

# Materials Science and Technology

IP Symposium, New Orleans

September 28, 2004

***“Technology Commercialization and IP  
Management”***

***Corporate Business Development & Partnerships***

***Kevin A. McMahon, Manager***

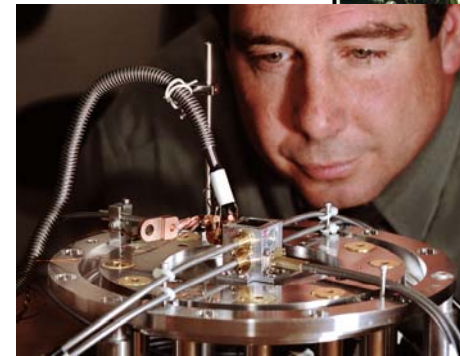
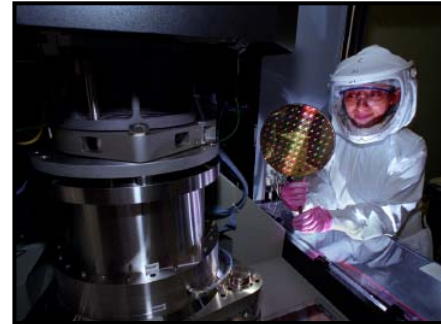
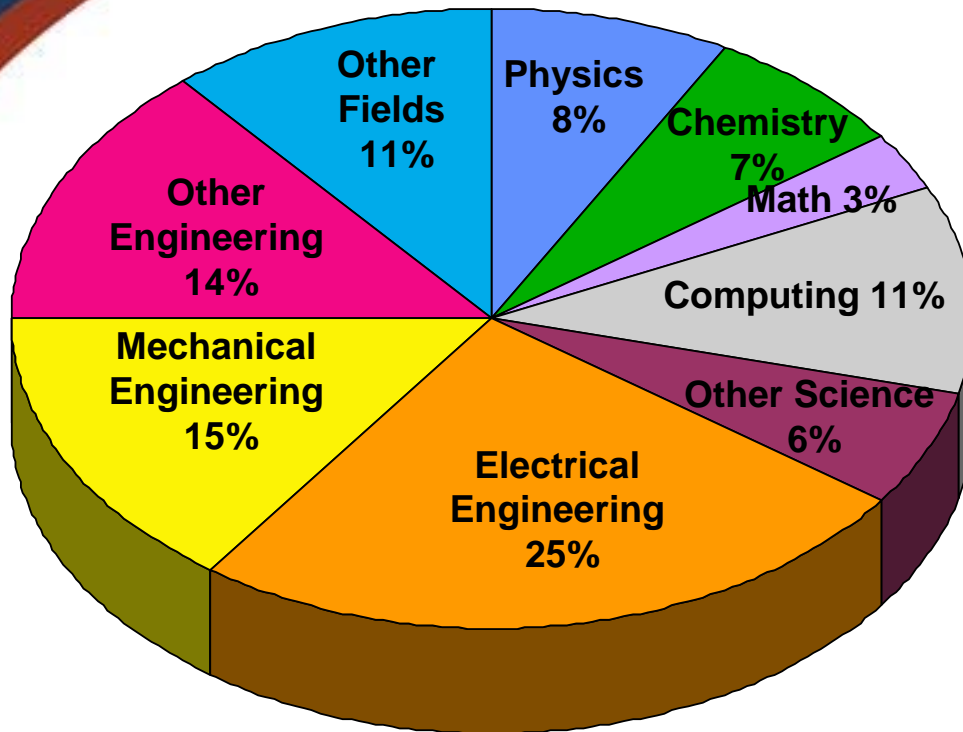
***Licensing and Intellectual Property Management***

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# Sandia employs approximately 8,200 employees (plus 2100 on-site contractors)

