

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



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Laurel, MD





### **M&S Driving Issues**



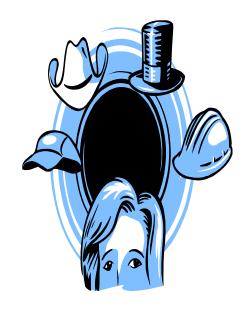


Growing Demand for LVC Interoperability

Redundancy of Tools, Data, Gateways & Repositories

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

Legacy Systems vice Innovation





### **LVCAR-I Project Framework**



#### Purpose:

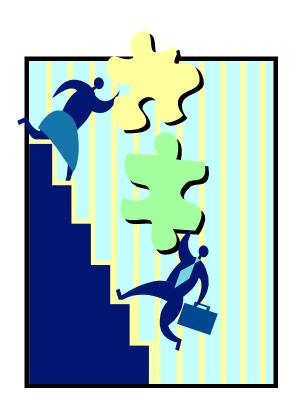
 "Develop a future vision and supporting strategy for achieving significant interoperability improvements in LVC simulation environments."

#### • Focus:

- Technical Architecture
- Business Models
- Standards Evolution
- Management Process

#### Precepts:

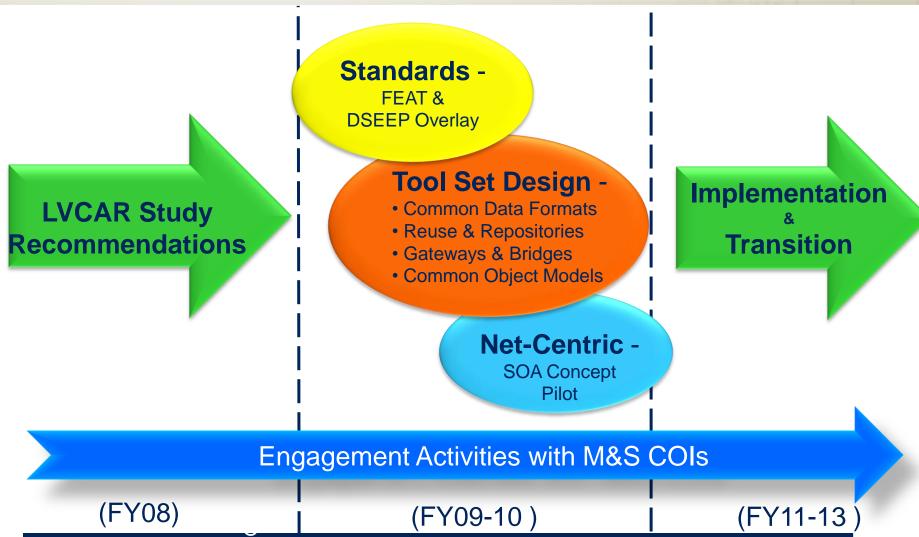
- Do no harm
- Interoperability is not free
- Start with small steps
- Provide central management





### **LVCAR-I Progression**







### 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** 

Standard

Storehouse

#### **EMBR Portal**

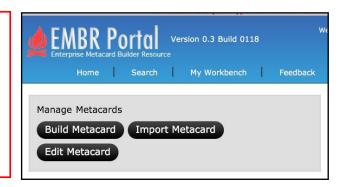
- A way to create metacards (MSC-DMS)
- Provides cloud-based data locker
- Edit / Collaborate / Search / Track Metacards
- Post / Evaluate Feedback
- Submit Metacards to Storehouse
- Localized or Web-Based Deployment

