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Attendance

Members:

Scott Hibbard (Chairman)
VP Technology & Product Management
Bosch-Rexroth – Electric Drives & Controls
Hoffman Estates, Ill.

Randy Gilmore
Vice President & Chief Technical Officer
National Center for Defense Manufacturing & Machining (NCDMM)
Blairsville, Pa.

Russell Reinhart
U.S. National Sales Manager
Dormer Pramet
Elgin, Ill.

Douglas Watts
Chief Technical Officer
MAG Automotive, LP
Sterling Heights, Mich.

Craig Ronald
Director, New Product Development
The Gleason Works
1000 University Avenue
Rochester, NY

AMT STAFF:

Benjamin Moses
Technical Director
AMT
McLean, Va.

GUESTS:

Jamie White
Branch Chief
Army ManTech Aviation Redstone Arsenal
Huntsville, Al
Welcome
Each member introduced themselves. The agenda was reviewed.

Antitrust Statement
Trade associations have long been recognized as serving a valuable, pro-competitive and entirely lawful role in promoting the economic development and consumer welfare of our country. However, serious antitrust problems can arise if a trade association’s activities are not properly conducted. Accordingly, AMT assigns the highest priority to full compliance with both the letter and the spirit of the antitrust laws. It is thus vital that all meetings and activities of the association be conducted in a manner consistent with that policy.

TIC Mission
The Technology Issues Committee acts as the voice of the membership by providing input to the association on member needs in support of AMT’s products and services. The committee works with staff to develop, promote and implement programs and services relating to technology issues facing AMT members. The committee also assists AMT in meeting the objectives of the Board of Directors’ Strategic Plan.

America Makes Tour
A tour was provided by Rob Gorham, Executive Director. The facility consists of local equipment for development and staff for project management.

Technology developments are grouped into design, process, material, value chain and AM genome. Project portfolio https://www.americamakes.us/our_work/project-portfolio/

- The Design focus area of the Roadmap is aimed at driving technological advancements in new and novel non-proprietary design methods and tools required to enable a culture change and break the cycle of designing additive manufacturing parts like cast or machined parts.
- The Process focus area of the Roadmap is aimed at driving technological advancements that enable faster, more accurate, and higher detail resolution additive manufacturing machines with larger build volumes and improved “as-built” part quality.
- The Material focus area of the Roadmap is aimed at building the body of knowledge for benchmark additive manufacturing property characterization data and eliminating variability in “as-built” material properties.
• The **Value Chain** focus area of the Roadmap is aimed at driving technological advancements that enable step change improvements in end-to-end value chain cost and time to market for additive manufacturing produced products.

• The **Additive Manufacturing Genome** focus area of the Roadmap is aimed at accelerating technological advancements that enable step change improvements in the time and cost required to design, develop, and qualify new materials for additive manufacturing.

• [https://www.americamakes.us/our_work/technology-roadmap/](https://www.americamakes.us/our_work/technology-roadmap/)

America Makes is partnering with the Youngstown Business Incubator ([http://ybi.org/advanced-manufacturing/](http://ybi.org/advanced-manufacturing/)). Startup companies will use this incubator.

Workforce development and education is another area of focus. The roadmap for workforce development and education consists of knowledge and awareness, competency and skills, industry experience, individual advancement, and scaling and diffusion.

• **Knowledge and awareness** - To increase the 3D Printing and additive manufacturing literacy of current users, students at all levels, academics, government/policy stakeholders, the general public, and companies potentially interested in adopting the technology by increasing their familiarity with the technology, its value, and its benefits.

• **Competency and Skills** - To increase the proficiency of current users, students at all levels, academics, the general public, and companies potentially interested in adopting the technology by using 3D printing and additive manufacturing technologies as a creative or problem-solving tool.

• **Industry Experience** - To strengthen and apply additive manufacturing knowledge and skills of students, inventors/entrepreneurs, product designers, and industry participants, by solving a variety of real-world problems.

• **Individual Advancement** - To ensure and grow a stable pipeline of talent by developing tools that link students and industry participants to employer needs.

• **Scaling and Diffusion** - To help drive the rate and scale of adoption of 3D printing and additive manufacturing technologies across the United States by driving consistency and integration of knowledge, skills, and experience and developing efficient channels of distribution.

• [https://www.americamakes.us/our_work/workforce-roadmap/](https://www.americamakes.us/our_work/workforce-roadmap/)

• [https://www.americamakes.us/](https://www.americamakes.us/)

**Academic Research Network**

Chris Barrett from Youngstown State University presented current and future research projects. These projects include bead orientation and microstructures in Inconel 718 and improving supports for aluminum powder. Future projects include new powders and workforce development for additive manufacturing machinist.
Minutes Approval
The May 17, 2017, minutes were reviewed. The MFG USA summary action was open at the time of this meeting. Mr. Gilmore motioned approval with correction. Mr. Watts seconded the motion. The minutes were approved with correction.

Data Science Working Group
A proposal was put forward to start a Data Science working group as part of the TIC. See the attached presentation for details.

Tech Trends
Trends in research was reviewed. See the presentation for details. The committee observed significant effort in the area of data. This is supporting information to create the Data Science working group.

2018 Meetings
Dates for 2018 are:
- March 6 – Miami, Fla.
- June 13 – Webinar
- October 24 – Pittsburgh, Pa.

Actions
- Develop Data Science Working Group outline. (Mr. Moses)
- Recruit members for working group. (Mr. Moses)

Conclude and Adjourn
The meeting adjourned at 2:00.

Respectfully submitted,

Timothy J. Shinbara, Jr.
Staff Liaison