

From: Eric Stief [mailto:eric.stief@autoharvest.org]
Sent: Wednesday, August 24, 2011 2:00 PM
To: amtech
Subject: AMTech Comments

Please see attached response to the AMTech Request for Information.

I would be honored to discuss in more detail.

At the AutoHarvest Foundation, we have so far brought together a consortium of over 60 stakeholders throughout the Automotive ecosystem in order to bolster collaboration and enable the transfer and adoption of advanced manufacturing technology.

Regards-

Eric Stief
Senior Vice President
AutoHarvest Foundation
Collaborate, Innovate and Win
www.autoharvest.org

TechTown
440 Burroughs, Mail Box 137
Detroit, MI 48202
248.797.7379
eric.stief@autoharvest.org



Collaborate, Innovate and Win

Wednesday, August 24, 2011

To: National Institute of Standards and Technology (NIST)

AMTechRFC@nist.gov

Re: Department of Commerce, Request for Information, Docket # 110620345-1331-02, Request for Information on How to Structure Proposed New Program: Advanced Manufacturing Technology Consortia (AMTech)

To whom it may concern:

At AutoHarvest Foundation, we are eager to learn more and contribute our thoughts regarding the AMTech proposed new program. As such, per the Request for Information cited above, I am pleased to submit comments on the topics listed in the Request for Information here. My comments are attached here.

I am available to discuss this further if it would be of assistance.

I look forward to learning more about AMTech as it is fully developed.

Regards-

A handwritten signature in blue ink, appearing to read "Eric Stief", written over a light blue horizontal line.

Eric Stief

Eric Stief, Senior Vice President 248.797.7379 eric.stief@autoharvest.org

440 Burroughs Avenue, Box 137

Detroit, MI 48202

330 East Liberty
Lower Level
Ann Arbor, MI 48104

1. Should AMTech consortia focus on developments within a single existing or prospective industry, or should its focus be on broader system developments that must be supplied by multiple industries?

Consortia should have underlying industry focus, so as to ensure that the effort is relevant to the parties pulled together. If too broad, there will be no depth to the effort and for-profit partners will lose interest quickly. This does not mean that the effort, if proper industry focus is selected, will not have broad multi-industry impact long term. For example, a focus on supporting an industry consortium focused in the automotive space will develop and transfer technologies in a variety of spaces – such as advanced materials, telematics, alternative energy and nanotechnology. This will result in technology transfer in multiple industries, such as telecom, aerospace and medical device. Furthermore, selection of a high volume industry for consortia initially (such as automotive) will bode well for technology adoption in other industries, since technologies will be proven viable and economical by automotive's tough testing standards and large volume production.

Furthermore, to the extent possible, industry consortia should be selected that have geographic focus so that it will be easier to promote in person and social interactions.

2. Who should be eligible to participate as a member of an AMTech consortium? For example, U.S. companies. i.e., large, medium, and/or small; institutions of higher education; Federal agencies; state, local, and tribal governments; and non-profit organizations?

Consortia should be REQUIRED to bring in the entire ecosystem, spanning the innovation life cycle, for the best technology development. Critical segments include:

- Entire industry manufacturing value chain (OEMs, OEM suppliers, sub-suppliers and early ventures/startups)
- Trade organizations for the industry
- Entrepreneurial segment, including industry sector relevant entrepreneur networks, seed and venture capital and business incubation programs
- Academic researchers including universities and national labs
- Regional economic development agencies
- Member organizations, such as industry sector relevant professional societies

Only with such an ecosystem, are all parties with vested interest brought to the effort.

3. Should AMTech place restrictions on or limit consortium membership?

Consortia should have regional emphasis, or at least a regional critical mass, so as to allow the ecosystem to interface easily.

Consortia organizers, the member organization that pulls together each consortium, should be non-profit organizations so as to ensure that all members feel that they are not being taken advantage of.

Furthermore, management for the consortium should be staffed by experienced personnel with both for-profit and academic research institution experience to allow the team to understand and resolve collaboration roadblock issues from all points of view quickly and deeply.

4. Who should be eligible to receive research funding from an AMTech consortium? For example, U.S. companies i.e., large, medium, and/or small; institutions of higher education; Federal agencies; state, local, and tribal governments; and non-profit organizations?