**\$ 2.2B Operating Budget FY04**



**~8,200 full-time employees (~ 900 in California)  
1,431 PhDs and 2,235 Masters**

# What/who is Sandia?

- **Is a “for profit” corporation (Sandia Corporation) incorporated in Delaware**
- **Is a subsidiary of Lockheed Martin Corporation**
- **Operates Sandia National Laboratories for the US DOE**
  - Facilities and equipment are funded by US DOE
  - Programs are funded by DOE, other federal agencies & industrial partners
  - Employees are Sandia Corporation employees
  - Revenues of ~ \$2.2 B / year
  - Federally Funded Research and Development Center

# Partnerships are Essential to Sandia's Success

- Synergistic with mission
- Imports best practices into Labs
- Commercialization matures technologies (reduces cost, improves reliability)
- Supports US industry



- Creates a critical supplier base for weapons components
- Provides challenging work for the staff
- Builds federal and local constituency
- Generates revenues

# IP management:

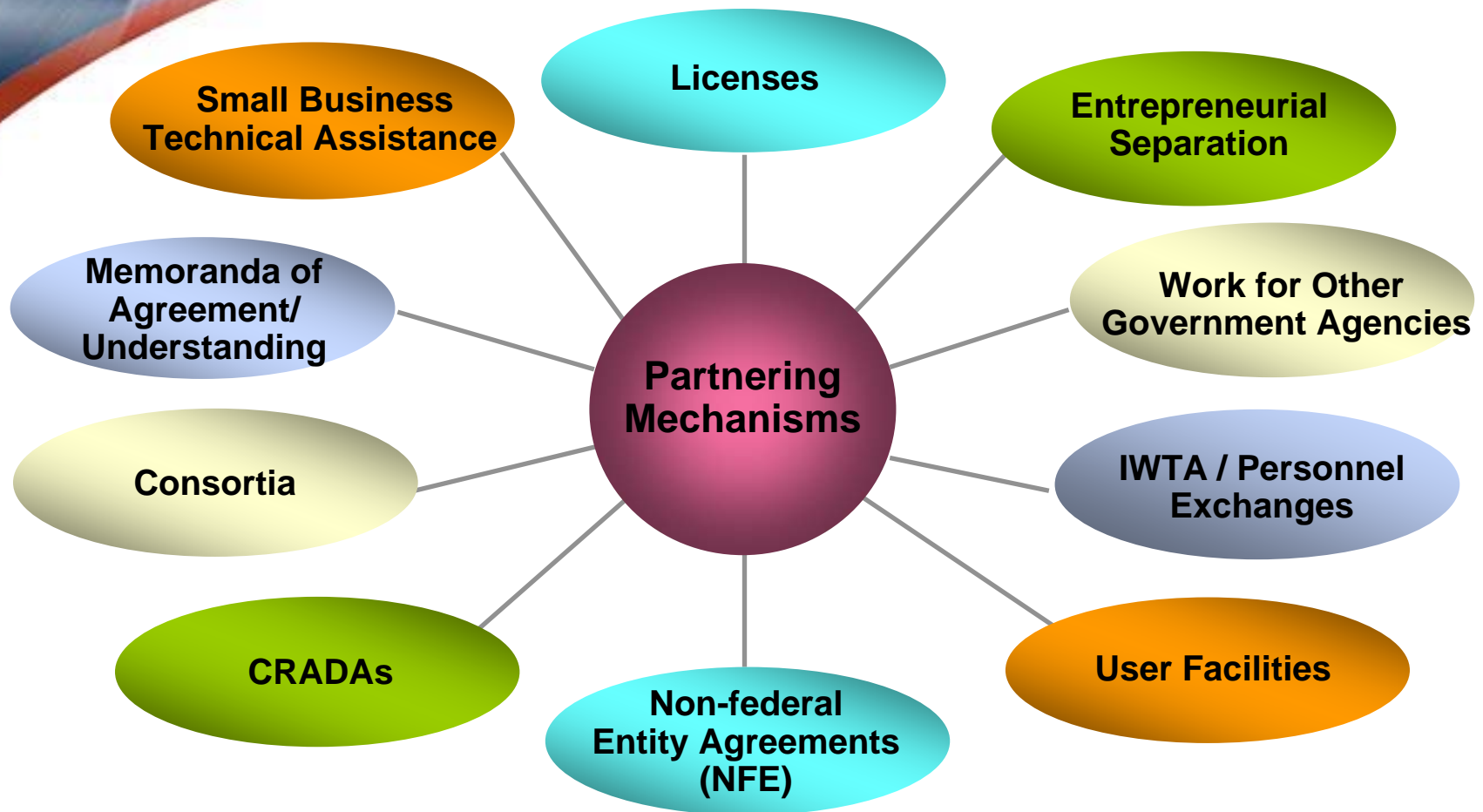
- **IP is the fuel for high-technology industries**
- **IP management and licensing is threaded through all of our partnership agreements with industry**
- **Sandia's clear ownership of IP enables a robust licensing program, providing state-of-the-art components to Sandia programs and new products to industry partners**
- **Some business cases merit Sandia acquiring an equity position in spin-out companies**

