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| **7TH SAWE Canada Chapter Technical Conference** | | **October 04, 2014**  **9:00 AM to 6:00 PM**  **Robert Sutherland Hall**  **Queens University, Kingston, ON** | | |
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| Facilitator: Rod vanDyk |  | Note taker: Kathy Lacroix |  | |
| Timekeeper: Robert Hargrave |  |  |  | |
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| **Agenda** | | | | |
| **TOPIC PRESENTER START TIME** | | | | |
| ***Welcome & Introductions*** | | Rod vanDyk | | 9:00 am |
| Introduction to the SAWE – Is it for you? | | Whidy Kiskunas | | 9:30 am |
| Additive Manufacturing + solidThinking Inspire: Making Lightweight, Low-Volume Designs a Reality (ALTAIR) | | Ujwal Patnaik | | 10:15 am |
| Aircraft Weight Control in a Change Management Environment | | 1. Carmine Gigliotti | | 11:15 am |
| Aircraft Weight Estimation  **LUNCH** | | Robert Hargrave | | 12:15 pm  1:00 pm |
| Weight Analytics – The Next Generation (ALTAIR) | | Charlie Saleh | | 2:00 pm |
| Standard Development Activity – RP for Weight Reporting in the Aviation Industry | | David Stansfield | | 3:00 pm |
| 2017 International Conference Planning – Montreal – Next steps for the Canada Chapter | | Rod vanDyk | | 4:00 pm |
| ***Open Forum – Queens Engineering Society presentations?*** | | Rod van Dyk | | 5:00 pm |
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| **Additional Information** | | | | |
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| Resource persons: Kathy Lacroix |  | | | |
| Special notes:  As a result of today’s discussions, Robert Hargrave will be highlighting potential topics for upcoming monthly meetings. |  | | | |
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**Abstracts**

1. **Is the SAWE for YOU? (W. Kiskunas, UTC Aerospace Systems)**

The Society of Allied Weight Engineers (SAWE) is an international organization whose primary purpose is to promote the recognition of “Mass Properties Engineering” as a specialized branch of engineering. The society is associated with Aerospace, Marine, Land and Allied Industries.

This presentation will address the following questions posed by many students hearing about the SAWE for the first time.

What is Mass Properties Engineering?

Who are Mass Properties Engineers?

What is the SAWE?

How can the SAWE help you?

1. **Additive Manufacturing + solidThinking Inspire: Making Lightweight, Low-Volume Designs a Reality (U. Patnaik, Altair Engineering Canada)**

Additive Layer Manufacturing (ALM) offers manufacturers a revolutionary new way to produce parts and assemblies with complex geometry in low volumes without the traditionally high tooling costs. Like all manufacturing processes though, the ALM process offers designers unique benefits only if they are able to create part geometry that exploits the advantages of ALM. solidThinking Inspire is quickly becoming the tool-of-choice for designers who want to create the most efficient designs possible for ALM production. solidThinking Inspire 2014 offers new capabilities in a format that is easy to learn and works with existing CAD investments to help design structural parts right the first time, reducing costs, development time, material consumption, and product weight.

1. **Aircraft Weight Control in a Change Management Environment (C. Gigliotti, Bombardier Aerospace)**

As an aircraft program reaches the Detailed Design Phase most airframe manufactures start managing engineering changes carefully, particularly in terms of impact to cost, schedule and weight.  Understanding weight growth during this phase can provide valuable and meaningful data to for future programs with regards to improving airplane weight prediction and weight control management. This presentation defines the process and reporting mechanism by which Engineering Design Changes and their associated weight impacts are identified, tracked and incorporated throughout the DDP, Flight Test Program and into the Aircraft Entry into Service phase of the program.

1. **SAWE Aircraft Weight Estimating Course and Participation at the 2014 SAWE International Conference (R. Hargrave, Bombardier Aerospace)**

In May 2014, I attended the SAWE International Conference held in Long Beach California also took the SAWE course training on Aircraft Weight Estimating and the use of SAWE RP-08. In this presentation I will give an overview of the training course and highlight the course papers and committee discussions that I participated while at the conference.

1. **Weight Analytics – The Next Generation ( C. Saleh, Altair Engineering USA)**

Weight Analytics empowers engineers, program managers and executives to make better decisions faster by managing the entire weight and balance process. Weight Analytics is a highly configurable tool, which allows users to perform what-if analysis, compare risks and opportunities for various scenarios, visualize, analyze, and predict weight and balance at any point in time during the entire product lifecycle. Integrated tightly and deeply with existing PLM, ERP,CAD and other systems, Weight Analytics offers the next generation of weight management solutions for complex and extended-enterprise products.

1. **Standard Development Activity – RP for Weight Reporting in the Aviation Industry (D. Stansfield, Bombardier Aerospace)**

During the 71st SAWE Int’l Conference in Germany, Dominik Wacht, Head of the Airbus MP, presented “Mass Properties challenges in the Extended Enterprise environment” during the Airline Affairs breakout session. Robert McIntosh, his Boeing counterpart, expressed that Boeing faced the same challenges. Other OEM and suppliers reps at the meeting also agreed that there were opportunities for improvement in the relationship, especially on data reporting. The diversity of Weight Report templates in use by all parties led to unnecessary workload and often times to confusion.

It was recognized by all a pressing need for standardization and this project was born. It is also a double test case: a) Industry working together to develop STDs through SAWE and b) pursue development as SAWE RP but working under ANSI rules and eventually submit the RP as candidate to become an ANSI STD (SAWE’s first).

1. **2017 International Conference Planning – Montreal – Next Steps (R. vanDyk, Messier-Bugatti-Dowty)**

The SAWE Canada Chapter has recently won the bid to host the International Conference on Mass Properties in 2017. Montreal will be the host site for the first International Conference in Canada. We will be presenting the current status of our planning and will be providing the next steps in ensuring that the conference becomes the new standard of excellence for the SAWE. This will be an opportunity to commit to various roles within the planning organization, and a means to identify all the key milestones that need to be met along the way.

1. **OPEN FORUM OR additional presentations from Queens Engineering Society**