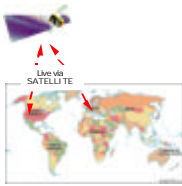


Trans-Atlantic Nanotechnology Forum for Earth and Space Applications



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4th ESTEC Round Table
Micro- and Nanotechnology for Space Applications
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Current Situation & Problem Statement

- Burgeoning of nanotechnology RTD initiatives, technology transfer activities and business opportunities in North America and Europe
- Lack of and need for actively identifying synergies, complementary fields of interest and strategic alliances between American and European nanotechnology initiatives at basic and applied research level
- Not enough value-added information available for strategic decision and policy making towards fostering collaboration between the continents



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Nanotechnology in Europe

6th European Framework Program for RTD 2002-2006 (FP6):
ERA, 700 Mio. Euros earmarked for nanotechnology

European Science Foundation (ESF):
Infrastructure and fundamental research projects

European NanoBusiness Association (ENA):
Network with regional hubs, focus on product development

ESA-ESTEC:
Micro- and nanosystems for space applications

PHANTOMS, NEXUS, EUSPEN:
Networks for Nanoelectronics, Microsystems and Nanotechnology

Nanoforum:
Information platform (documents, events, courses etc.)

National and regional schemes/activities:
funding, networks, centers, surveys, Universities, RTD centers, companies



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Nanotechnology in N. America: USA

National Nanotechnology Initiative (NNI, \$679m in FY 2003)

National Nanotechnology Research & Development Act (Bill for
spending \$2.4billion over next 3 years; approved by US House of
Representatives; pending approval by Senate.)

Major Players:

Federal Agencies: NSF, DoD, DoE, NIH, NIST, NASA, EPA, NIBIB

Universities & Nanotechnology Centers: MIT, Harvard, Yale, Northwestern,
Princeton, Rice, etc.; NASA has funded 5 universities for nanotech R&D.
There are 40 separate nano-initiatives in 21 states.

Companies (big, SMEs, start-ups, spin-offs)



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Nanotechnology in N. America: Canada

National Nanotechnology Initiative: National Research Council (NRC)

Government Research: (Partial list of organizations) INMS, IMS, SIMS, ICPET, IMI, NIN, DND

National Institute of Nanotechnology (NINT): \$120 m for NINT at the University of Alberta

Universities: McGill, Queen's, Concordia, Dalhousie, Laval, etc.;
Universities of Alberta, British Columbia, Calgary, Toronto, Montreal etc.



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Cooperation between Europe & N. America

EU (EC) – US (NSF)

Nanotechnology: based on "Materials" agreement

4th Joint EC - NSF Workshop on "Nanotechnology Tools and Instruments for Research and Manufacturing", Grenoble, France (Jun 2002)

3rd Joint EC - NSF Workshop on "Nanotechnology Revolutionary Opportunities & Societal Implications", Lecce, Italy (Feb 2002)

2nd Joint EC - NSF Workshop on "Nanomanufacturing and Processing", San Juan, Puerto Rico (Jan 2002)

1st Joint EC - NSF Workshop on "Nanotechnologies", Toulouse, France (Oct 2001)

World Nano-Economic Congress (WNEC) - North America-Europe-Asia, Washington DC, USA (Sep 2003)



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Forum Objectives

- Provide a live platform for exchange of information, opinions and questions emerging in the nanotechnology landscape on both continents
- Create greater transparency, identify synergies, open avenues for collaboration
- Facilitate collaboration between North America and Europe
- Showcase and foster both earth and space applications issued from nanotechnology developments
- Identify and discuss legal instruments required for strategically promoting nanotechnology for earth and space applications
- Educate government policy makers about the need to promote cooperation



→ Proposal for a high-level
Trans-Atlantic Nanotechnology Forum

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Target Audience of the Forum

- Researchers
- Program and Network Managers
- Corporate Managers
- Policy Makers
- Entrepreneurs
- Investors
- Technology Transfer Experts
- Licensing Executives
- Others



