

**Minutes of the 5th “AutoMatIC” (Automotive Materials Intelligence Consortium) Meeting**

*KSPG, Neckarsulm, Germany*

*20-21 October 2016*

Attending:

Vesna Savic (Webex)	GM
Denise Massa (Webex)	GM
John Parker	Granta Design
Dale Delgado	Granta Design
Dan Williams	Granta Design
Najib Baig	Granta Design
David Campbell	Granta Design
Radim Mrazek	Honeywell
Mohamad El-Zein	John Deere
Mark Blagdon (Webex)	Jaguar Land Rover
Peter Seggewiß	Rheinmetall Automotive (KSPG)
Albert Schmid	Rheinmetall Automotive (KSPG)
Remy Bompont	PSA Peugeot Citroën

**Summary of Actions:**

<b>Minute</b>	<b>Action</b>	<b>Actioned</b>
1.3	Update logos on AutoMatIC presentations / marketing collateral	Granta
1.4	Circulate My Granta instructions	Granta
2.2	Ensure all members provide self-assessment for Industry Report by extended November deadline	All
3.3	JLR to share with Rheinmetall how they export URLs to records within material cards	JLR / Rheinmetall
3.5 and elsewhere	Ensure all feature requests from Member Updates are captured by Granta Product Management	Granta
6.2	Mohamed El-Zein to put Joining Teams in contact with Najib at Granta to provide feedback on joining template	John Deere
7.3	Granta to collate wear/tribology information from members	Granta
13.3	PSA and JLR to work together on a best practice approach to Dassault V6 integration	JLR / PSA
14.1	Najib to follow up individually with members on Additive Manufacturing solution	Granta
16.4	Granta to collate members' end-user survey questionnaire questions and share them with the group	Granta
17.3	Granta to circulate next meeting dates asap	Granta

## Minutes – Thursday 20 October, 2016

### 1. Welcome/Agenda Review

1.1 Dan Williams welcomed everyone to the 5<sup>th</sup> AutoMatIC meeting and thanked KSPG for hosting.

1.2 There are a number of automotive companies beginning projects with Granta – this is positive news for the consortium, as it should mean more members will be able to sign up before the next meeting.

1.3 Some of the company logos on the AutoMatIC slides are out of date – KSPG is now Rheinmetall Automotive, and PSA has also changed logo. **[Action – Granta]**

1.4 Dan reviewed the minutes from the previous meeting. All the presentations from previous meetings (including Member Updates where permission has been granted by the member) are now on the My Granta site, and all consortium members should have a login. Granta will re-send the access information after this meeting. **[Action – Granta]**

1.5 Regarding the action for GM and JLR to consider a joint approach to HP (IMDS) regarding a 'broker approach' to declarations – Denise Massa advised that GM is now pursuing a 100% disclosure strategy instead.

### 2. Industry report

2.1 Dan Williams gave an update on the Industry Report. A number of members have not yet submitted their self-assessments, but feedback from the group was that this is an important exercise. Remy Bompont said that PSA have a goal to use this report internally as part of management reporting / return on investment discussions – it shows management that there is always more to do in the area of materials information management. Mohamad El-Zein commented that some of the report areas such as CAE, CAD/PLM and Security are top concerns, but it can be hard to prove to management why they are so important – this kind of document can really help in this area.

2.2 It was agreed that we would extend the time period for self-assessment so that everyone gets a chance to contribute to the 2016 report. **[Action – all]**

### 3. Member Update – Rheinmetall Automotive

3.1 Peter Seggewiss and Albert Schmid presented Rheinmetall's Member Update. Areas where progress has been made since the last meeting include a new Purchasing Database, a new Test Server, and an upgrade to MI Version 9 Update 2 which progressed without issues.

3.2 Rheinmetall ensure usage of Granta by mandating that all CAE reports must cite a source for their input data. Granta is an acceptable source for citation.

3.3 There was a discussion about the best way to provide citations to official sources of data from MI. JLR have taken an approach to export an HTTP link to a record inside the material card. Rheinmetall would be interested in achieving a similar result. **[Action: JLR, Rheinmetall]**

3.4 Also, a decision has now been made that Windchill is to be the official PLM system for Rheinmetall. Peter is still trying to make sure that materials are given suitable visibility at the strategic PLM planning meetings that are happening across the company.