### 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)

#### **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



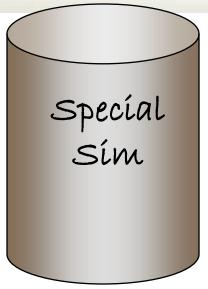






### Making Assets Discoverable Through Metacards







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);
}
```

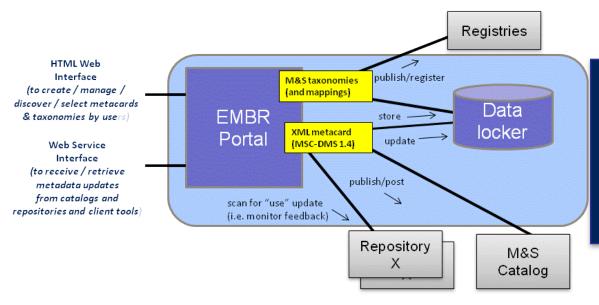
#### **Metacard Feedback Process**

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









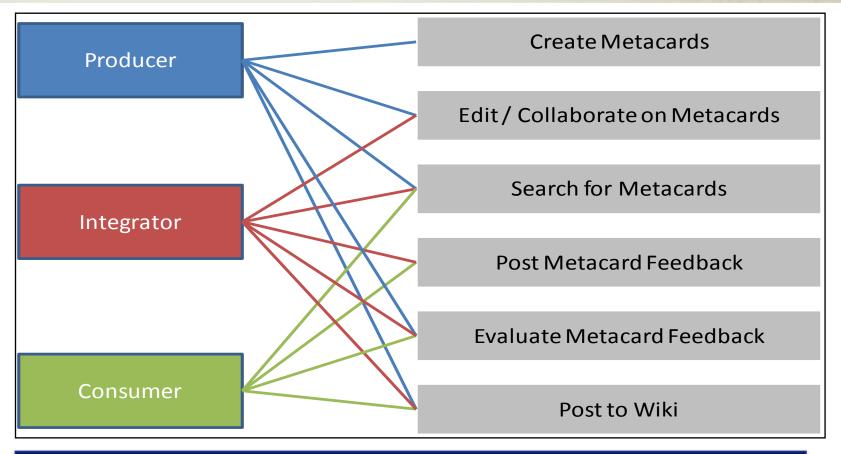
The EMBR Portal provides a means for M&S producers and consumers to collaborate on metadata content and to exchange information and feedback on M&S usage.

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**



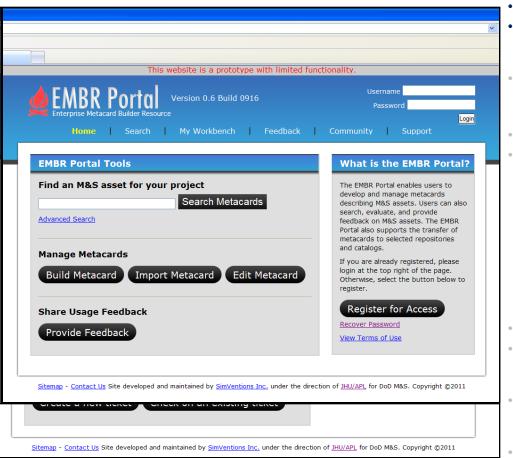


The EMBR Portal provides a shared space for both structured and unstructured review of discovery metadata in MSC-DMS format



