

NSTec Overview and Capabilities

**Presented to NI Account Managers
NI Week 2012
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Introductions

Who we are and what we do?



Nevada National Security Site

Managed and Operated by National Security Technologies, LLC

Agenda

- NSTec overview
 - Purpose of this meeting
 - Company background
 - Role in the DOE Complex
 - A brief history of the NNSS (formerly the NTS/Nevada Proving Grounds)
 - Capabilities and strengths



Purpose of Presentation

- Introduce NSTec to NI Account Managers



NSTec Covenants

- **Vision** - Attract new customers to NNSS who have experimentation requirements that are compatible and complementary to the site's national security mission.
- **Service** - Manage and operate NNSS in a manner that creates the Model of Excellence in M&O Contracting.
- **Partnership** - Achieve an unprecedented level of cooperation and transparency into every facet of NSTec management and operations.



NSTec: Providing integrated solutions to complex problems



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NSTec Charter

Provide support and infrastructure for experiments and activities supporting DOE/NNSA missions:

- nuclear explosives operations;
- remote field experiments and operations;
- physical and environmental science;
- nuclear waste management systems and technology;
- design and fabrication of electronic, mechanical, and structural systems;
- remote and robotic sensing;
- management of multi-laboratory facilities, mining, engineering, and construction operations;
- chemical, explosives, and hazardous materials systems and technologies; and
- waste management for various categories of waste.



History of the NNSS (NTS) Contract



Nevada National Security Site

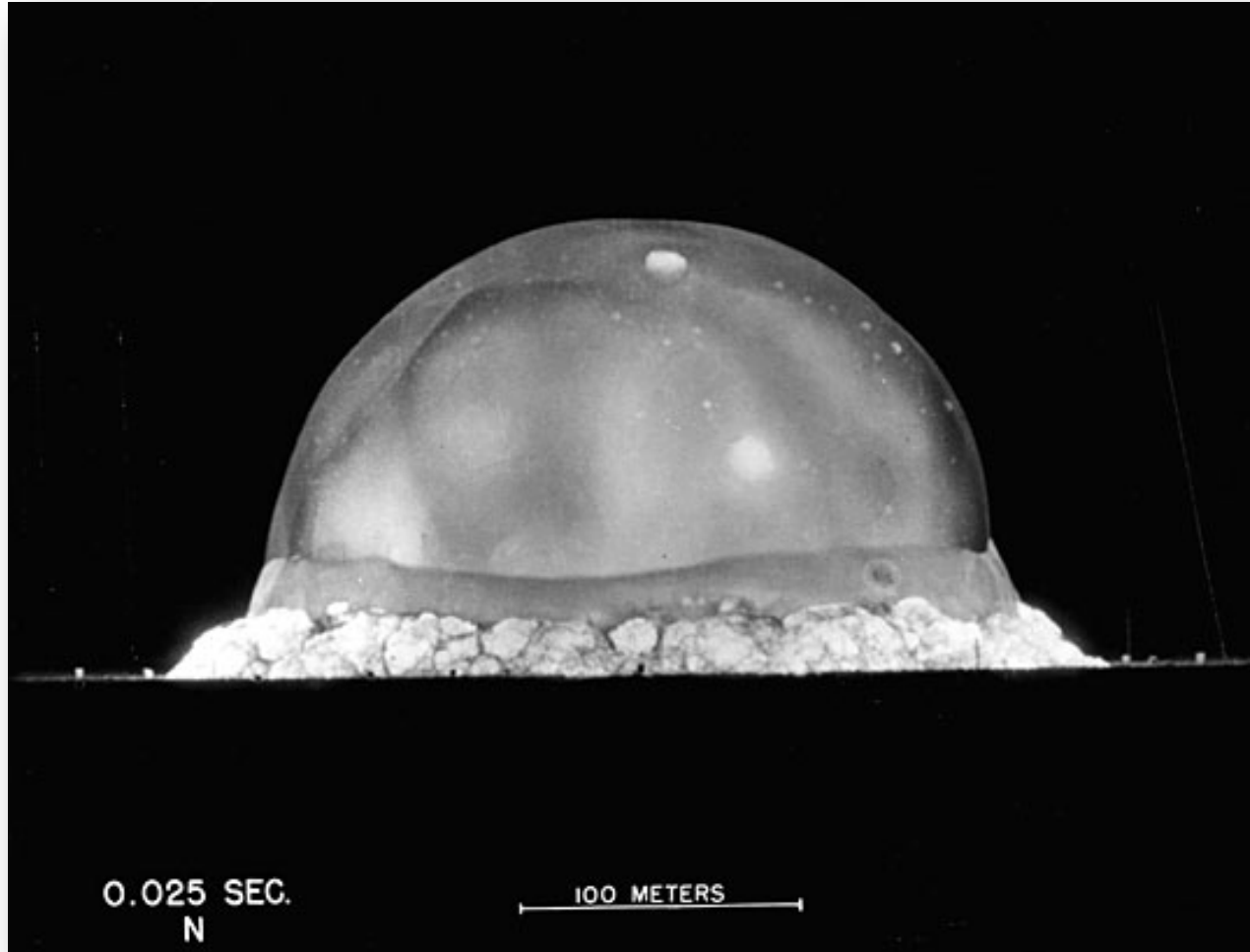
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In the beginning...

