Workshop on Model Lifecycle Management

2017 annual INCOSE international workshop
Los Angeles, CA, USA
January 28 - 31, 2017

www.incose.org/iw2017

Lonnie VanZandt, Enterprise Architect, Sodius
TIMLM Working Group co-Chair

Facilitator Info

- Enterprise Architect, Sodius
- (ex) Chief Architect, No Magic
- (ex) UPDM Co-chair
- INCOSE Tools WG Co-chair
- OMG BPMN2 Certified
- OSLC Developer
- IBM Jazz CLM Integration Partner
- PTC Windchill Integration Partner
- Tasktop Sync Partner
- ~30 years Software and Systems Engineering
- 17 years Consulting
- Hobby Ontologist

TIMLMWG Meetings

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Meeting Group Description	Contact	Meeting Date	Meeting Time	Expected Attendance	Speaker
TIMLM Opening Plenary	John Nallon	29-01-16	13:00-15:00	40	Nallon/VanZandt
SAVI: Intermodel Error Checking and Consistency with Demo	John Nallon	29-01-16	15:30-17:30	40	Shaw
OSLC Core v3.0 Overview	John Nallon	30-01-16	09:00-10:00	40	Bill Chown
PDES/LOTAR MBSE Overview	John Nallon	30-01-16	10:30-12:00	40	Williams/Shaw
PDES SE Interoperability Project	John Nallon	30-01-16	13:00-15:00	40	Russell
Roundtable: Boeing's Model Exchange Issues Using OMG Standards	John Nallon	30-01-16	15:30-17:00	60	Williams, Freidland, Harold

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TIMLM WG Workshop Review and Look Ahead	John Nallon	31-01-16	09:00-10:00	40	Nallon, VanZandt
Ap233/Ap239/Ap242 Standards Update	John Nallon	31-01-16	10:30-12:00	40	Shaw
Concept Models for Collaborative and Cooperative Engineering	Lonnie Van Zandt	31-01-16	13:00-17:30	40	VanZandt/Rhodes/ Schindel
TIMLM WG Panel Planning for IS2017	Lonnie Van Zandt	31-01-16	08:00-10:00	12	VanZandt
TIMLM WG Web and Connect Site (new) Overview and IW Closing Plenary	John Nallon	01-02-16	10:30-12:00	30	Nallon
IW2017 Wrap-Up and Quad Chart Finalization	John Nallon	01-02-16	13:00-14:00	16	Nallon/VanZandt

Workshop Sessions

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- Introduction to the MLM and *LM Definition [Plenary]
- Defining Collaborative and Cooperative Workflows
- Mapping MLM and EA Concepts to PBSE
- Eliciting and Recording MLMS Capabilities
- Eliciting and Recording MLMS Stakeholders and Performers
- Eliciting and Recording MLMS Operational Activities (Use Cases)
- Trade Space Due Diligence and Recording existing Systems
- Specifying MLMS Service Choreographies
- Workshop Conclusion [Plenary]

MLM Vision: Purgatory

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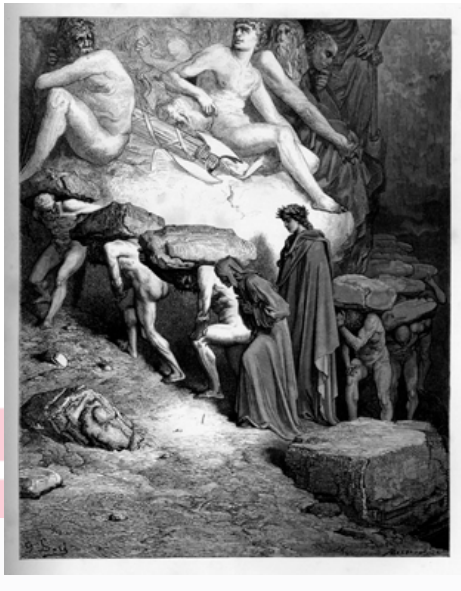
We see:

“a community of Systems (and discipline-specific) Engineers struggling to persist and to reference the artifacts of engineering over the lifecycle of each enterprise;

a community of Stakeholders and Decision-makers forced to make decisions irrationally and intuitively due to a lack of access to the defensible arguments that both legacy documentary and innovative model-based systems engineering should provide."



Doré, Gustave, 1868, Dante purgatorio

MLM Vision: Paradise

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We see:

"a day when engineers use distributed systems that automatically persist artifacts in compact, modular form along with the provenance of each modification;

a day when engineers can reference the current and the historical representation of both individual artifacts and collections thereof along with the relational graphs between artifacts;

a day when stakeholders make rational decisions using the Systems Engineers' explicit sound dialectical and rhetorical arguments based on the provenance of content and change."

Doré, Gustave, 1868, Dante e Beatrice

Management?

Paraphrasing Charlton and Adras, ***management*** is a process by which managers reflectively model and share a representation of their own processes to ***enable themselves to perform*** their eponymous information-processing activities of ***monitoring, evaluating, predicting, and controlling*** their enterprise and its systems. [@Charlton2003]

Furthermore, managers manage for particular purposes. Purpose-driven, they ***acquire systems*** to ***address the needs*** of the enterprise and they manage their stakeholders, engineering lifecycle tools, and artifacts during the acquisition processes ***to attain certain goals***. [@VanZandt2016]

Collaboration?