### EMBR Portal GUI and Functions: Overview



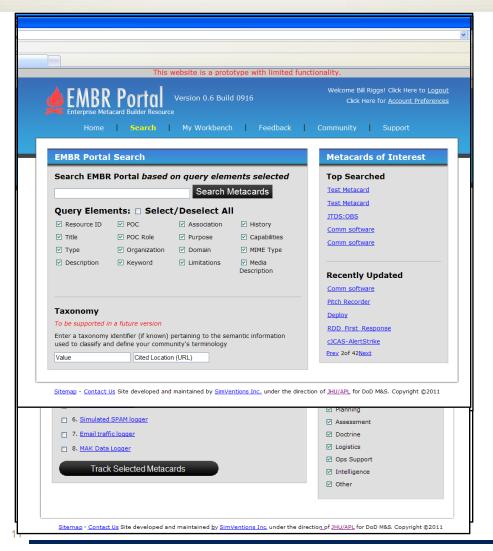


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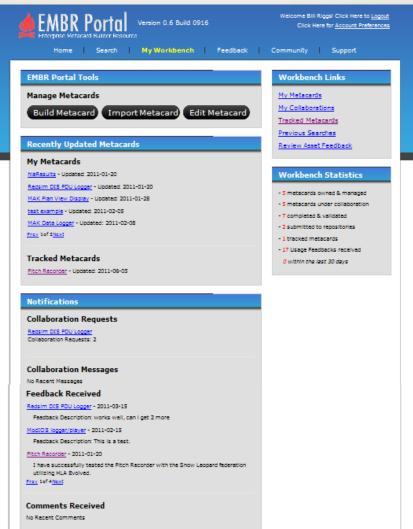


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### EMBR Portal GUI and Functions: Metacard Building and Editing



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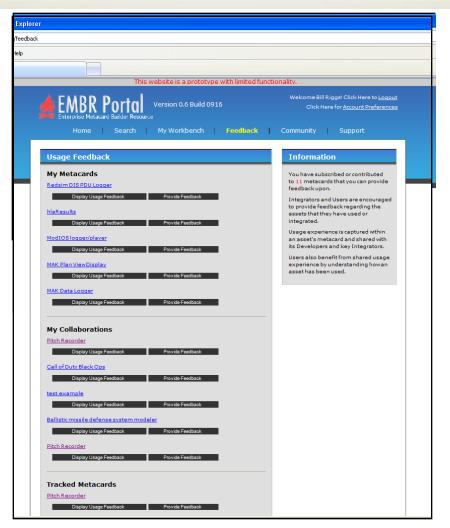
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### EMBR Portal GUI and Functions: Feedback



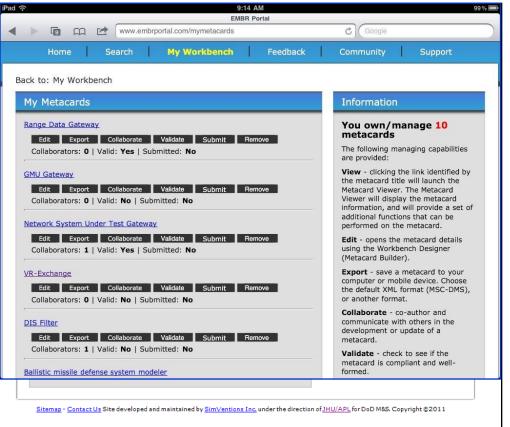


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### EMBR Portal GUI and Functions: Validation and Publication





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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

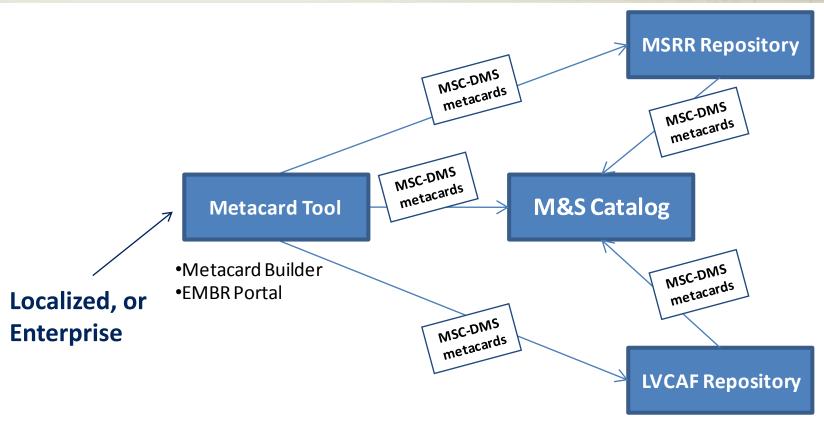


- Make it easy to build and share M&S asset metacards
  - No need to be an XML expert