Research funding for specific scientific research projects should clearly demonstrate that it is aimed at solving one or more technology challenges directly posed by a consortium member from the for-profit members. Research dollars should be spent addressing industry needs, not exploratory academic interest. This will increase technology adoption and research productivity.

5. What criteria should be used in evaluating proposals for AMTech funding?

Criteria should include:

- Clear demonstration of industry need as supported by for-profit members of the industry consortium
- Personnel expertise in the area of study
- Breadth of collaboration

6. What types of activities are suitable for consortia funding?

To support the development of a consortium, in addition to planning grants, general support to bring new level of consortium member interface – such as support for web-based collaboration tools, seed fund programs and member events would be useful.

To support specific research, support should be directed to research which is one step earlier than that that typically funded by the for-profit members of the consortium, but of clear need to for-profit long term goals. Proof of concept research that brings the early stage technology to a point that industry and venture investors can assess viability via a working prototype will promote collaborations and technology transfer.

7. Should conditions be placed on research awards to ensure funded activities are directed toward assisting manufacturing in the U.S.?

Yes, funding should support industries of keen interest to the American taxpayer, which create wealth, improve standard of living, create jobs and revitalize distressed regions. Furthermore, consortia should be selected for support that are also critical to other government programs – for example 1) Homeland

Security; 2) Department of Defense, and 3) Department of Energy. In addition, the consortia selected should also be synergistic with recent US government investment, for example supportive of the automotive industry to both support a key industry here in the US, but also to support the recent US bailout investments and raise the potential of payoff on those investments to the taxpayers.

8. What are ways to facilitate the involvement of small businesses in AMTech consortia?

Ensuring that the full for-profit value chain is engaged will help. For example, OEMs and major suppliers should be participants, so that small business can learn of the end goal needs from the OEMs, but also have a way to tap in to the challenge by interfacing with the tier suppliers who are seeking earlier stage technologies. OEMs do not have a way to interface with small companies easily, but the tier suppliers do. Furthermore, venture capital sources should be key members, so that they can invest in the small businesses once the opportunities are identified. Such connections will significantly reduce the time to market for new innovations.

9. What are best practices for facilitating the widest dissemination and adoption of knowledge and technology through consortia?

They should focus on a specific industry to make collaborations understandable and immediately relevant.

Participation should be throughout the ecosystem as detailed in answer to question #2 above.

Consortia must have high level buy-in and commitment from the leadership from all ecosystem members, but MOST critically, from the top of the value chain in the for profit consortia membership (the "OEMs"). These members are the end buyers for the innovation any consortium seeks to develop and all other members of the consortium will eventually need or wish to work with the OEMs. Successful consortia will have clear visibility into the OEM decision makers, which will attract meaningful participation throughout the ecosystem and eventual market relevance / wealth creation for consortia led activities.

The ability for consortium members to meaningfully transact opportunities via participation in the consortium via template agreement and meaningful communication nodes will demonstrate that participation will save them time and makes them more effective.

10. While it is expected that the research efforts of AMTech consortia (including participants from the Federal, academic, and private industry sectors) will take place largely at the pre-competitive stage in the development of technologies, the generation of intellectual property is possible, and even likely. What types of intellectual property arrangements would promote active engagement of industry in consortia that include the funding of university-based research and ensure that consortia efforts are realized by U.S. manufacturers?

For-profit members will want standardized research and confidentiality agreements agreed to by the member base in advance to allow for timely execution.

For-profit co-supporters of any research effort will require IP rights that are meaningful to their industry business case. If a sole collaborator, this might mean a set number of years for exclusivity. If there is a consortium for the specific intellectual property, the consortium will need to have template agreements to address this sort of reality up front. This could translate to shared exclusivity, creation of a co-owned spinout venture or many other options, such as shared IP as seen in membership organizations such as the Bluetooth Consortium.

11. Would planning grants provide sufficient incentive for industry to develop roadmaps and initiate the formation of consortia? If not, what other incentives should be considered?

Planning grants are not sufficient but are a good start.

For example, any consortium supported should also be able to receive funds to develop IT infrastructure, which is expensive and not fundable by other sources. Such IT solutions should allow in-depth collaboration made possible with 21st century web-based tools between consortium members. Such presence should provide enhanced collaboration tools – such as public and private collaboration forums, detailed explanations of capabilities and interests posted for search and review by other members, as well as social media tools (user credentialing, wikis, blogs, comment sections, member listings, etc.), the potential for web demos, webinar presentations and other such features.