Because we will never compete with our partners in the commercial marketplace, there is inherent market complementarity in our technology partnerships

# What is Intellectual Property @ Sandia?

- **Patents**
- **Copyrights**
- **Trademarks**
- **Information...**
  - Trade secrets “not allowed”
  - Agreement generated information
  - Agreement protected generated information

# Sandia's many mechanisms for technology partnering



# Invention IP “Subject” or “Background”?

- **Subject Inventions IP (SIP) is IP created during a partnering agreement:**
  - **Sponsor SIP (Sponsor sole inventor)**
  - **Sandia SIP (Sandia sole inventor)**
  - **Sponsor & Sandia SIP (joint inventor-ship)**
- **Background Inventions IP (BIP) is IP that is owned by Sponsor or Sandia prior to the execution of a partnering agreement**



# Sandia SIP determinations associated with CRADA\*

- Subject Invention IP (SIP) is IP created (i.e. invented or *first actually reduced to practice*) during the course of the CRADA, and can be:
  - Sandia SIP – SIP created by Sandia during the CRADA, owned by Sandia
  - Partner SIP – SIP created by Partner during the CRADA, owned by Partner
  - Joint SIP – SIP created jointly by Sandia & Partner during the CRADA, undivided ownership by both Sandia & Partner
- Partner has *statutory rights* to *Sandia SIP*, up to and including exclusive rights in a field of use, and for *reasonable compensation*

\*CRADA = Cooperative R&D Agreement

# Sandia SIP determinations associated with CRADAs (cont'd)

- Partner may wish to negotiate an “Agreement to License (ATL)” for *Sandia SIP* to be executed with the CRADA, delineating business terms such as:
  - Level(s) of exclusivity
  - Field(s) of use
  - License issue fees\*
  - Running royalties\*
  - Minimum annual royalties\*
    - *\*Sandia takes “funds-in” into consideration*

# Sandia SIP determinations associated with WFO-NFE (“work for hire”)

- Title to IP generated under a WFO/NFE is typically waived to the Sponsor; however, in some circumstances Sandia may negotiate to retain title.
- When Sandia retains title, Sponsor may wish to negotiate for make, use and sell rights via an Agreement to License, delineating business terms such as:
  - Exclusivity
  - Field(s) of use
  - Issue fees, running royalties, and minimum annual royalties\*
    - *\*Sandia takes “funds-in” into consideration.*
- Sandia’s standard initial offer is of non-exclusive rights to BIP (to the extent the partner needs to practice SIP).