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Forum Participants

- Moderator
The moderator's role will be key to ensure that the panel discussion is lively and engaging - we should consider going in for internationally renowned technology savvy television anchors or moderators
- Panelists
Invited participants including eminent researchers, companies involved in manufacture and production, investors, policy makers and technology transfer experts
- Audience
As outlined in the 'Target Audience' slide. They will listen in on the moderated panel discussion and ask questions



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Forum Overview - 1

- Annual high-level Forum; First Forum in Spring 2004
- Forum envisioned to have two locations (nodes): one in the United States and one in Europe; Nodes will be connected live via satellite facilitating real-time discussion and debate between the participants
- Forum will commence with state-of-the-art review covering nanotechnology areas for earth and space applications
- Followed by a moderated discussion between invited panelists on both sides of the Atlantic
- Forum could begin or end with a Tour of the local nanotech facilities, networking sessions and dinner/lunch.



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Forum Overview - 2

- Forum will be organized in a conference space; the moderator and panelists will be seated on the podium; the audience will be seated in the hall
- Live discussion attended by an in-situ audience; access by external audience via live broadcasts over the web, television and radio
- Panelists and audience will include a balanced mix of nanotechnology researchers, entrepreneurs, investors, policy makers, IPR specialists and technology transfer experts



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Forum Overview - 3

- Nano Researchers & Entrepreneurs can share the latest developments in nanotechnology
- Investors will have an opportunity to ask tough questions as to which nanotechnology research areas will translate into business opportunities in the near and medium term
- Policy Makers will share information about relevant legislature to promote nanotechnology
- Technology Transfer Experts and Licensing Executives will talk about commercialization, intellectual property, and licensing



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Forum Location

The Forum is envisioned to have 2 satellite locations:

- Silicon Valley (USA)
- Vienna (Austria)

Alternative locations in Europe*:

- a. Delft, The Netherlands
- b. Paris, France

* *Alternative locations could include the ESA establishments*



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Forum Support

Satellite Link

- * Plan to request ESA and NASA to provide free satellite time
- * Technical support from Austria (Graz) and other countries

Conference Space

Plan to request ESA, NASA, universities to provide free conference space for the 1st Forum

Sponsors

Invite government organizations, private industry, and foundations to sponsor the Forum

Registration Fees

Participants will have to pay registration fees to attend the Forum



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Forum Follow-up Action Items - 1

White Paper

Submit a white paper summarizing the Forum discussions and recommendations to the European Commission and the US Congress

Online IPR and Policy Resource

A place where interested parties can find answers to questions regarding Intellectual Property Rights (IPR) issues and government policy issues relating to Transatlantic cooperation in nanotechnology research, licensing, and business

Online Portfolio for Technology Transfer

A compilation of technologies developed at universities and other organizations that are available for licensing in Europe and North America



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Forum Follow-up Action Items - 2

Electronic Investor Newsletter

Provide a wrap up of major RTD events, what patents were secured, what companies were hatched, what inventions were announced, what licensing deals were made, what investments were made.

Will bring evaluation of the events, trends, and materials that are driving creative growth in the nanotechnology business

Each issue could include: RTD Analyses, Technology Trends and SWOT Analyses, Venture Briefings etc.



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Future

Trans-Atlantic-Pacific Nanotechnology Forum

The Trans-Atlantic Nanotechnology Forum for Earth and Space Applications is envisioned to be a recurring annual event that will grow to possibly include Asia and Australia, thus making it a highly efficient Trans-Atlantic-Pacific exchange platform.

What will take place between two events / forums ?

Design and organization of upcoming Forum
Follow-ups of agreements
Identification of bi-/multi cooperation potentials



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For the Audience

- Do you know of any other forums or events that are similar to the Forum proposed in this presentation?
- We are looking for any available information about the true level and scope of current collaboration (if any) between Europe and North America in nanotechnology.
- If you or your organization would like to support this Forum financially, logistically or in any other way, please contact us!

Contact

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