3.5 A number of requests to Granta for new functionality were proposed. These include a way to generate more complex comparison tables (similar to Excel Pivot Tables) for data where there is a need to “group by” particular properties. [Action: Granta]

#### **4. Technical session: CAD, CAE and PLM integration**

4.1 Dan Williams led a discussion on integration with 3<sup>rd</sup> party engineering systems.

4.2 A number of models for integrating materials information into the product lifecycle were proposed: (i) Assignment in CAD using a Gateway, (ii) Assignment in PLM using a Gateway, and (iii) a variation on (ii) where collections of materials are authored in GRANTA MI and then synchronized with the PLM server so that assignment can be made directly from the PLM system’s material objects. Denise Massa commented that GM’s approach is (iii) – and they see it as the best choice in order to enable downstream capabilities such as “Where Used”.

#### **5. Member Update: John Deere**

5.1 Mohamad El-Zein presented a member update from John Deere, who are attending AutoMatIC for the first time.

5.2 John Deere’s main motivation for a materials information management project is to eliminate situations where people use the ‘wrong number’. The current materials database is based in Sharepoint, which has challenges when it comes to searchability, and requires sharing of exact links to work.

5.3 Most CAE is done in India. Data security is important – for CAE the workaround is to share model parameters only, with no identifying information.

5.4 Additive Manufacturing is becoming increasingly important.

5.5 Deere are very cost sensitive. All in-house software purchases compete with open source alternatives, and require detailed justification.

5.6 There was a discussion around where funding for materials information management typically comes from—which groups ‘sponsor’ the initiatives, and whether corporate IT is fully involved in the ongoing licensing and maintenance of the solution. Member companies varied somewhat in both answers, with both CAE groups and Materials Technology acting as sponsors in some cases.

#### **6. Technical Projects Update**

6.1 Najib Baig provided an update on Technical Projects. The Welding and Joining schema is now fully integrated into the MI:Metals Template and is available to members to download.

6.2 John Deere is interested in providing feedback on the welding schema. [Action: JD]

6.3 The discussion turned to tribology and wear – the next proposed focus area for the group. PSA already have tribology data in MI – Remy Bompont offered to demonstrate this during PSA's member update.

6.4 John Deere can provide a template for various wear tests including ASTM G65 – this can be provided via Polly Schum at MDMI.

## **7. Member Update – Honeywell**

7.1 Radim Mrazek provided Honeywell's member update. In particular, Radim presented Honeywell's approach to wear/tribology data management.

7.2 The process involves progressive data reduction – from initial raw data from the tribometer (GBs of data) to a final set of 'normalized parameters' which are captured in Granta.

7.3 Granta will capture all the examples of tribology and wear data management from this meeting and subsequent data gathering activity, and use this to inform a plan for a standard schema. **[Action – Granta]**

## **8. Lessons Learnt database discussion – Rheinmetall**

8.1 Rheinmetall have implemented both a database and a process (involving Excel templates) for capturing 'Lessons Learnt'. This was a pilot project done on behalf of another group.

8.2 There was a discussion about best practice in capturing this kind of ad-hoc 'tribal' knowledge. A number of members use Sharepoint for this.

8.3 Dan Williams commented that the upcoming Workflow capability in MI Version 10 could help here – it allows the configuration of simple forms with drag-and-drop capability for images, reports, etc. – so that end users do not have to be experts in MI in order to contribute knowledge to the database.

## **9. Return on Investment discussion**

9.1 This discussion was partially postponed to be covered in JLR's member update the next day, as Mark Blagdon has a template spreadsheet for ROI. GM and KSPG also have such templates – it was agreed that Granta would collect all three templates and consolidate them into a single 'best practice for Return on Investment' template which would be shared with all members.

## **10. Member Update – General Motors**

10.1 Denise Massa and Vesna Savic presented GM's Member Update.

10.2 The Vehicle (CAE) and Base Material Approvals portions of the project are complete; next step is the Appearance Approvals database and process, which will be delivered using MI:Workflow in MI Version 10.

10.3 Vesna highlighted the importance of being able to search parameterized multi-value data and tabular attribute types.

The first day of AutoMatIC was concluded with a Consortium Dinner at the Burg Hornberg hotel.

## **Minutes – Friday 21 October, 2016**

### **11. Member Update – JLR**

11.1 Mark Blagdon presented JLR's Member Update. He began with an overview of the scope of the data management project and the various datasets that have been collected.

11.2 The subject of exporting unique URLs was raised again. JLR have a solution to this but it would be greatly improved if the links could be version controlled. It was commented that the "Link to" capability in GRANTA MI, which is in the datasheet Tools menu, is not easy to find.