# Our top 10 Industrial Partners FY2003

## **CUSTOMER**

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**Lockheed Martin**

**EUVLLC**

**General Atomic Corporation**

**Goodyear Tire & Rubber Company**

**Waters Corporation**

**Daniel Anderson**

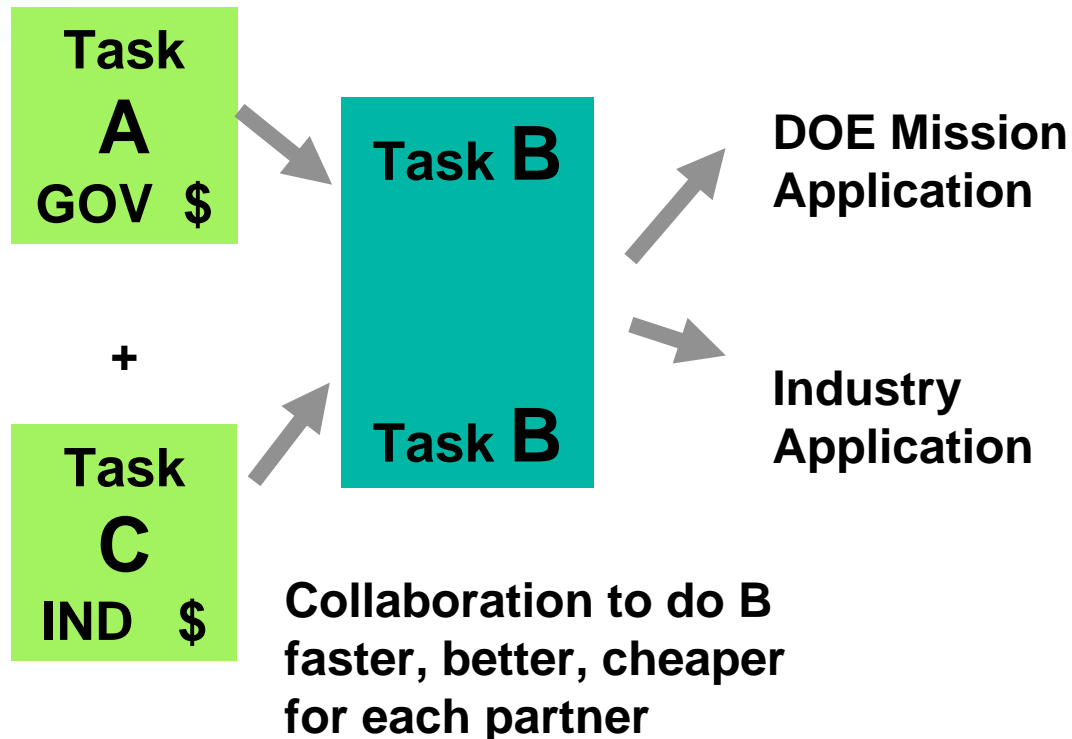
**Northrup Grumman**

**3M**

**Silicon Valley**

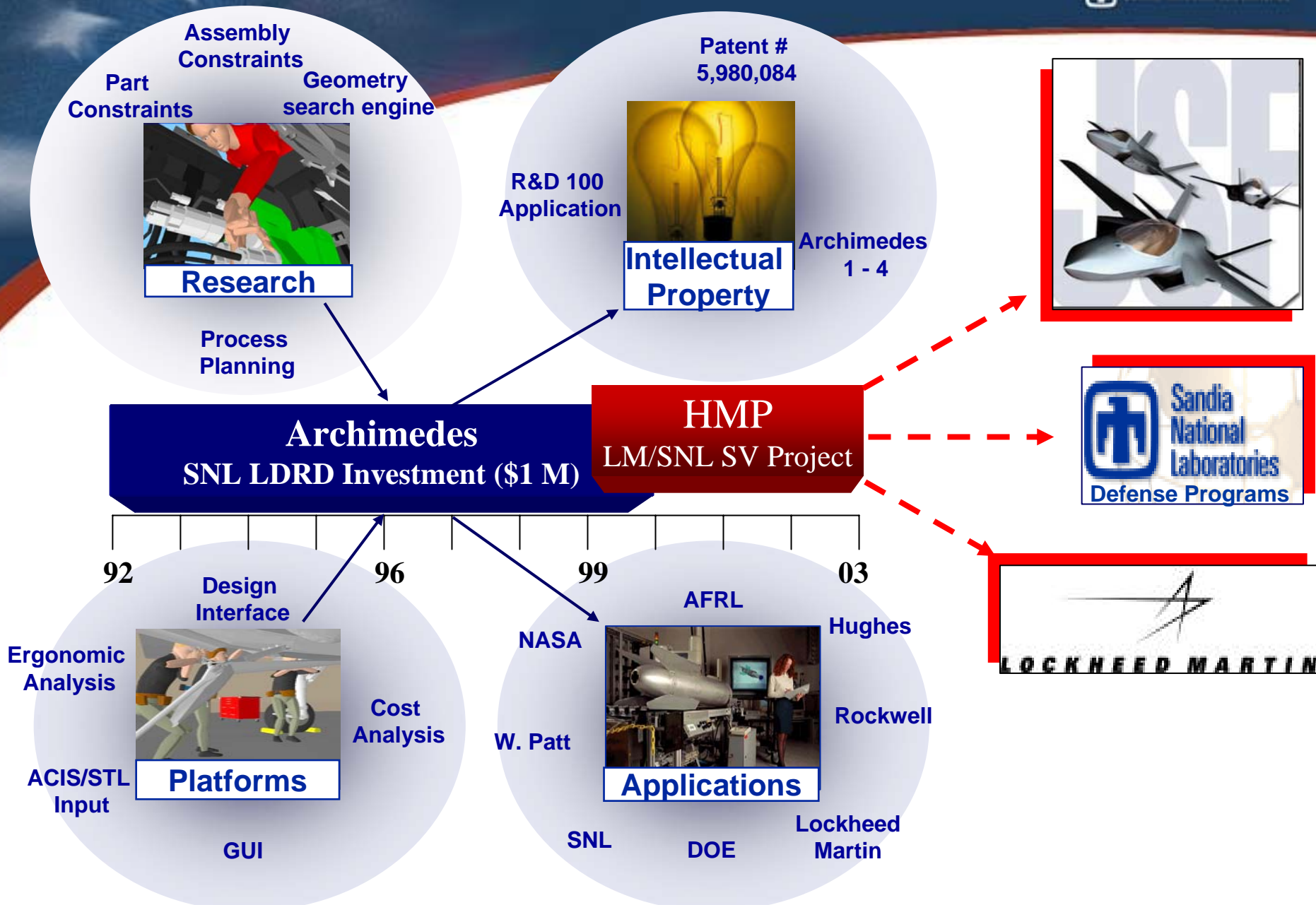
**Specialty Metals Proc Consort**

# Win-Win Partnerships Model



- models for polymer performance
- processes to deposit metals
- metal casting models & processes
- advanced lithography
- microelectronic mfg. equipment
- reliability models for IC's
  - \*
  - \*
  - \*

# Lockheed Martin Case Study



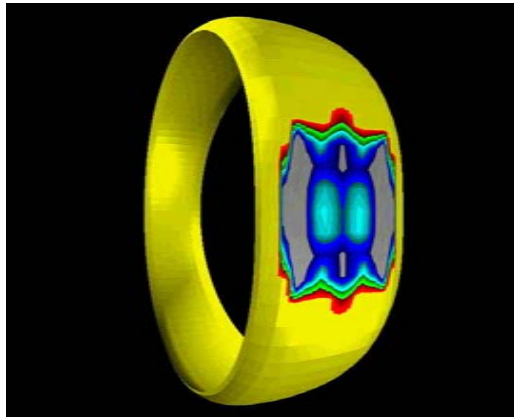
# Goodyear Case Study

## Collaboration produced reliable simulation tool to replace build-and-test design method

- Sandia used improved simulation tool to reduce portions of a neutron generator cure schedule by a factor of two



Neutron generator



Simulation of tire performance

- Goodyear using simulation tool to replace costly, time consuming build-and-test method of tire design