- After World War II, the Atomic Energy Commission contracted Edgerton, Germeshausen, and Grier (EG&G) to photograph atomic bombs as they exploded.
- The trio were asked to solve the problems of dealing with the blinding light, the need to be miles away from the explosion, and the speed of the nuclear reaction in the bomb.
- The solution was the rapatronic (for Rapid Action Electronic) shutter, a shutter with no moving parts that could be opened and closed by turning a magnetic field on and off.



Trinity Fireball at 25 ms



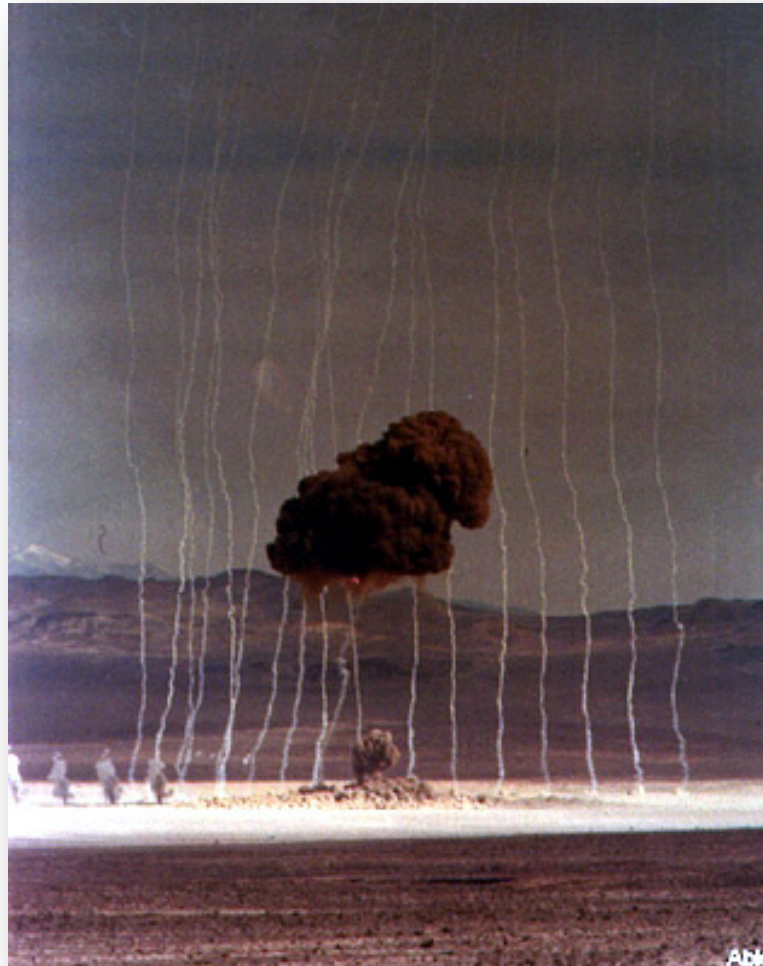
First atomic weapon test, conducted July 16, 1945, White Sands Proving Ground, New Mexico.



