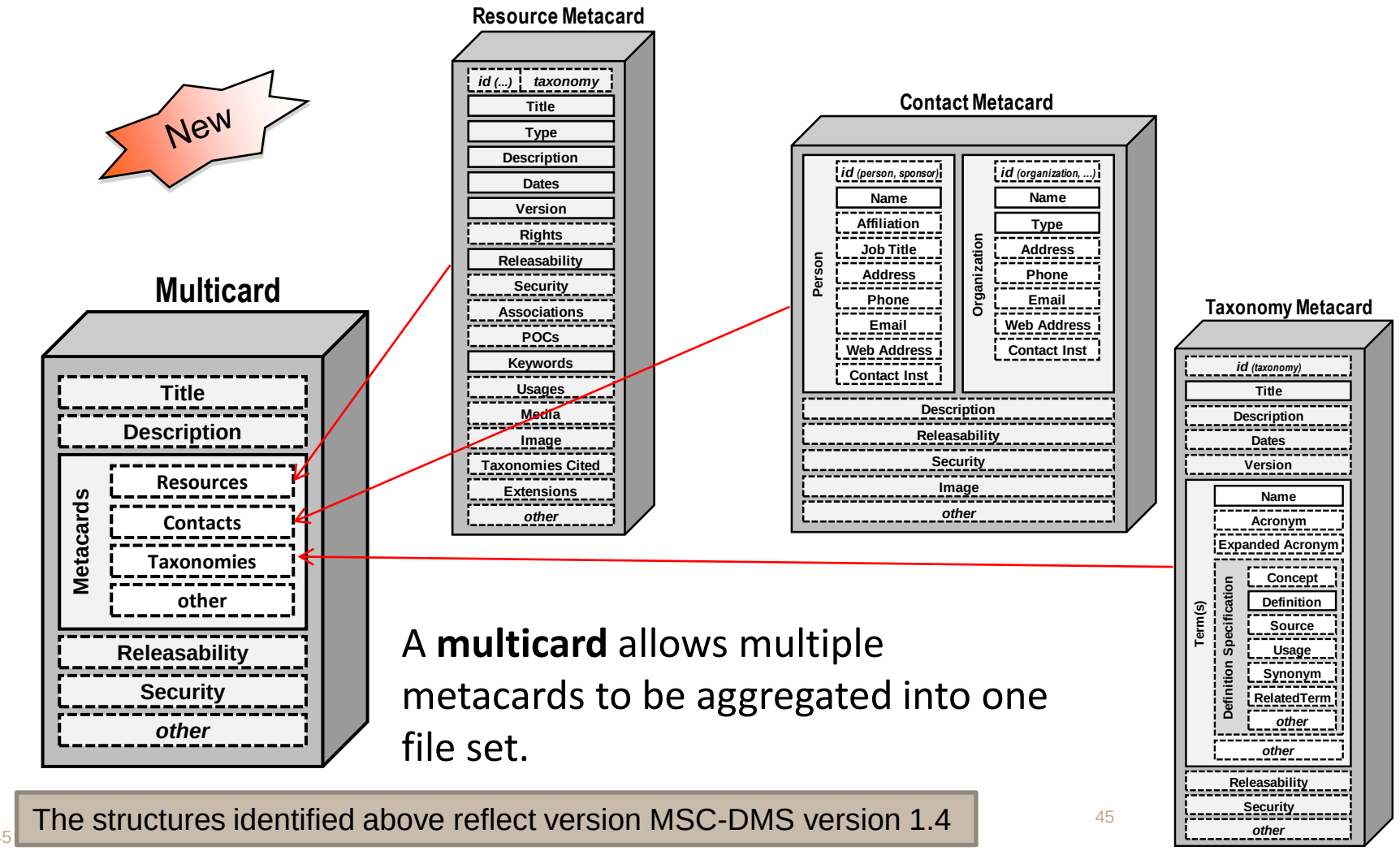
MSC-DMS Version 1.4



A **multicard** allows multiple metacards to be aggregated into one file set.

The structures identified above reflect version MSC-DMS version 1.4

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