

RE: Trip Report - SPIE Annual Meeting (Aug 3-4, 2010)

Date: Aug 4, 2010

TO: nmOptics Board of Directors

File

FROM: Jim McNally

Purpose: To attend and participate in the SPIE Annual meeting including meetings in the Exhibit Hall, and the SPIE Engineering, Science & Technology Policy (ESTeP) Committee.

(1) I represented nmOptics on the SPIE Engineering, Science & Technology Policy (ESTeP) Committee. The charter of the ESTeP Committee is to position SPIE as a worldwide information resource in optical science and engineering for technology policy development and promote the interests of engineers, scientists, and other professionals working in the field. Specific responsibilities include: promote optical science and engineering communities issues at all levels of policy decision-making, support Society activities aimed at developing government-industry-university interactions, provide current information on new initiatives and changes in both national and international governmental policies, and recommend specific actions the Society should take in the area of technology policy, including advocacy activities.

The ESTeP policy priorities are:

- The economic imperative of photonics
- The need for continuity and long-term support in science and technology R&D funding
- Science, Technology, Engineering, and Math (STEM) Education

The key topics addressed at the meeting included:

- Continued strong activities to advocate and support budgets for all science and engineering activities and science education from federal agencies.
- SPIE has committed to continue to take a position affirming the SBIR program and to support robust funding for the program.
- ITAR discussions (continues as an area of major concern to SPIE)
 - Remains an issue of significant concern as it is inhibiting companies from market access
 - Delays, delays, delays
 - Confusion over clarity in regulations
 - The complexities caused by the Department of Commerce, the Department of Defense, and the State Department all involved in regulating satellites and weapons – an item that SPIE is advocating for a reduction in the regulatory overhead.
 - Some progress is being made as the Administration has stated that there will be one list to reduce this complexity. A multi-agency working group has been formed.
- The major areas SPIE is advocating at federal level this year continue to be:
 - LONG-TERM FEDERAL FUNDING FOR SCIENCE & TECHNOLOGY R&D
 - SPIE has urged Congress to maintain a “doubling” trajectory for science agencies for the next ten years including consistent funding of the SBIR and STTR programs. This requires sustained support for annual increases in R&D funding of 5%- 6% per year.
 - THE ECONOMIC IMPERATIVE OF PHOTONICS IN A HIGH-TECH ECONOMY

- Specifically, the U.S. needs a coherent, consistent government R&D policy and better economic impact data collection that supports the development of emerging industries like photonics to keep jobs in the U.S.
 - MATH & SCIENCE EDUCATION
 - SPIE has urged Congress to support: (1) \$450 million in funding for the FY10 Math and Science Partnership program at the Department of Education; (2) A \$140.5 million increase for the National Science Foundation's Education and Human Resources Directorate as planned under the *America COMPETES Act of 2007*; (3) An increase of 8% to approximately \$5 million for the DOE Office of Science.
- We received a report from SPIE's Washington Representative (Bob Boege) on the latest developments in DC related to budget issues and policy initiatives of importance to the SPIE agenda. Basic takeaway is that chaos reigns with very little hope for FY11 appropriations bills (other than Defense); DoD will continue to support SBIR/STTR funding in FY11 despite an overall paralysis in Congress regarding re-authorizing the program; there will likely be CR's for other agencies.
- I presented my report from the SPIE Task Force that I chaired that developed recommendations for an update to the 1998 National Research Council report. SPIE is working with the National Academies and a coalition of US photonics organizations to update the 1998 National Research Council report, "Harnessing Light." The "Harnessing Light II: Capitalizing on Optical Science Trends and Challenges for Future Research" study has 5 key goals:
 - Review updates in the state of the science that have taken place since publication of the National Research Council report, Harnessing Light;
 - Identify the technological opportunities that have arisen from recent advances in and potential applications of optical science and engineering;
 - Assess the current state of optical science and engineering in the United States and abroad, including trends in private and public research, market needs, examples of translating progress in photonics innovation into competitiveness advantage (including activities by small businesses), workforce needs, manufacturing infrastructure, and the impact of photonics on the national economy;
 - Prioritize a set of research grand-challenge questions to fill identified technological gaps in pursuit of national needs and national competitiveness;
 - Recommend actions for the development and maintenance of global leadership in the photonics driven industry -- including both near-term and long-range goals, likely participants, and responsible agents of change.

The Task Force purpose was to draft a white paper providing the National Academies Committee with industry input on the key data points, economic impacts, and the optics/photonics market taxonomy that should be included in the report. The Task Force developed recommendations for the US economic impact based on numerous markets and products produced in US, and a review of recent studies from other nations to address economic impact in relation to the global market. Additionally, SPIE continues to advocate for the funding (~\$850k) from multiple agencies to perform the "Harnessing Light II" study (\$560k already committed).

- I also presented a summary report on the status of the DoD **Rapid Innovations Program** (a new program that could be of significant benefit to small businesses). The program is in the House version of the National Defense Authorization Act for Fiscal Year 2011 that was passed by the House Armed Services Committee. Basically states: The Secretary of Defense shall establish a program to accelerate the fielding of innovative technologies developed using Department of Defense research funding and the commercialization of such technologies. (It is targeted at providing additional funding for going "beyond Phase II" and improving the process for

transitioning SBIR developments.) The funding amount identified in the bill was not to exceed \$500M per year through 2015. This bill has passed the House by a vote of 229 to 186, and is under review by the Senate Armed Services Committee. I proposed that SPIE sign out a letter of support to the Chairman and Ranking Minority Member on the Senate Committee supporting this section of the Defense Authorization Bill. The letter will be drafted and reviewed by the SPIE Executive Leadership Team in August and, if approved, sent by the time Congress returns from recess.

(2) Industry Exhibit Hall

- Of limited interest at this show due to low industry participation.

Respectfully,

J. McNally
Chairman
nmOptics