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Able Detonation



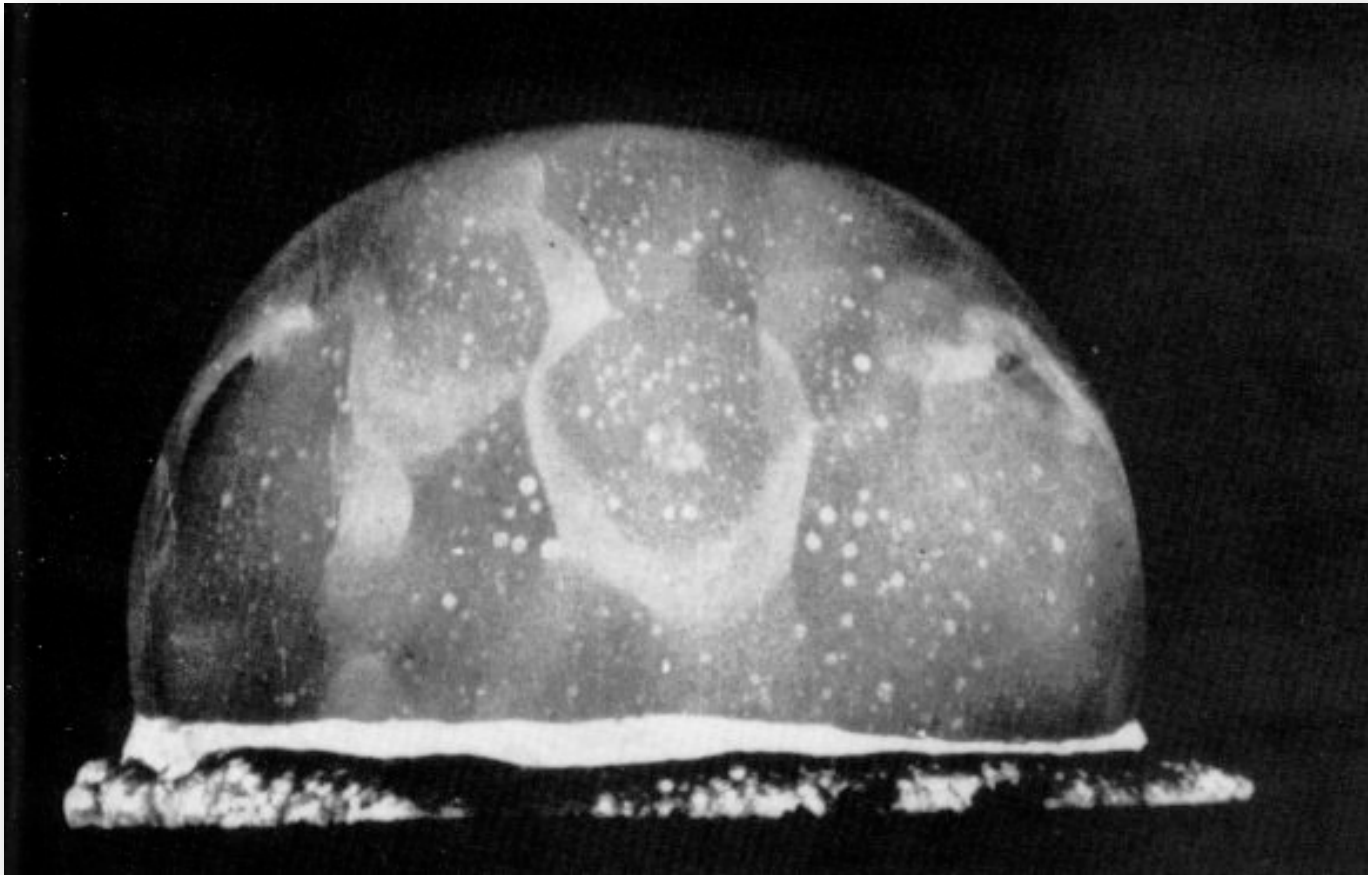
Operation Ranger, first atomic test at the Nevada Test Site, air drop, January 27, 1951