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In “Mob Programming, A Whole Team Approach”, the authors describe, “mob programming”, an evolution of pair programming as, “all the brilliant minds working together on the same thing, at the same time, in the same space, and at the same computer” [@Zuill2016].

The TIMLMWG intends the term "Collaborative Engineering" to be a variation of this mob programming concept. Blending in Sun Microsystems’ John Gage’s marketing campaign that “the network is the computer” and allowing the “same space” to be the “same virtual space”, the TIMLMWG describes collaborative engineering as: ...

Collaboration

"All the brilliant minds **working together** on the **same thing**, at the **same time**, in the **same virtual space**, and on the **same worldwide network**."

[@VanZandt2016]

Lifecycle Management

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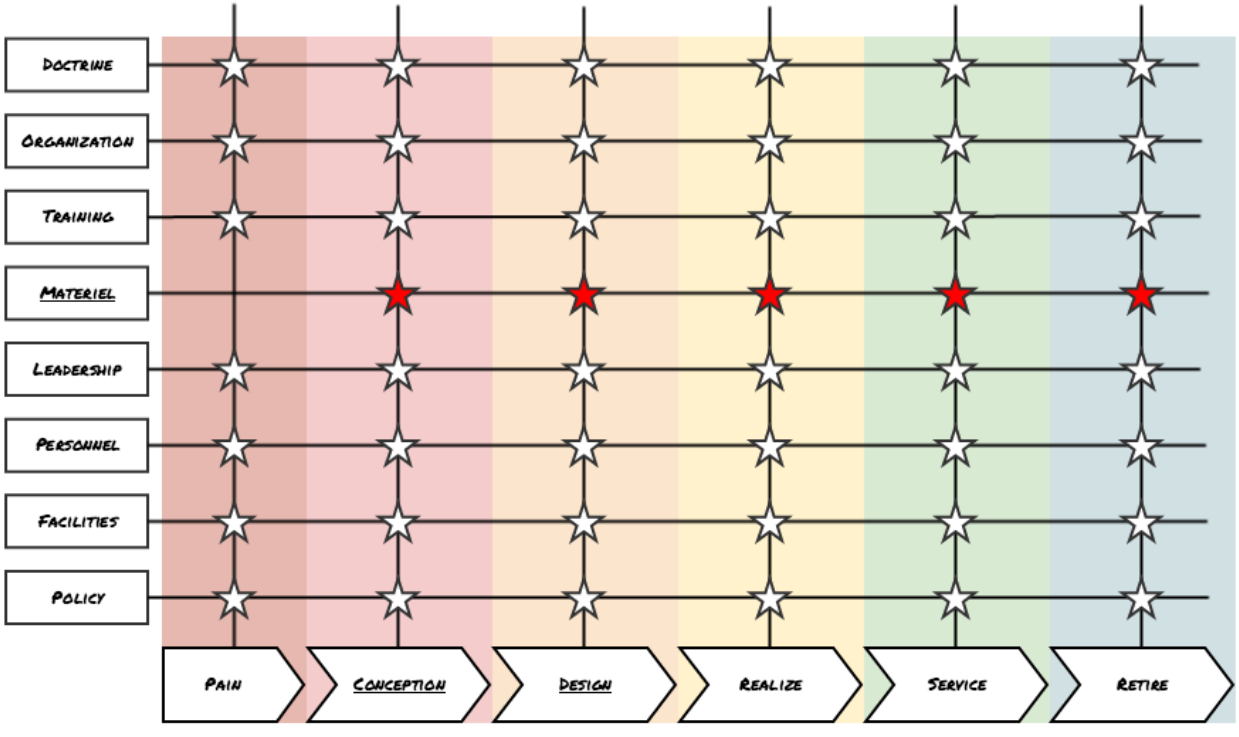

- Doctrine:
  The codification of beliefs or a body of teachings or instructions, taught principles or positions concerning how the organization operates
- Organization:
  How the Organization forms into teams, Units, Divisions
- Training:
  How the Organization prepares to perform tactically
- Materiel:
  Systems, Tools, Resources, Models, Files, etc.
- Leadership:
  How the Organization prepares its Leaders
- Personnel:
  Staff and Users
- Facilities:
  Real property, installations, and industrial facilities
- Policy:
  Internal, Joint Venture, National, Supra-National Laws, Treaties, Conventions, etc.

Sessions' Mission

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Within three hours, starting now, collaboratively come up with a collection of curated instances of the Session's specific Concepts.

Sessions' Tactics

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- Choose a scribe
- Choose one or more curators
- Find some Rapid-Prototyping tools: Pens, Papers, Boards
- Choose an electronic authoring tool to capture the contributors' proposals and the curated results
- Whiteboard / brainstorm / research Prior Art, Novel Ideas, Known good Solutions
- Take 2-3 breaks
- Capture the contributions
- Curate the contributions
- Share the curated results with the plenary team

START
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Workshop Conclusion

- Report: PBSE Session
- Report: Capabilities Session
- Report: Performers Session
- Report: Operational Activities Session
- Report: Systems Session
- Report: Service Choreography Session
- Opinion Sharing