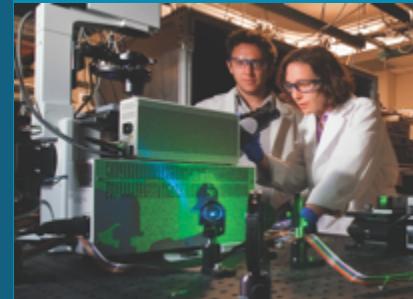
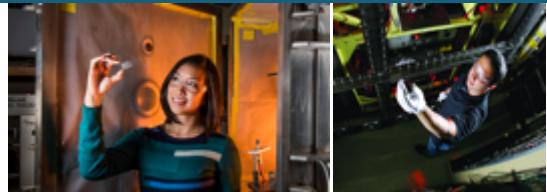




EMIT Consortium Member Presentation

Autumn 2018



PRESENTED BY

Celeste A. Drewien, Richard L. Karnesky



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.



SharePoint Site

Granta MI Materials Database

Discussions
Database Descriptions
Training Materials
Presentations
Requested Data
Downloads
Site Contents

This community was established 3/23/2015.

About Granta

GRANTA MI (Materials Intelligence) is a leading commercially-available system for enterprise materials information management. It is offered free to members of the Sandia workforce on the SRN and SCN by the Common Engineering Environment (CEE).

As a single resource for all of your materials data, GRANTA can save time, cut costs, and significantly reduce risk associated with materials selection. GRANTA integrates with the **SIERRA** suite, the **Sandia Analysis Workbench**, and **CREO**. Integration with PDMLink and other Sandia software is planned and already under development. There is a SOAP-based API and toolkits for python and Matlab to integrate materials data with other software.

The Granta team can work with you to import your experimental data or to find pedigree materials data for your application. Your GRANTA MI subscription gives you read access to internal Sandia materials databases and the following commercial databases:

- MaterialUniverse
- Aerospace MI bundle (MMPOS, CMH-17)
- Composites Design
- M-21 Metals & Consumables
- JAHM Curve Data

Part of Common
Engineering Environment

Data input by researchers

Used for At-Risk Materials

Integrated within CREO
(CAD application)

We have a strong need for better one-way (and partial) syncing between databases that are on air-gapped networks.



Sandia
National
Laboratories

- ▶ Products and parts
- ▶ Coatings
- ▶ Electricity mix
- ▶ Critical Materials
- ▶ End of life
- ▶ **Legislations and Lists**
- ▶ Materials - in house
- ▶ MaterialUniverse
- ▶ ProcessUniverse
- ▶ Producers
- ▶ Reference
- ▶ Resources
- ▶ **Restricted Substances**
- ▶ Shape
- ▶ Specifications
- ▶ Transport
- ▶ Use - mobile mode
- ▶ Use - static mode
- ▶ Suppliers

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Unclassified

Full 1-Way Update
of unclassified data

Classified



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Includes classified
materials

Inc. classified specs
Inc. classified info

We make updates on our unclassified database that need to be pushed to our classified database

The classified database includes information that we cannot include in the unclassified database

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Unclassified

Partial

2-Way Updates



NATIONAL LABORATORY

EST. 1945

Los Alamos

NATIONAL LABORATORY

EST. 1945

NATIONAL LABORATORY

EST. 1945

Los Alamos

NATIONAL LABORATORY

EST. 194

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Sandia

MI:Admin (@grantami.sandia.gov)

