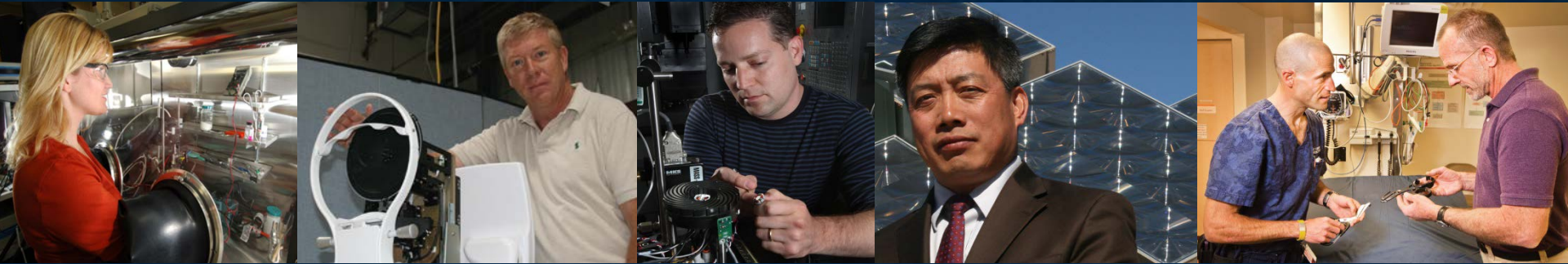


Show Videos: SAND Numbers:
2013-7281P, 2013-7282P, and
2013-7283P.



An Update on Technology Transfer at Sandia

Peter R. Atherton
Senior Manager, Industry Partnerships

June 2014

What is Tech Transfer?

The process of transferring scientific findings from one organization to another for the purpose of further development and commercialization...

...for the public good.

Association of University Technology Managers
http://www.autm.net/Tech_Transfer.htm

Tech Transfer: Establishing a Baseline*



- **Umbrella CRADAs:** 3 (total 26)
- **CRADAs:** 18
- **NM Small Business Assistance (NMSBA):** 354
- **Sandia Science & Technology Park:** 3 (total 36)
- **Entrepreneurial Leave (ESTT):** 3
- **WFO/NFEs:** 62
- **IP License:** 23 (total 818)
- **Government Use Notices:** 183
- **Open Source Software:** more than 220,000 downloads

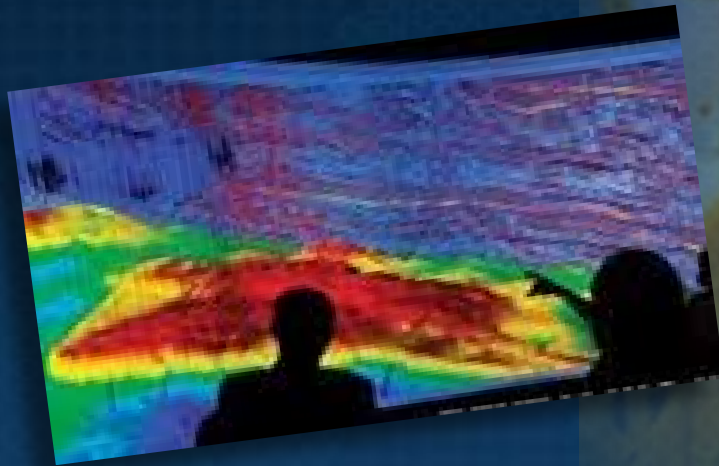
Tech transfer for the public good takes many forms

*FY13 numbers

Sandia's Rich History of Tech Transfer

Laminar Flow Clean Room

- Microelectronics
- >\$50B worldwide



Drill bit and microseismic technology

- Helping to unlock ~70 years worth of natural gas resources



General Atomics Aeronautical Systems Synthetic Aperture Radar

- High-resolution video images in all weather conditions
- Government Use Notice
- Supports nearly 700 employees at General Atomics



Solar Glare Hazard Analysis Tool – (SGHAT)

Selects PV array configurations that will maximize energy production with minimal glare at airports