  - Compliance with MSC-DMS standard automatic
- Help facilitate MSRRs and M&S Catalog to reflect more asset of interests
- All on the web / access controlled
- Can be configured for local organizations / networks



### Metadata Flow: An Example



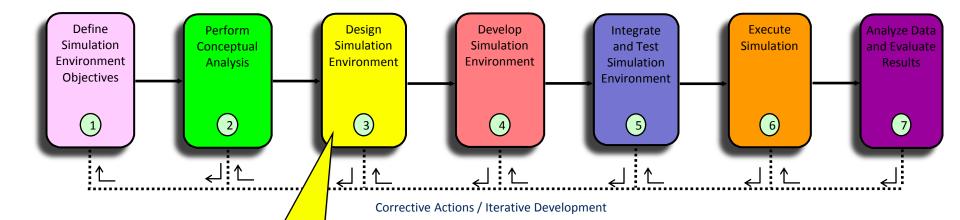


Localized – Creation and Discovery starts at home Enterprise – Distribution and Cataloging is on the web



### Vignette 1: Design Simulation Environment





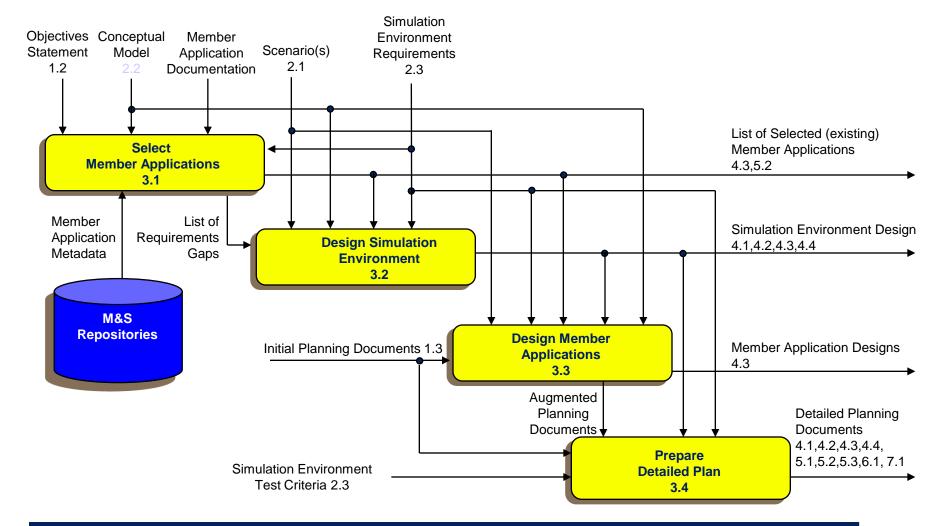
- 3.1: Select Member Applications
- 3.2: Design Simulation Environment
- 3.3: Design Member Applications
- 3.4: Prepare Detailed Plan

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

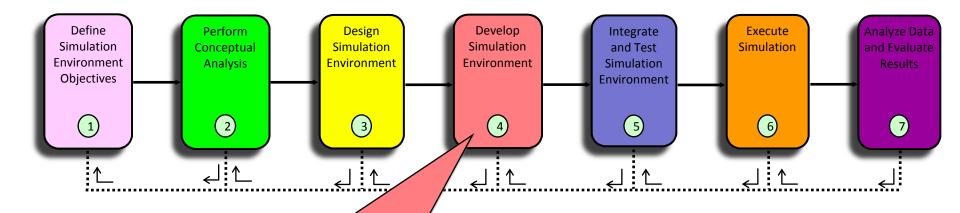






### Vignette 2: Build Simulation Environment





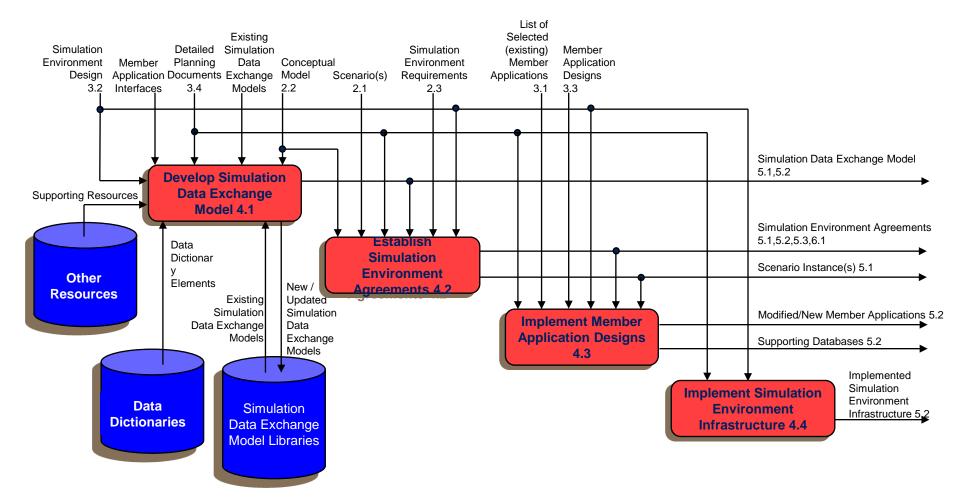
- 4.1: Develop Simulation Data Exchange Model
