AMMO WG Teleconference Minutes – 9 November 2016

On 9 November, 2016 the Additive Manufacturing Maintenance Operations (AMMO) working group conducted a teleconference. A brief summary of the teleconference follows:

**DLA-AM Parts Selection Tool** – Tom Parks, LMI, gave a presentation on an AM parts selection tool demonstrated at DLA that helps identify “Which Legacy Parts are Additive Manufacturing Candidates?” The tool uses an approach that identifies part attributes required to make informed AM decisions, then examines DLA data for those required part attributes. The determination of amenability of legacy parts to AM production requires detailed knowledge of numerous technical and logistics attributes. The legacy parts AM prescreening tool was tested November 2015 to July 2016 with the following results:

* A wide range of AM variables and paucity of online technical data precludes fully-automated AM decision support process
* Prescreening decision support process to identify “potential AM candidates” is feasible
* DLA R&D initiated follow-on effort (Oct 2016) to refine the AM Pre-screening Tool and identification process for ‘problematic parts’

 **Overview of America Makes Standards Work –** Jim McCabe, ANSI, provided a status update of the America Makes & ANSI Additive Manufacturing Standardization Collaborative (AMSC) to include the AMSC mission to coordinate and accelerate the development of industry-wide additive manufacturing (AM) standards and specifications. Jim also discussed the AMSC Roadmap that will identify published AM standards and specs, and make recommendations for new or revised ones, and also a separate standards landscape spreadsheet which is also in development. He concluded with a timeline update which included circulating the revised roadmap draft for internal review & comment (Oct 6 - 28) and the resumption of bi-weekly WG meetings (Oct 31 – Dec 8) to review comments / make further revisions prior to publishing roadmap version 1.0 in Feb 2017.

 **AM Fleet Casting Update –** Dana Ellis, NCMS presented an NUWC-Keyport “Fleet Casting” project designed to implement a dual technical solution to greatly reduce the cost and lead-time facing commercial foundries: Solidification Analysis tools to evaluate mold design candidates with the goal to greatly reduce the number of mold design iterations, and AM technology in the form of “sand printing equipment” will be used to produce physical sand molds directly from digital CAD data, thus completely eliminating the need to produce costly and complex patterns. Jerry Thiel from the University of Northern Iowa described the UNI Additive Manufacturing Center.

**Business Model Update –** Brett Conner and Ashley Martof, Youngstown State University, described three models that look at how an OEM could transfer TDP to DoD and subsequently charge for the service. The 3 models are:

* OEM sells TDP to government outright, possibly using a NPV
* OEM sells TDP to government on a per use basis
* OEM charges on an annual basis and also charges a data fee for each transaction

YSU is modelling the reoccurring costs, support costs, and non-reoccurring costs. They also pointed out that how the contract is established is a critical component to be considered.

 **Additive Manufacturing Sustainment Advisory Group -** Marilyn Gaska, LMCO:

* Marilyn stated that the group is working on an updated plan for the next AM Business Model event. They expect to know the date and location in time for the AM Town Hall on 5 December.
* The newly added member Caterpillar gave an AM sustainment briefing…no slides were available at this time…more to follow.
* Frederico Sciammarella provided an update on the roadmap value chain, including sustainment
* Jim McCabe provided an update on the AMSC Standards effort.
* Marilyn forwarded the announcement for the Cybersecurity for Advanced Manufacturing 2nd Public Forum which occurred on Tuesday, Nov 15.

**Next Meeting:** - The next AMMO WG call is the AM Town Hall at 8:00-10:00 am (Mtn Time) on Monday, 5 December, at the 2016 DoD Maintenance Symposium in Albuquerque, NM. Steve Morani will serve as the moderator.

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