

AVM Transition Program

Charlie Stirk

Charlie.stirk@dmdii.org

303-517-9092

AVM – Advanced Vehicle Make

- Collection of related DARPA programs
 - Meta, iFab, VehicleForge, ...
- Software that integrates design and manufacturing concerns
- DMDII relationship to prior phases of AVM
 - Members – Rolls Royce, Boeing, PARC, Oregon State, Iowa State ...
 - People – Naresh Shah, DMDII Senior Director of Operations
- MBE Summit
 - 2013 - AVM performers – Vanderbilt, Penn State ARL, STEP Tools
 - 2014 - ESI, Dassault Systemes ...
- Funded like a DMDII Corporate Project
 - Directed by a member with a specific R&D focus
- Run like a DMDII Enterprise Project
 - Regular project call process, IP rights, 1:1 cost share

AVM Project Calls

- Project call workshop on July 8, 2014 in Chicago
 - ~ 200 participants
 - AVM performers discuss and demo tools
 - 1 minute speed dating presentations
 - AVM reports and open source software
 - TRL maturity and description of tools
 - Teams self-organize
- Project Call 1 – Tool Integration
 - More mature tools in technology demonstrations
- Project Call 2 – Technology Development
 - Less mature tools technology maturation

Evaluation Process

- All participants
 - Conflict of Interest
 - Non-disclosure agreement
- Preliminary cost proposal analysis by SCRA
- Technical Subject Matter Experts
 - Strengths/Weaknesses
- Evaluation Board
 - No DMDII staff as evaluators, only observers
 - Evaluation Criteria from project call
 - Strengths/weaknesses, numerical score, selectable/non-selectable

Cost Share

- 1:1 for DMDII projects
- Third-party software licenses
 - Several PLM vendors contributing their tools
 - Hybrid tool flows
 - Incorporating AVM technology into existing PLM tools
- Labor from universities and industrial members
- Criteria
 - Verified and documented
 - Necessary and reasonable

AVM Standards Development

- Directed by DARPA as a separate task
- AVM technology that can be standardized
 - Component specification
 - Component library (non-ITAR controlled items)
 - Validation software
- Extend existing standards for AVM requirements
 - Model metadata for data management and context
 - Product Manufacturing Information (PMI)
- Application programming interfaces (API)
- Pilot DMDII involvement in standards development and testing
- DMDII standards meetings for AVM and other project call participants
- Partner with NIST and standards development and testing organizations