Server Tools Options Help

Schema Profiles Access Control Data Updater

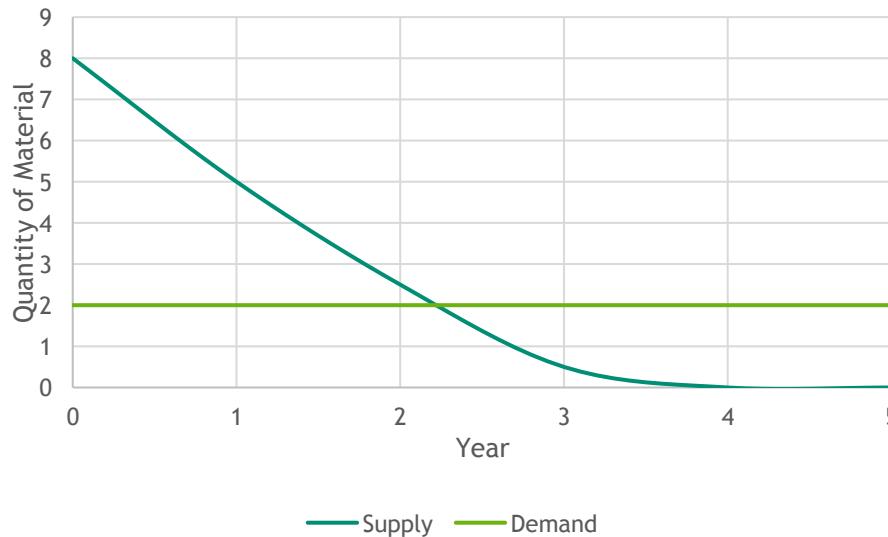
Upload and verify update Apply update

Project name	Update name	Update description	Status	Progress	Database key	Update applied date	Actions
Product Risk...	Update File...	Data Update for Product Risk Oc...	Update applied		MI_Product_Risk_3	1/11/2018 10:59...	
Product Risk...	Schema Up...	IPC-1754 Schema Update for Pr...	Update applied		MI_Product_Risk	8/27/2018 1:39 PM	
Product Risk...	Schema Up...	Pre-requisite Schema Update for...	Update applied		MI_Product_Risk	6/21/2018 9:35 PM	
Product Risk...	Schema Up...	Schema Update for ProductRisk...	Update applied		MI_Product_Risk	6/21/2018 10:13...	
RSDM rele...	Data Updat...	Data Update for RS v8.2 – April...	Update applied		MI_Product_Risk	6/21/2018 9:27 PM	
RSDM rele...	Restricted S...	Data update of substances, legis...	Update applied		MI_Product_Risk	8/20/2018 6:31 PM	
RSDM rele...	RSDM Data...	RSDM Data update v7.1 - Januar...	Update applied		MI_Product_Risk	1/27/2017 9:51 AM	
RSDM rele...	RSDM Data...	RSDM data update v7.2 - April 2...	Update applied		MI_Product_Risk	4/24/2017 9:50 PM	
RSDM rele...	RSDM Data...	Data Update for RSDM v7.3 - Jul...	Update applied		MI_Product_Risk_3	1/11/2018 9:36 AM	
RSDM rele...	RSDM Data...	Data Update for RSDM v8.1 - Ja...	Update applied		MI_Product_Risk	2/1/2018 2:02 PM	
RSDM rele...	Schema Up...	Schema Update for Restricted S...	Update applied		MI_Product_Risk	6/21/2018 10:18...	
RSDM rele...	Update File...	Data Update for RSDM v7.4 - Oc...	Update applied		MI_Product_Risk_3	1/11/2018 12:34...	

▶ Use - mobile mode
 ▶ Use - static mode
 ▶ Suppliers

The “Data Updater” tool has been useful for Granta-generated updates & we wonder if a similar tool could help us make quarterly updates from the SNL unclassified database that we share (on our other network and with other sites using Granta Product Risk).

We are contemplating using Product Risk to track and communicate supply/demand/good-through dates



One aspect of materials availability risk is the so-called “magic barrel” problem.

We trust a particular lot (“barrel”) of material to serve our needs, but may be in trouble when we run out of that lot.

We need to better plan how to mitigate this (by acquiring and qualifying new lots (possibly with a materials substitution and re-design if it is not possible to get a “new magic barrel”) more timely.

Do other EMIT members have this need? How do you address it?