- 4.2: Establish Simulation Environment Agreements
- 4.3: Implement Member Application Designs
- 4.4: Implement Simulation Environment Infrastructure

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.

### DSEEP Step 4: Develop Simulation Environment







#### **EMBR Portal: Features**

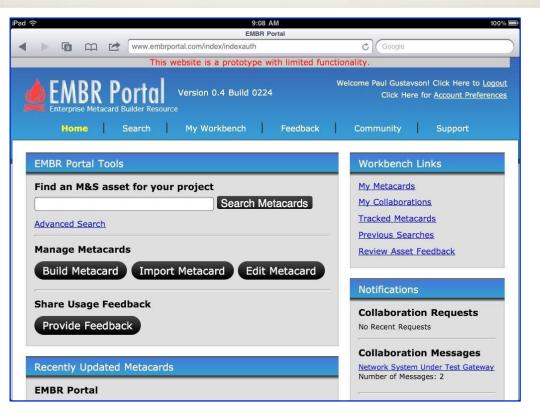


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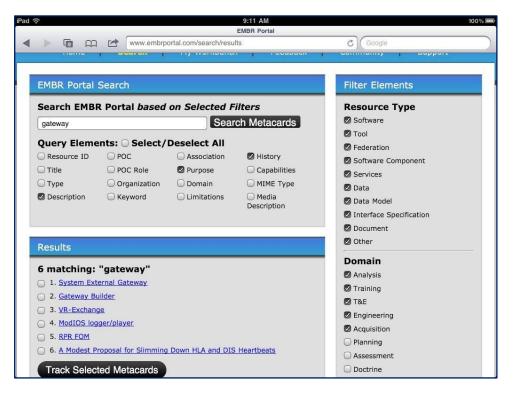


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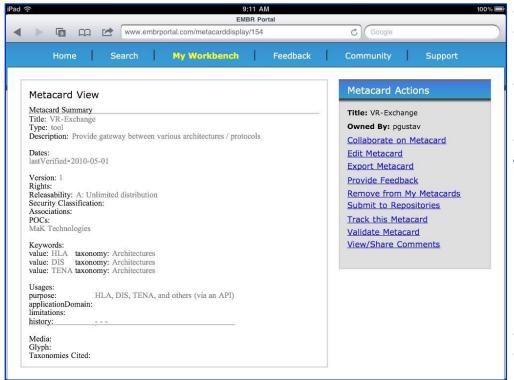


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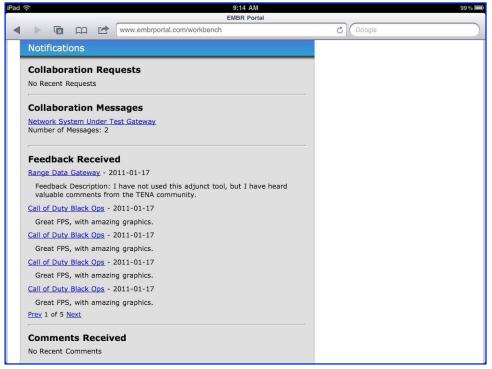
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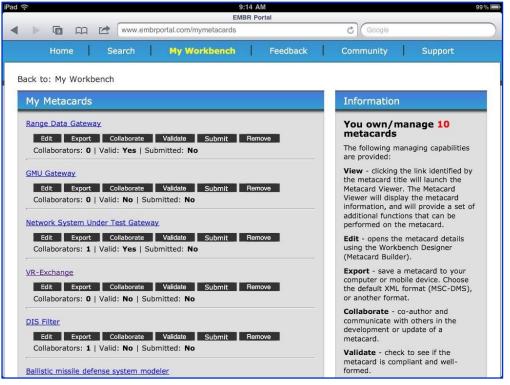


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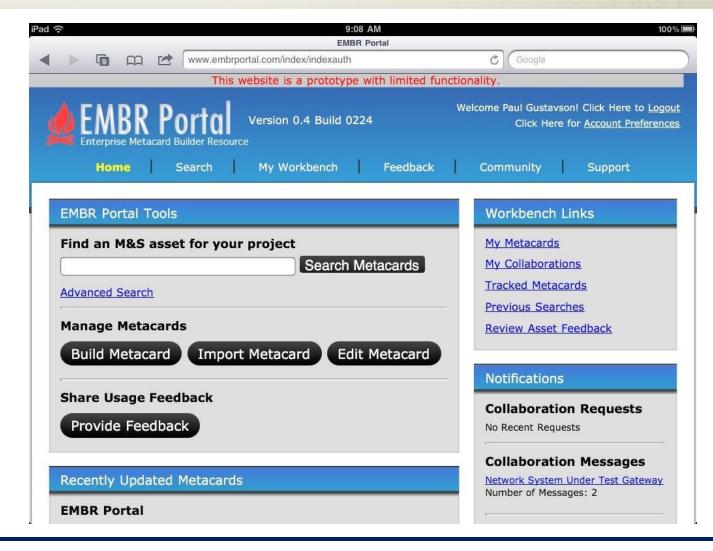


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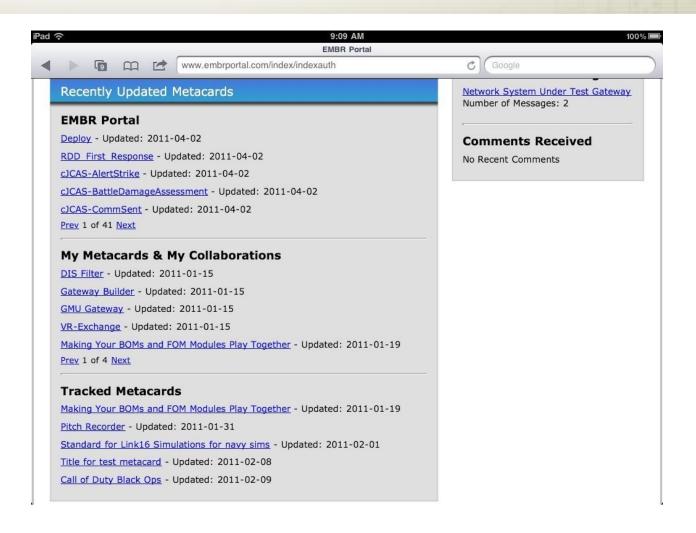