11.3 JLR's 'hub model' for representing materials via a central hub table was discussed. An interesting application of this could be to ask how a property such as modulus varies for the same hub record across various different databases linked to the hub. To do this, improved tools for cross-tabular reporting would be required.

11.4 There was a discussion about Granta apps, such as MI:Explore, which continued into the subsequent Granta Software Update session. A challenge with new apps is installing, configuring and exposing end users to them. JLR have tried a version of Explore hosted by Granta to get around these challenges.

### **12. Granta Software Update**

12.1 Dan Williams and John Parker provided an update on MI Version 10, which will be released in December.

12.2 Version 10 will see greatly improved tools for displaying and comparing functional data in MI:Explore. Members commented that new apps such as Explore and Workflow risk adding more confusion for end users, and are difficult to install and configure. There was a discussion about the relative merits of improving the capabilities of MI:Viewer versus developing new apps using more modern web technologies. Dan Williams commented that Granta has a high priority roadmap action to develop a consistent 'app switching' capability in MI so that end users and IT administrators see the various apps as being part of a consistent whole.

12.3 John Parker presented the new Application Activity report which will be available in Version 10. The report collects usage information from all Granta tools and summarizes it in one place – previously usage had to be estimated using inaccurate data from a variety of logs which were not intended for this purpose. There was a discussion about what data it would be helpful to capture, and about how the logs could assist with both license compliance reporting and more general management reporting on usage.

### **13. Member Update – PSA**

13.1 Remy Bompont presented PSA's member update. Remy was also able to log into PSA's MI installation and provide a live demo of the database.

13.2 PSA have been using MI Version 9 since March 2016. One of the goals of the project was to ensure there was no disruption to the simulation teams, who wanted to work the same way before and after a new system was implemented.

13.3 Integration with Enovia / 3D Experience was discussed. Remy and Mark Blagdon agreed to work together on a best practice approach to achieving this while Granta is still waiting for Dassault Systemes to agree a technology partnership. **[Action: PSA, JLR]**

13.4 PSA have historically not used IMDS for supply chain substance declarations; however Remy commented that PSA are going to start using it soon.

13.5 Remy raised various challenges with MI, including the complexity of data importers, and performance challenges when running a report on a large dataset (40,000 records).

13.6 There was a discussion around external supplier access to MI, and how both access control and the supplier interaction workflows should be managed.

#### **14. Additive Manufacturing discussion**

14.1 Najib Baig provided a demonstration of Granta's Additive Manufacturing solution. The demo was well received. Najib will follow up directly with members to arrange more detailed individual meetings. **[Action: Granta]**

#### **15. Technical Session – Workflow**

15.1 Dan Williams provided a demonstration of the upcoming MI:Workflow capability in MI10.

15.2 The demo was well received. Some concerns noted by members included (a) the 'app-switching' challenge already raised earlier, and (b) licensing implications. An example of the latter would occur at John Deere, where any user in the company is allowed to initiate a workflow to request, say, a material test. Could there be a way to allow any user to initiate a workflow without requiring MI access and access control privileges?

#### **16. Communicating Information to End Users**

16.1 John Parker ran a discussion session on how best to communicate with end users.

16.2 Mark Blagdon commented that JLR send out a survey using Google Forms. This produces graphs and analytics that help him understand usage patterns. JLR seek to make MI a source of knowledge – to do this effectively a number of barriers must be overcome. For example, how can a database help a user understand things like "Where can I find out more about polymers?", or "Why would a plastic's properties be influenced by fibre direction."

16.3 Rheinmetall took the group through a demonstration of their own online survey.

16.4 It was agreed that best practices for: surveying end users; linking or embedding non-numeric data; and making end-user training material available would all be useful. As a first step, Granta



agreed to pool the various survey questions that members had collected, and share them with the group. **[Action: Granta]**

## **17. Wrap Up**

17.1 Members generally agreed that the new agenda format (more time for member updates) was good. Webex participation was a challenge for those on the phone.

17.2 It was proposed to host the next meeting in Germany at GM (Frankfurt) in May. Granta to provide a proposal of dates (must not coincide with PLM World). **[Action: Granta]**

17.3 There was a discussion about whether Granta could provide training alongside the meetings to help with travel justification.

17.4 Mohamad El-Zein offered to host the October 2017 meeting in Moline.

The meeting concluded with a tour of Rheinmetall's piston assembly facilities.