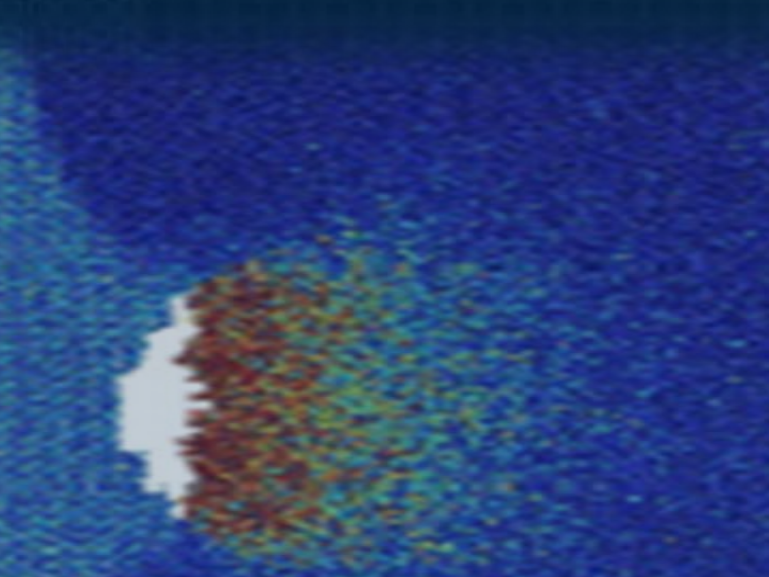
- Free, publicly available web-based software tool
- Airports that Use SGHAT:
 - Hartsfield-Jackson Atlanta International
 - Las Vegas McCarran International
 - Phoenix Sky Harbor International
 - Newark Liberty International
- Funded by U.S. DOE and supported by FAA
- R&D 100 Award

LAMMPS

Open Source Software

Large-scale Atomic/Molecular Massively Parallel Simulator

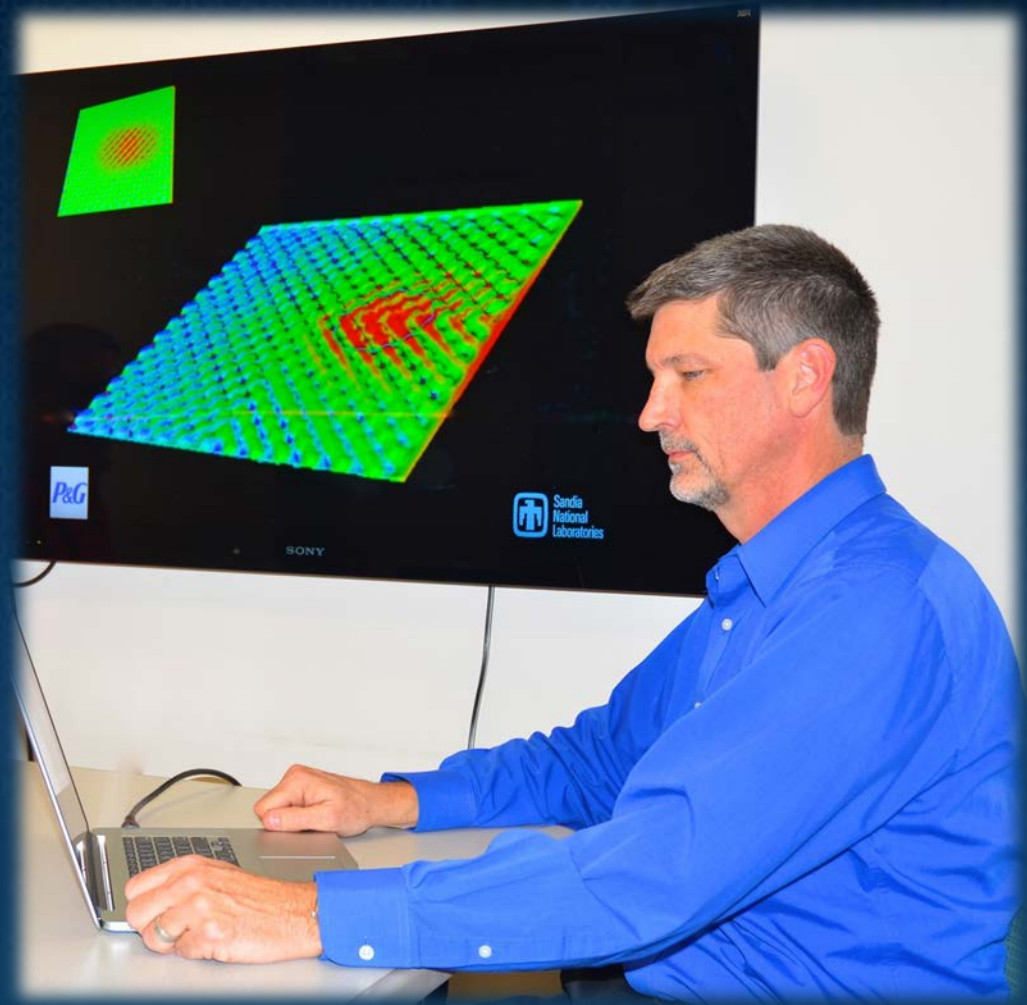
- 100+ contributors worldwide
- 1250 email subscribers
- 150,000 downloads
- Member companies have drastically cut their design cycle times