### **EMBR Portal Home Page (Cont.)**







### EMBR Portal: Metacard Search Utility (I)



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Find an M&S asset for your project	My Metacards
Gateway Search Metacards	My Collaborations
Advanced Search	Tracked Metacards
Manage Metacards	Previous Searches  Review Asset Feedback
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### EMBR Portal: Metacard Search Utility (II)

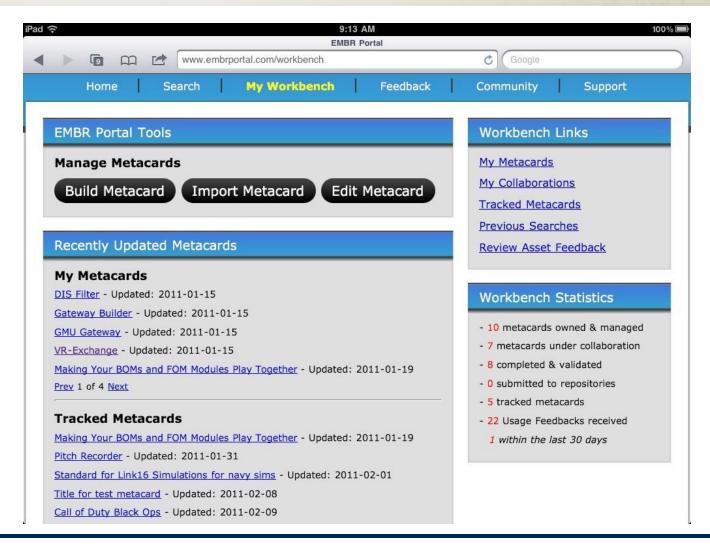


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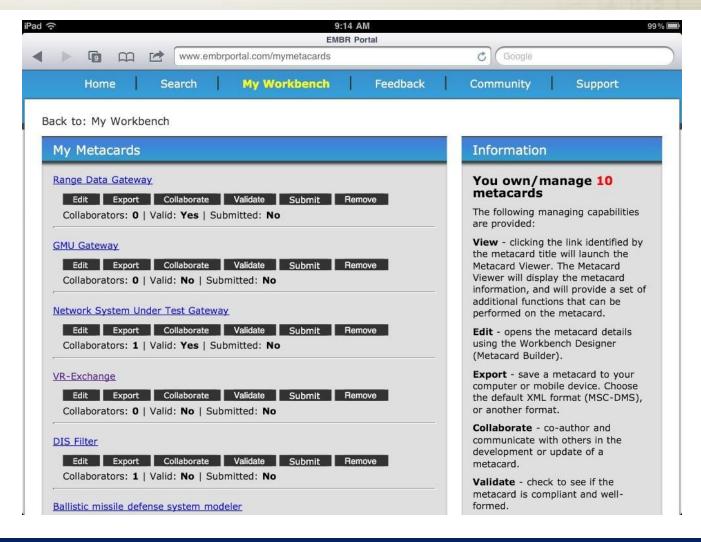






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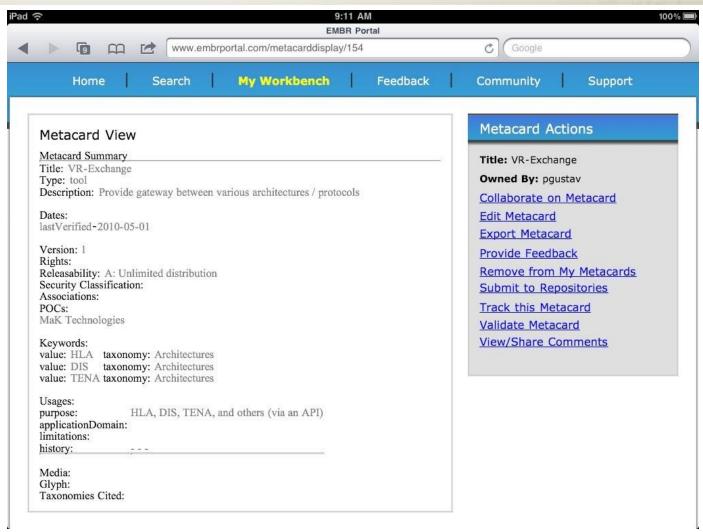
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#### **EMBR Portal Metacard View**

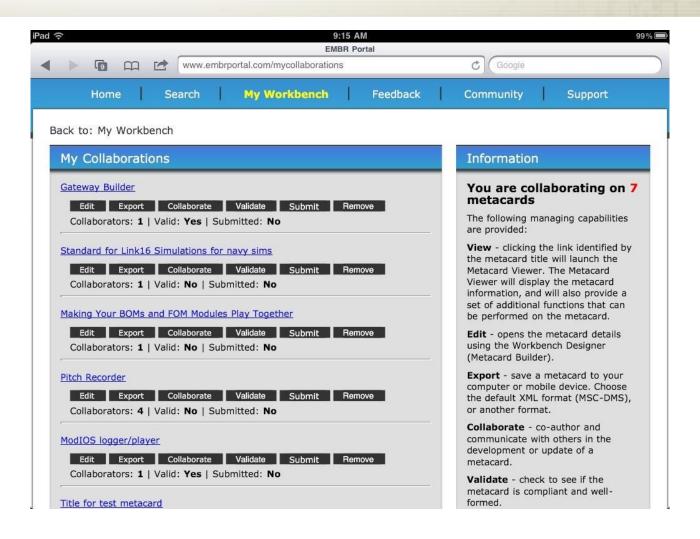






#### **EMBR Portal Collaboration**

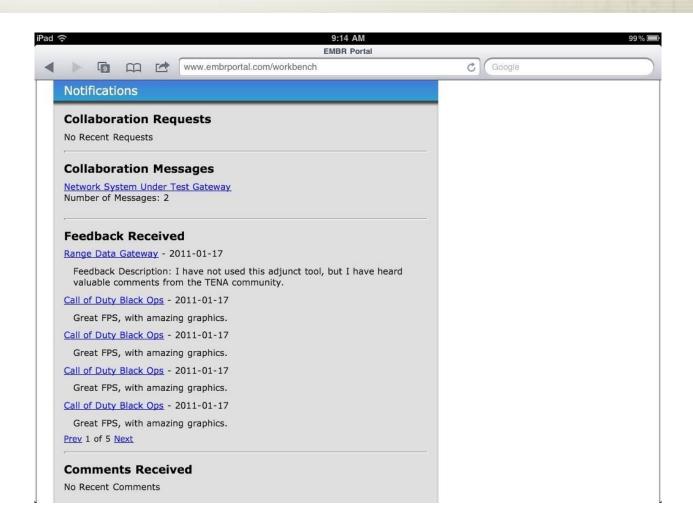