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George Fireball at 20 ms



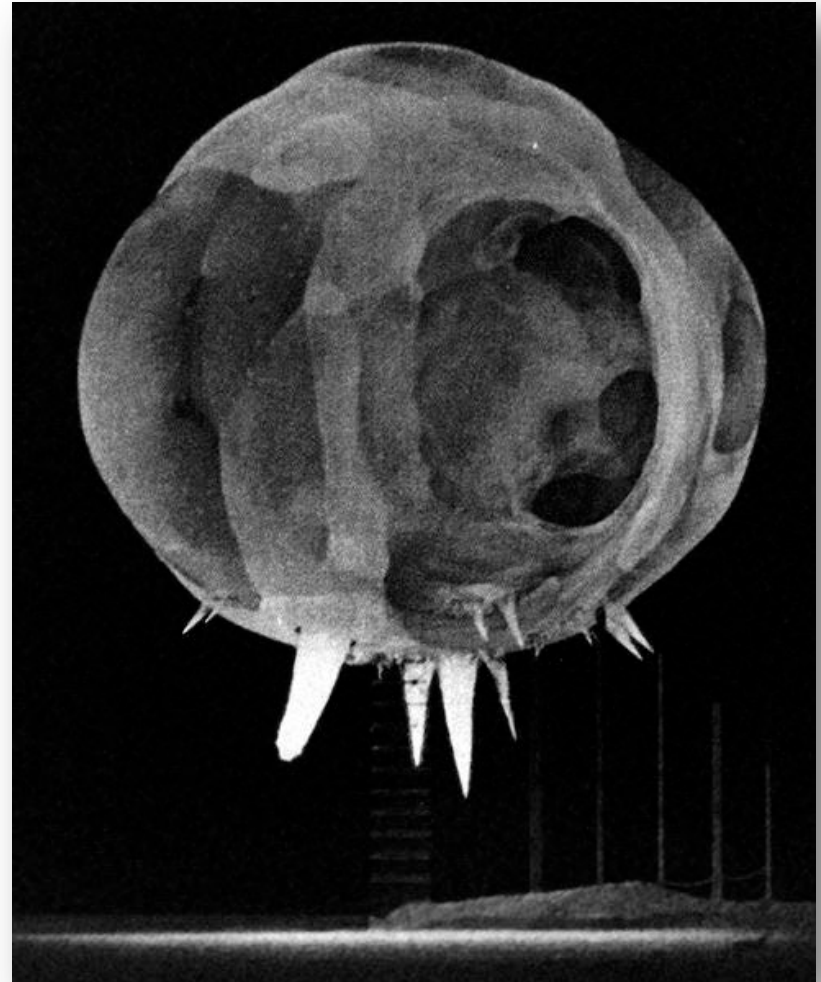
Operation Greenhouse, Pacific Proving Ground, Enewetak Atoll, Marshall Islands, May 8, 1951



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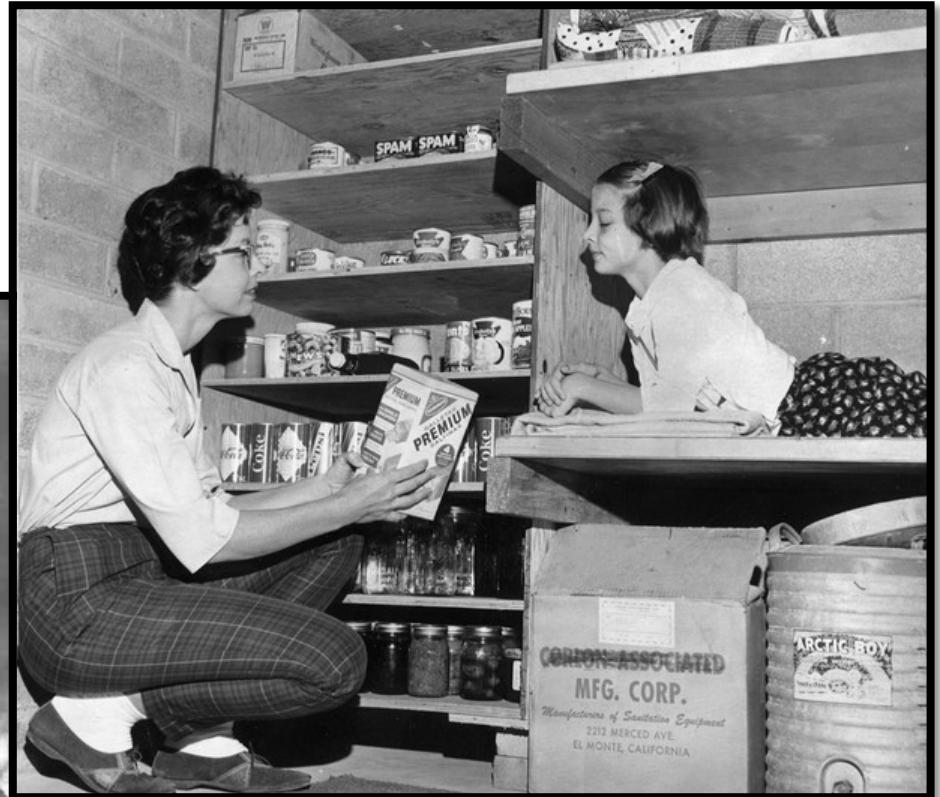
Rapatronic Data Reveals Interesting Phenomena