P&G

Helping to Improve Product Performance

- Interaction of liquids with absorbent materials studied to improve product performance for Family Care, Home Care, and Baby Care business units
- Sandia reduced-order modeling capabilities address thin-porous sheets used in products for the take-up or expulsion of liquids
- Shell models expedite design studies
- Umbrella CRADA since 2002



Sandia Uses Several Programs and Partners to Transfer Technology



Sandia Science & Technology Park

- Cyber Engineering Research Laboratory
- 2-megawatt Solar Array

36 companies and organizations

2,400+ people

\$75K average salary

\$3B wages and salaries since 1998

NMSBA: SAVSU Technologies

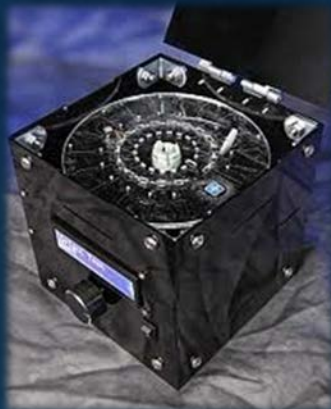
Long-term Storage of Vaccines in Remote Areas



- New Mexico Small Business Assistance (NMSBA) Program
- Solar thermal ice maker
- Delivered globally including Southeast Asia and Africa
- Saving lives

ESTT: Gregory Summer and Ulrich Schaff

- Entrepreneurial Separation to Transfer Technology (ESTT)
- Startup and licensed SpinDx™ – lab-on-a-disk
- Rapid, low-cost, and compact point-of-care diagnostic tool
- New application: Male fertility test kit



