

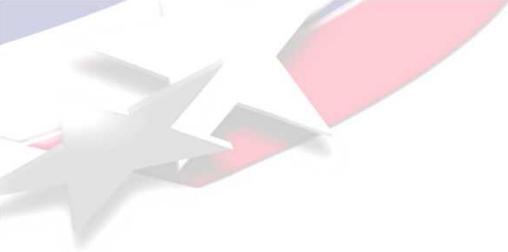
# **The Application of Standards-Based Models in the Deployment of Enterprise-Wide Collaboration/Videoconference Systems**



**govNET Summit**  
Hot Springs, VA

April 17, 2007

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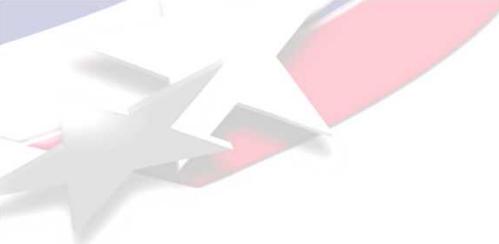


# Mission-Driven Laboratory

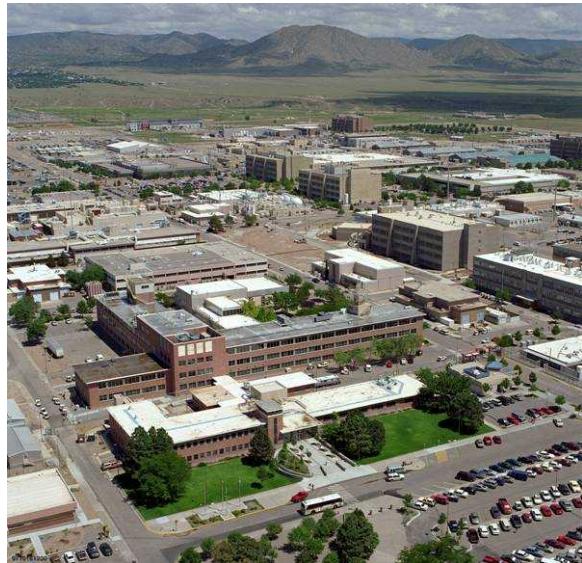


We serve many agencies of the US Government with:

- Design and development: nonnuclear portions of US nuclear weapons
- Production: advanced components
- Safety, security, use control
- Treaty verification, nonproliferation, counterproliferation
- Advanced military technologies
- Energy and environment
- Homeland security, countering weapons of mass destruction