12. Should each member of an AMTech consortium be required to provide cost sharing? If so, what percentage of cost sharing should be provided?

No

13. What criteria should be used in evaluating research proposals submitted to an AMTech consortium?

Criteria should include:

- Clearly stated industry relevance (need stated for innovation by for profits)
- Ability of research funding to get to a go/no go decision for industry and/or investors for the technology
- Technology feasibility, team expertise
- Uniqueness of solution – are other solutions not available for this need?

14. What management models are best suited for industry-led consortia?

The consortia should be led by non-profit entity to ensure members that there are no favorites, but which has a strong, advisory council to take direction from which is filled with high level leadership from membership – for-profits and academic research labs.

15. Should the evaluation criteria include the assessment of leadership and managerial skills?

New consortiums should be led by management that has in depth professional experience with for-profit, academic research and entrepreneurial programs and efforts. Management must understand the issues from all points of view and derive the best ways to work with the entire ecosystem.

16. Should limitations be placed on the duration of consortia?

No, however money should be invested in consortia which demonstrate high level of engagement throughout the ecosystem. If consortia are not able to demonstrate and maintain this they should lose support.

17. How should an AMTech consortium's performance and impact be evaluated? What are appropriate measures of success?

Metrics such as these could be tracked:

- Research collaborations established between consortium members
- Technology and research needs identified and communicated to the consortium membership
- Technology and research abilities redeployed or licensed via interfaces with the consortium members
- New startups enabled via consortium member participation
- Grassroots innovators (retirees, students, independent inventors) identified and brought into the consortium to participate

18. What are the problems of measuring real-time performance of individual research awards issued by an industry-led consortium? What are appropriate measures of success?

It is difficult to measure such collaborations because it is an added level of reporting effort that is difficult to find time for and broadly disseminate.

A viable solution would be to have the consortium's on-line toolkit discussed in #11 above, to streamline public and private communications pulled from other databases and or discussion groups already being used by the members. This would allow for the reporting aspect to not be a duplicative effort, and would allow for proper communication of private and public goals and achievements via a 24 hr. accessible on-line tool.

19. How should the NIST AMTech program be evaluated?

The same criteria outlined in question #17 are reasonable criteria. Furthermore, the effectiveness of R&D grants should be measured by whether they perform the work as detailed.

20. What are lessons learned from other successful and unsuccessful industry-led consortia?

It is critical that the for-profit sector be behind any successful consortia. They prove/validate that there is money to be made in the area of focus, thereby attracting entrepreneurs and seed capital. Furthermore, it is critical to have the for-profit sector involved so as to insure that the academic research inspired by the consortium is of interest and relevant to the for-profit participants. The danger of having academic research in pursuit of academic interest without being measured against industry need or long term potential, would make a consortium fall apart – for-profit industry will lose interest, entrepreneurs will realize that the academics are not focused on delivering research that is geared toward commercial opportunities and investors will lose interest because there will be no chance of viable investments with near term exit opportunities.

21. How can AMTech do the most with available resources? Are there approaches that will best leverage the Federal investment?

The AMTech funding should be directed to supporting programs that already have clear interest from across the ecosystem as detailed in in targeted and strategic industry sectors as detailed in #7 above. The for profit involvement must be deep and high level as detailed in #9, and to be saleable and viral, and potentially portable to other industries long term, the IT developed with AMTech support to service the consortium should be robust and up to date as detailed in #11 above.

22. How should AMTech interact with other Federal programs or agencies?

The AMTech program should seek to award support to consortia which can themselves demonstrate a deep working relationship with many federal agencies and consortia which can bring programs supported by other agencies into the consortium's effort and thereby achieve a win/win between federal programs.

There are many synergistic federal efforts, regional efforts, state efforts and local efforts that must be embraced by AMTech and utilized vs. reinvented and competed with.

23. What role can AMTech play in developing, leading, or leveraging consortia involving other Federal agencies?

By supporting consortia that have meaningful understandings of multiple programs and interfaces with such programs, AMTech can help insure that the best of all programs will be leveraged and exploited to bring positive results.

Other programs of particular interest include EDA programs, DoD programs and DoE programs which are geared towards the support of regional research clusters, support of entrepreneurial ecosystems, and support for bringing federal labs into more direct interface with their for-profit counterparts.