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Nuclear Testing, the Cold War, and its Social Impact



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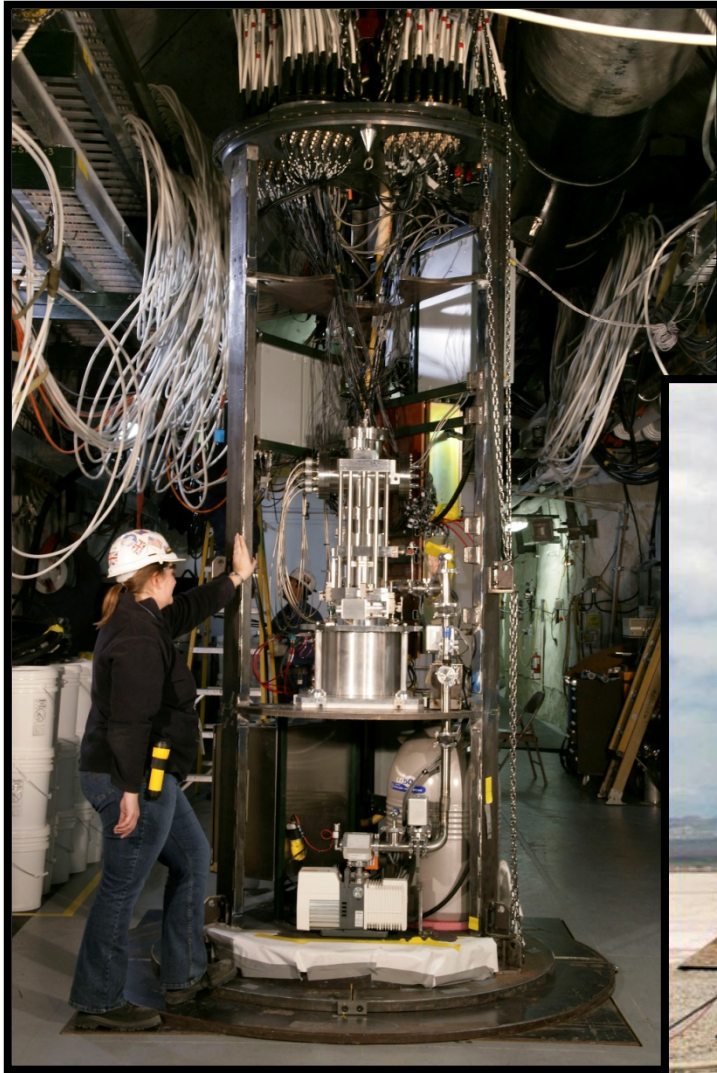
Fast-Forward to 1992