#### **EMBR Portal Feedback**







New

New

New

### MSC-DMS 1.4 What Latest Version Offers



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

Modeling and Simulation (M&S) Community of Interest (COI) Discovery Metadata Specification (MSC-DMS)

Version 1.4

December 24, 2010

Department of Defense (DoD) Modeling and Simulation Coordination Office (M&S CO)

Keywords: Accessibility, Cataloging, Discovery, Interoperability, Metadata, Modeling and Simulation, Reuse, Understandability, Visibility

Distribution A: Cleared for Case No. 08-S-2636).

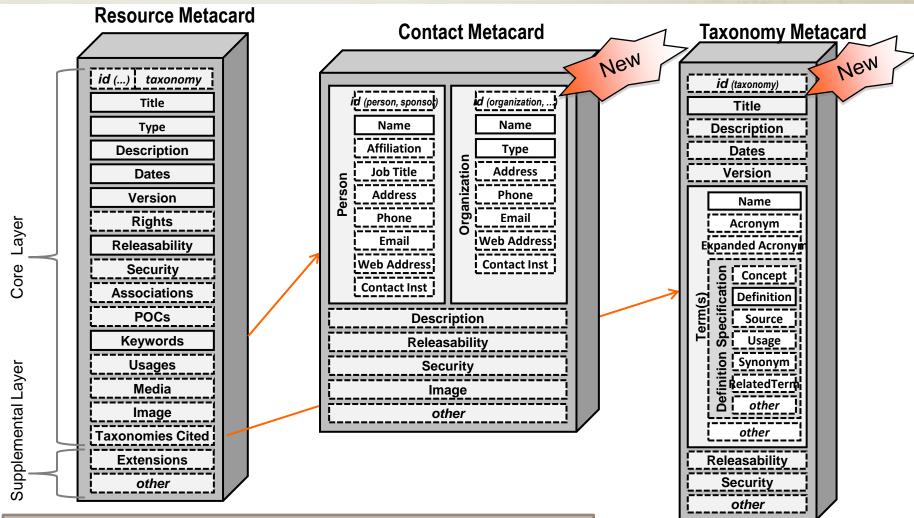
> Modeling & Simulation Community of Interest Discovery Metadata Specification (MSC-DMS)

> > Resource Metacard Implementation Guide









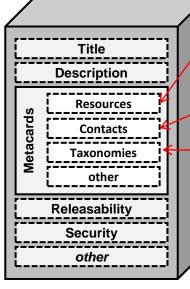


#### **MSC-DMS Version 1.4**





#### Multicard



# id (...) taxonomy | Title Type Description Dates Version Rights Releasability Security Associations POCs Keywords Usages

Media

**Taxonomies Cited** 

other

**Resource Metacard** 

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

#### **Contact Metacard**

Id (person, sponsor)    Name						
Releasability Security Image	Name Affiliation Job Title Address Phone Email Web Address	Name Type Address Phone Email Web Address				
Security Image	Description					
Image	Releasability					
;;	Security					
other	Image					
	other					

**Taxonomy Metacard** 

	id	(taxonomy)			
Title					
Description					
		Dates			
		/ersion			
		rersion			
		Name			
		Acronym			
	Expa	nded Acronym			
	Ę	Concept			
જ	(g) Definition				
Ĕ	Source Source				
ř	Speci	Usage			
	ţi	Synonym			
	fini	RelatedTerm			
	Defi	other			
		other			
	Pol	easability			
	Kei				
Security					
other					