SUMMARY:

- Exelis: Companies are interested in ways to improve efficiencies and reduce costs
- Moondog: Looking for where the new technology is
- Lasermax – Interested in DOD – pragmatic approach – there is always a struggle with sources material for military products because they are working in a space where price per unit is more expensive and costs tend to be high for emerging technologies.
  - If there is a large investment needed for a particular material or technology and it is too large for the commercial size to justify, DoD needs to step in and invest in it.
  - The DoD understands that there is this need and lack of funding that they should address and that is what the NNMI is if the US military is to stay ahead.
- GE – Geo is involved in other IMI and if integrated manufacturing piece could be included, this would be extremely interesting
- Ed White: giving suite of materials that allow for more effective participation is key as well as being able to measure better and more effectively when it comes to metrology.
- Today there are existing programes where 50% of the funding is from the government and the rest is corporate funding. Most of the programs selected by sponsors is phenomenal and has accelerated the technologies.
- Design for manufacturability is an enticing reason to participate in IMI – If we can be close to the businesses that are always innovating, it is beneficial for us. Some more reasons include that:
  - Time to market gets shorter
  - Takes out expense in R&D in giving the customer product that takes a shorter time to market
  - Being exposed to the technology and working with the institutions when it is first coming out is beneficial
- When funding is released, the funding has to compliment the workforce training, competitiveness in the US and how the SMEs will actually function in the model.
- Corning Tropel – believe there is less and less funding coming into these isolating operations.
  - When there are efforts in which various centers are collaborating, there are more funds available and it is easy how one may be more successful by collaborating then by trying to

to replicate existing technologies.
    - There is tremendous power in being able to convince these groups to collaborate
- OIDA Tom Hausken:
    - Important to remember what the value proposition of the NNMI
    - The US is really strong in photonics – trying to fix everything through the NNMI is not a good approach
    - Franhaufer approach may not be the best approach – industry only puts 1/3 of the money that goes into it.
        - Very different, different culture – also have not heard about SEMATECH – it's a very old different model
    - NNMI is going to have to stand on its on, going to have to win matching money

Open Discussion of a National Institute for Optics and Photonics Manufacturing Technology Development

NTRP

National Technology Roadmap for Photonics

NIST

National Institute of Standards and Technology

U.S. Department of Commerce

Companies Represented

Companies

- LaserMax
- GE Global Research
- Rochester Precision Optics
- Inrad
- IQE
- Exelis
- IoS
- Moondog Labs
- Former Sr. Executives
  - Corning
  - Kodak

Types of Companies

- Small, Medium, and Large Companies
- Serving Diverse Markets
  - Defense
  - Consumer
  - Commercial
  - Biomedical
- Built around different photonics technologies
  - Lasers
  - Optics
  - Materials
  - Imaging
  - Displays