Working With ATP --
-- Joint Venture

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PCAD Joint Venture Team

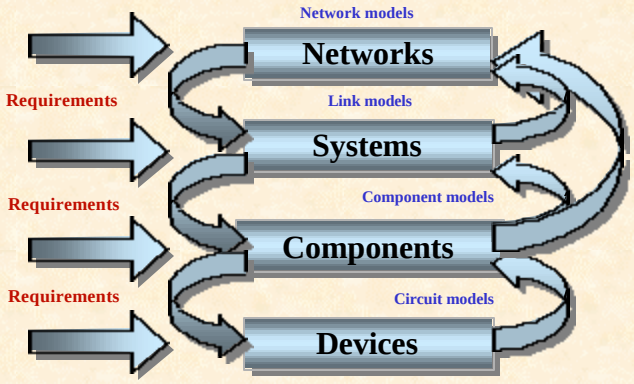
PCAD Technical Contacts

Consortium Director -	**Dr. Al Mondelli (SAIC)**
Consortium Technical Lead -	**Dr. Matt Goodman (Telcordia Technologies)**

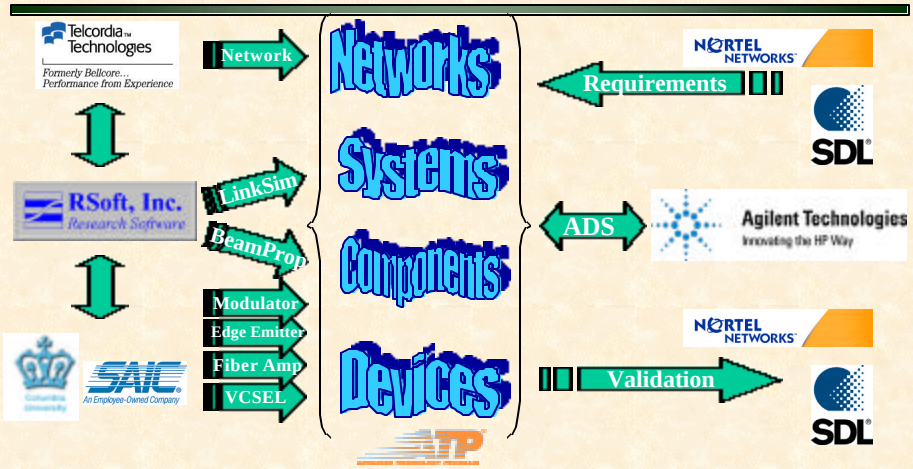
Agilent Technologies	**Dr. Kelley Wood**
Columbia University	**Professor Richard Osgood**
Nortel Networks	**Dr. Gary Mak**
RSoft Inc.	**Dr. Rob Scarmozzino**
SAIC	**Dr. Spilios Riyopoulos**
SDL	**Dr. Mehrdad Ziari**
Telcordia Technologies	**Dr. Janet Jackel**

PCAD Joint Venture Team

Multi-Level Photonics-CAD (PCAD) Framework



PCAD Activities



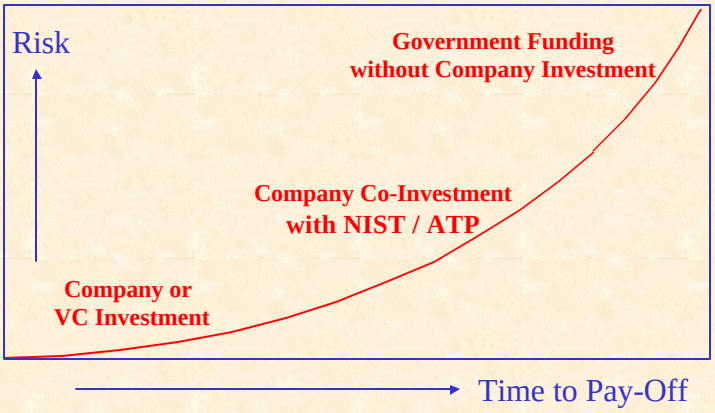
Why PCAD?

- **Multi-Level Photonics Framework**
  - Design automation for photonics
  - Accelerate photonics component and systems development
    - ⇨ analogous to ECAD stimulus on electronics development
  - Links to ECAD
- **Benefits for the Photonics Industry**
  - Shortened photonics design cycle time
  - Reduced product time-to-market
  - Improved reliability
  - Lower cost