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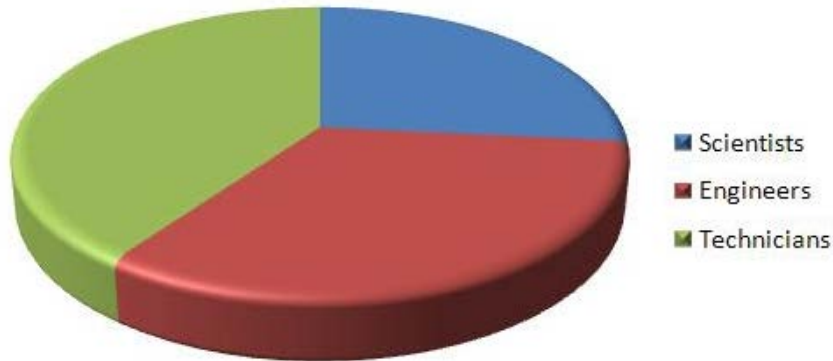
Recent Experiments



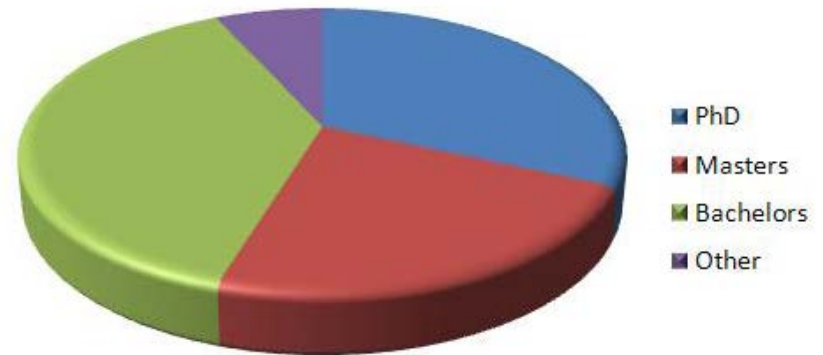
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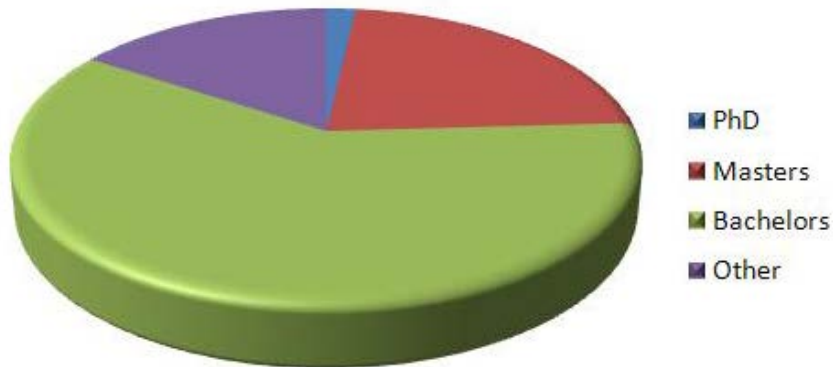
Company Demographics (Technical Support)