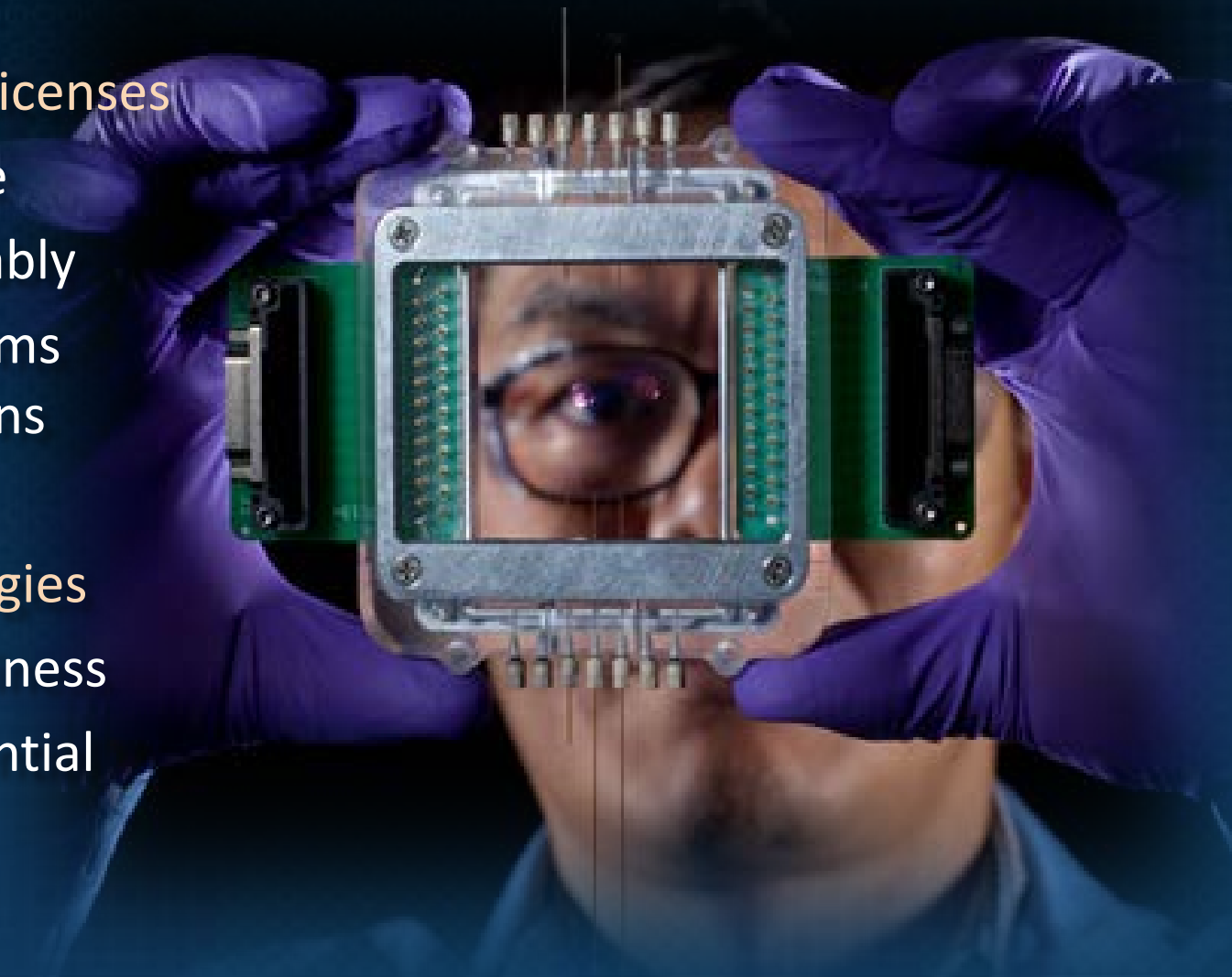
Making It Easier to License IP

Ready-to-Sign Licenses

- Nonexclusive
- Priced favorably
- Standard terms and conditions

“Hot” Technologies

- Market readiness
- Market potential



Sandia Cooler: Breakthrough in Cooling Efficiency

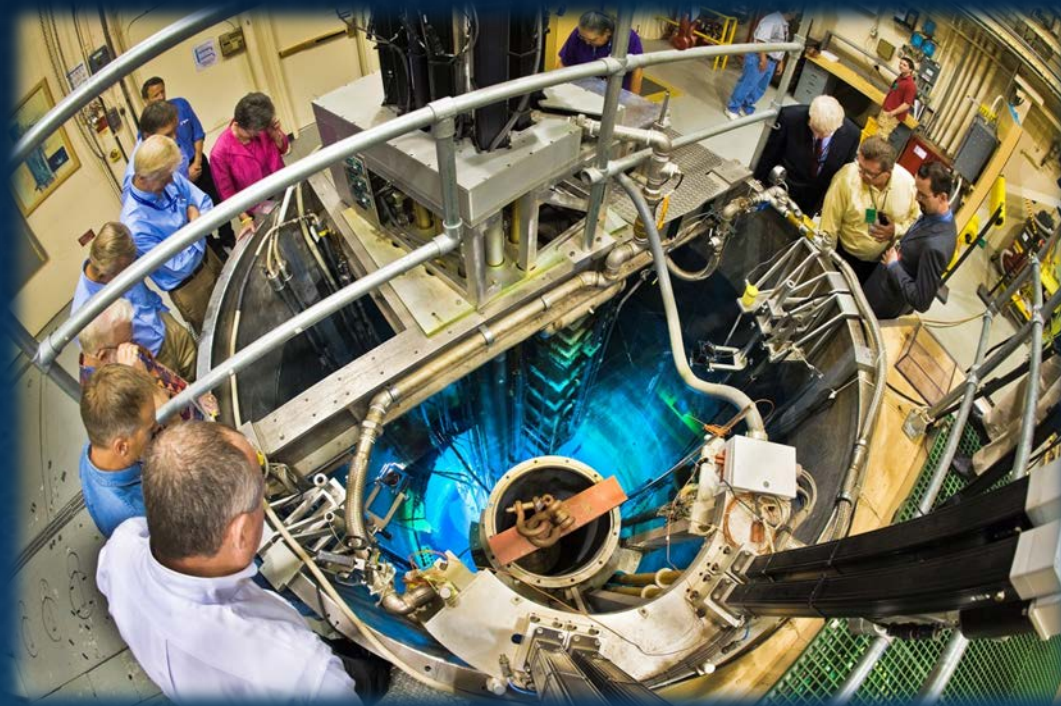
Air Bearing Heat Exchanger – Electronics, HVAC

- Rolling out prototype evaluation program
- CRADA and DOE investments
- 4 licenses in place, 50 companies interested
- R&D 100 Award



Eden Radioisotopes

Moly 99 Reactor Conceptual Design



- 30M medical diagnostic procedures worldwide each year and most use Moly 99
- More than 50% in U.S., but no U.S. producer of Moly 99
- World's 5 main production reactors outside U.S. and often closed for repairs. Two of largest could be decommissioned in next 10 yrs.
- Plans to build first U.S. reactor for the isotope
- Global supplier
- Exclusive license

“Hot” Technology – Decontamination Foam

Global events driving
major interest



“Hot” Technology – Enhanced Oil Recovery

Provides water-flood chemistry
to improve oil recovery
from existing wells



“Hot” Technology – Protocell

University of New Mexico Partnership

A novel nanoparticle that can
more effectively deliver drugs to
targeted cancer cells



Combustion Research Facility (CRF)

Serving as a national and international leader in combustion science and technology for over 30 years



- Livermore Valley Open Campus (LVOC)
- U.S. DOE facility
- Collaborative space: scientific community and industry partners

Our Vision For The Future

- Evolve the Technology Showcase
- More “Hot” technologies
- Easy and fast licensing
- Access to research and inventors
- Develop partners for research, mission, and tech transfer
- Provide collaborative space