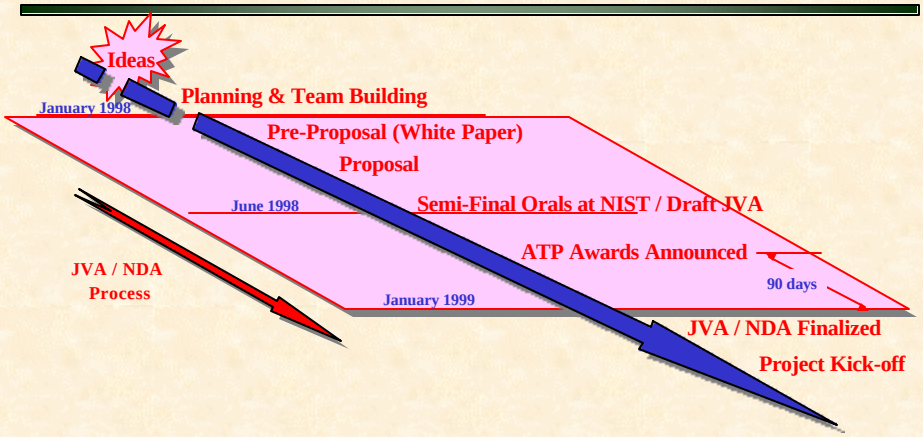
Why NIST ATP?

- **NIST ATP provides leverage for internal R&D investments**
  - NIST shares company costs 1:1 (including equipment)
  - Companies retain all Intellectual Property and equipment
  - NIST shares the risk to enable high-risk research with large pay-off
- **NIST ATP provides a mechanism for pre-commercial collaborations**
  - Facilitates collaborations that would otherwise be prevented by eventual commercial competition
  - Enables large teams to assemble and address large problems

ATP vs. Other Funding



Timeline



Team Building… Issues for Large Teams

- **Benefit of a Large Team ⇨ Big Impact**
  - Provides interdisciplinary expertise
  - Brings together different company perspectives
    - ⇨ Enables important problems to be attacked
- **Large Teams Have Special Issues**
  - Team Stability -- more than 8 partners is too many!
  - Competition between partners
  - Management Risk
    - ⇨ NIST perceives large teams as a program risk
    - ⇨ Need focus on both Management and Technical Issues

Cost Sharing

- **Required by NIST ATP**
  - Participants must cover >50% of costs
  - Learn NIST ATP rules before submitting a proposal
- **Cost share need not be shared equally within team**
  - Each company spends internal money on its own R&D
  - Some partners can agree to receive lower NIST reimbursements
    - ⇨ to cover administrative costs
    - ⇨ to allow small company and/or university participation
    - ⇨ to cover subcontractors

What Is A Joint Venture Agreement?

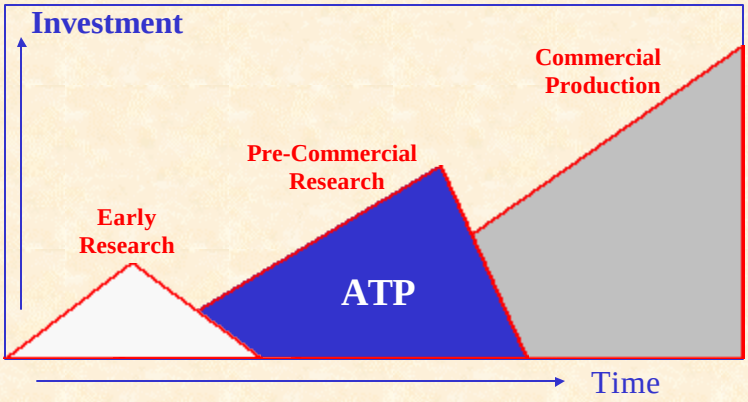
- **Team Government**
  - Team Collaboration Rules and Procedures
  - Team Responsibilities
  - Charter of Governing Body
- **Team Budget and Cost Share**
- **Disposition / Protection of Intellectual Property**
  - Background IP and Program IP
- **Commercialization Procedures**
- **Non-Disclosure Agreement**

A Strong JVA ⇨ A Stable Team

Issues for Commercial Partners

- **Audit Required by NIST ATP Legislation**
  - Company-selected external auditors usually carry out the audit
  - Audits include both direct and indirect costs
    - large commercial companies (with limited Government business) can have the greatest problems with audit requirements
  - Audits are only required for the ATP project itself
    - whole company is not audited
    - a spreadsheet accounting system with traceable documentation can be sufficient to track costs for the project
  - NIST ATP rules are different from other Government agencies
    - prior experience with DoD or other agencies is not a guarantee that no audit approval problems will occur

NIST ATP Is Your Partner

- **NIST is not your customer**
  - NIST will not take delivery of your research
  - NIST will not own any IP developed
- **NIST is not your VC**
  - NIST will not claim any ownership of any resulting business entity
  - NIST will not profit from your ATP activities
- **NIST will encourage your success**
  - NIST will push for commercialization of your ATP products
  - NIST will facilitate broad impact from your ATP activities

From Research...
To Commercialization