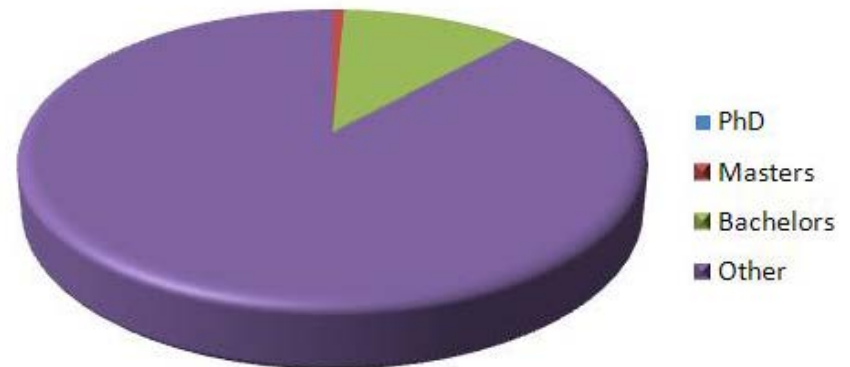
Technical Staff



Scientists



Engineers



Technicians

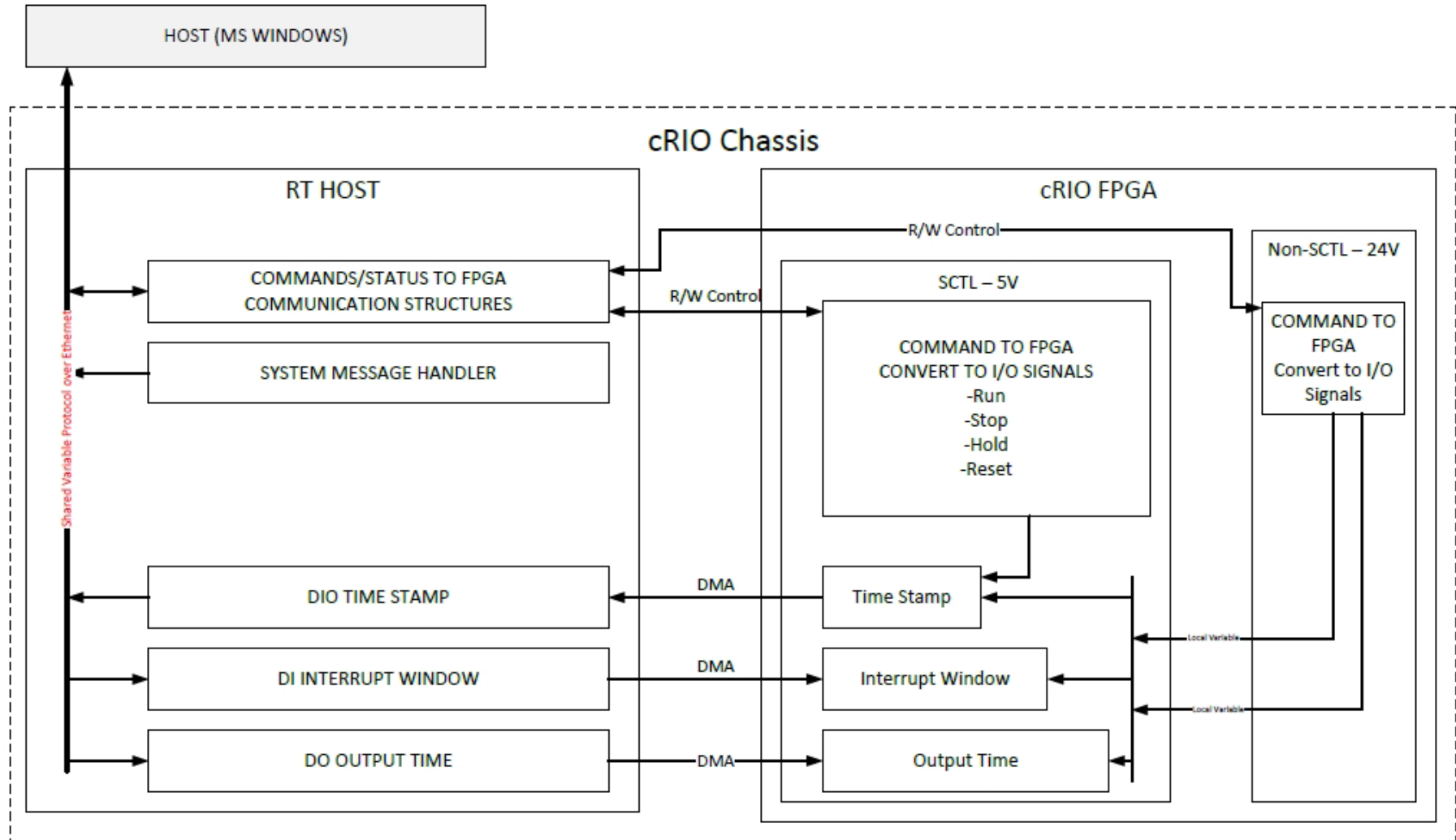


Facilities and Capabilities

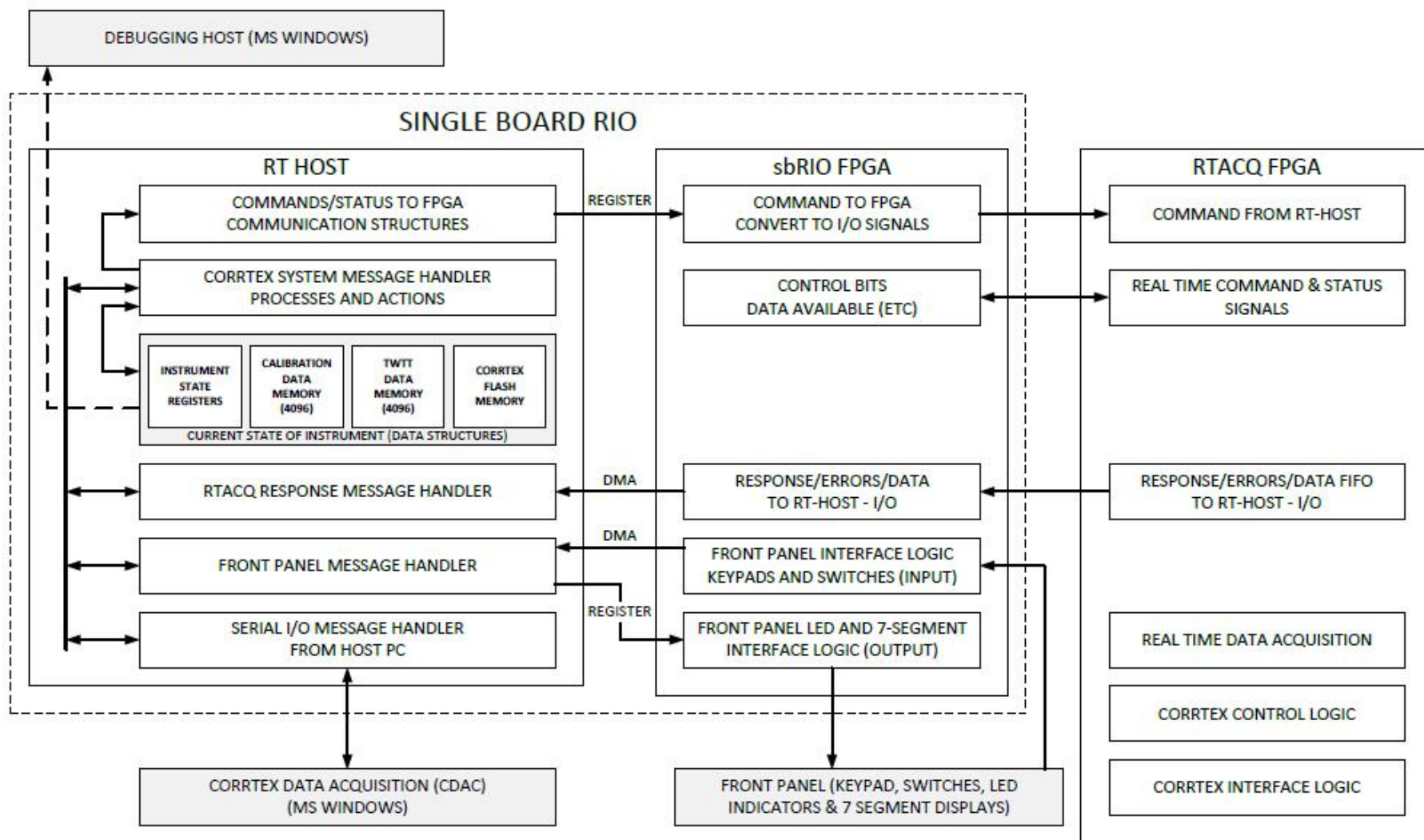
- Fully equipped laboratories
- State-of-the-art test and measurement equipment
- Well-equipped machine shops
- PCB design
- Mechanical design
- Electronic design
- Optical design
- Software development
- Systems integration
- Fabrication capability
- Turn-key solutions



Integrated Signal Programmer



CORRTEx



DOE Integrated Contractor

- **Staff members hold appropriate security clearances**
- **Seamless access to DOE facilities and resources**
- **Perform work to DOE safety and security requirements**
- **Staff can easily share sensitive information**
- **Funds are routinely passed between ICs**
 - **Integrated Contractor Order (ICO)**
 - **Approved Funding Program (AFP) transfers**



NSTec: Committed to Customers, Dedicated to Success

- **Focus on client needs**
- **Utilize established engineering processes**
- **Continuous, open communication**
- **Follow standardized project management practices**
- **Implement Earned Value Management techniques**