# Distributed Facilities to Meet National Needs



Albuquerque,  
New Mexico



Kauai Test Facility,  
Hawaii



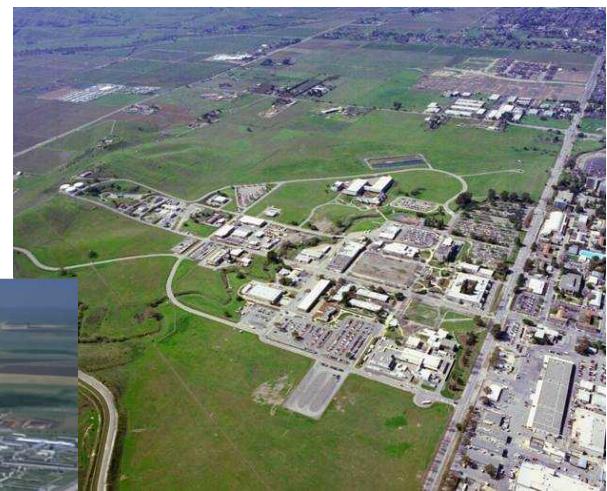
Yucca Mountain,  
Nevada



WIPP, New Mexico



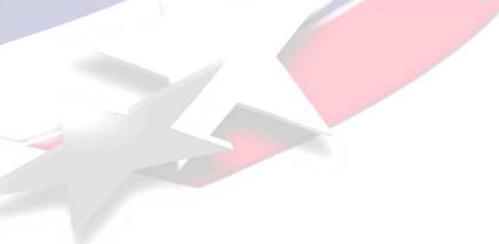
Tonopah Test Range,  
Nevada



Livermore, California

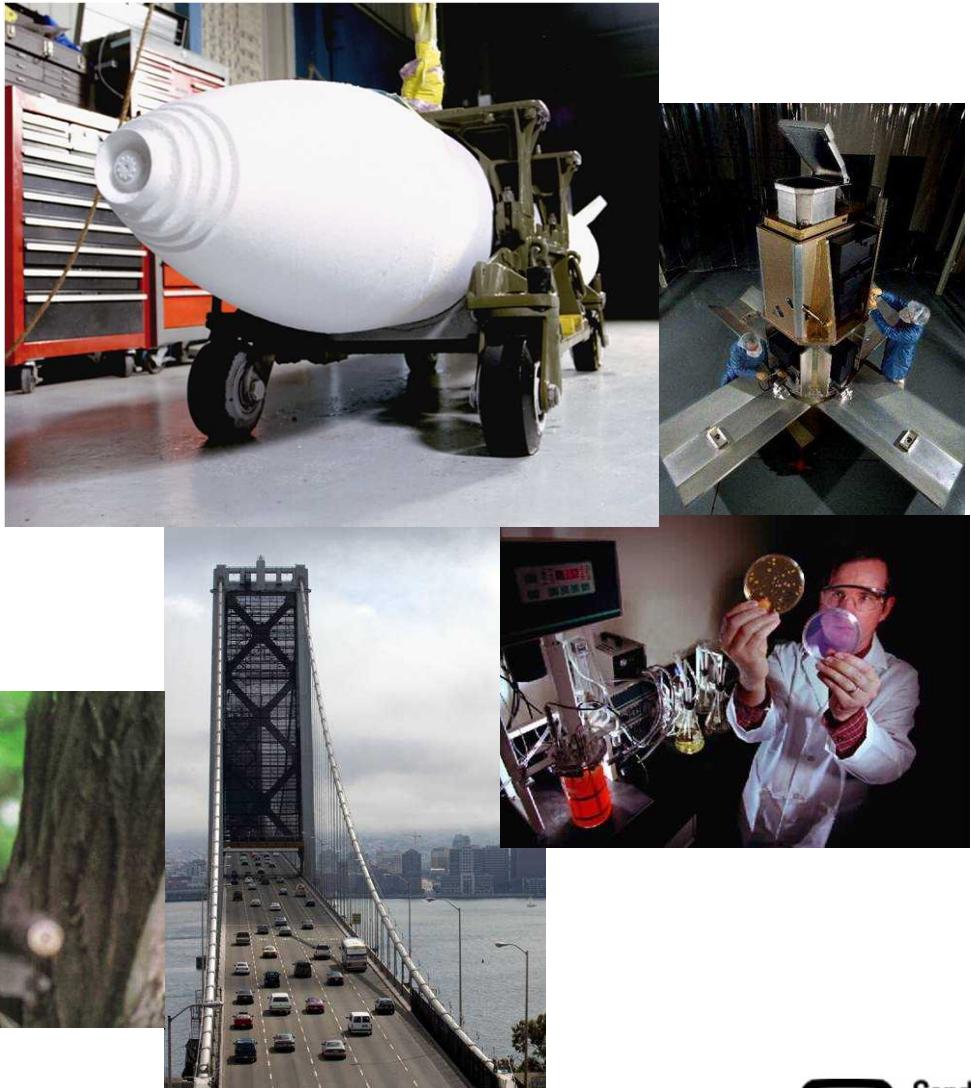


Pantex, Texas



# Four Mission Areas

- Nuclear Weapons
- Defense Systems and Assessments
- Energy, Resources, and Nonproliferation
- Homeland Security and Defense



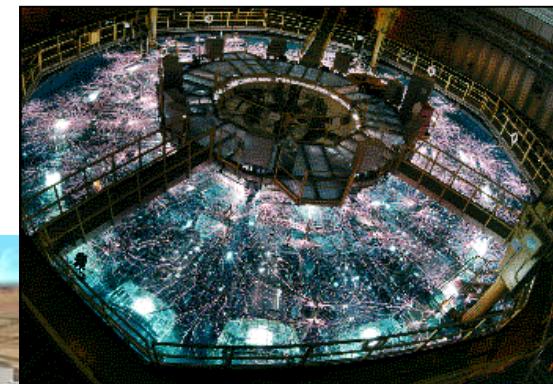


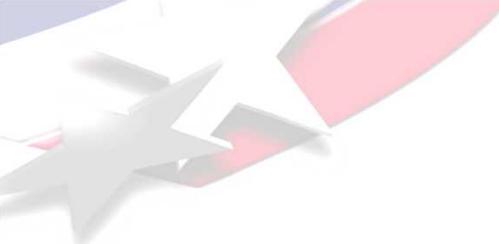
# Nuclear Deterrence for National Security

## *Our Defense Programs Mission*

### Our Vision:

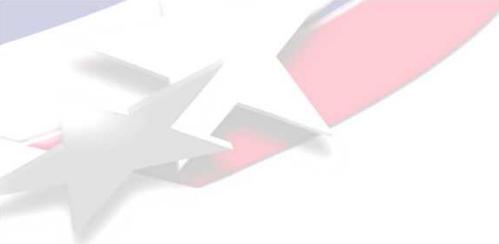
Credible deterrence built on both a safe, secure and reliable nuclear weapons stockpile that is capable of meeting all military requirements – now and in the future – and a science-based engineering infrastructure capable of responding to national security needs whenever they arise.





# Sandia is a major user of collaboration technology

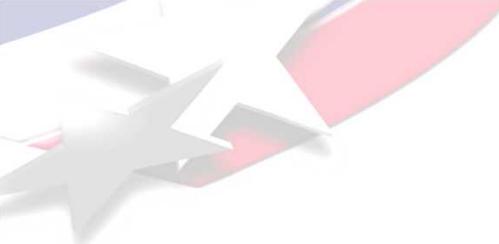
- Sandia is geographically diverse
- Volume of video calls
  - Prior to 911, videoconferencing sessions logged approx. 3500 hours per year
  - In FY06, videoconferencing sessions logged over 9,000 hours per year
- Size of deployed systems
  - We have over 300 videoconference and collaboration rooms in place (offices, conference rooms, auditoriums, visualization theaters)



# Primary Drivers for the use of Collaboration

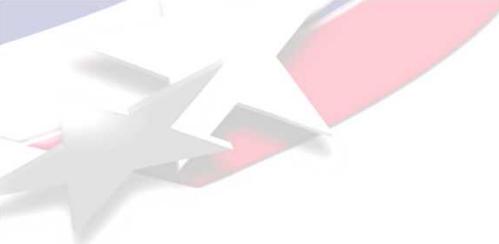
- Reduce, where possible, dependency on travel
- Reduce operating costs
- Shorten business cycles





# Application of Enterprise-wide Standards

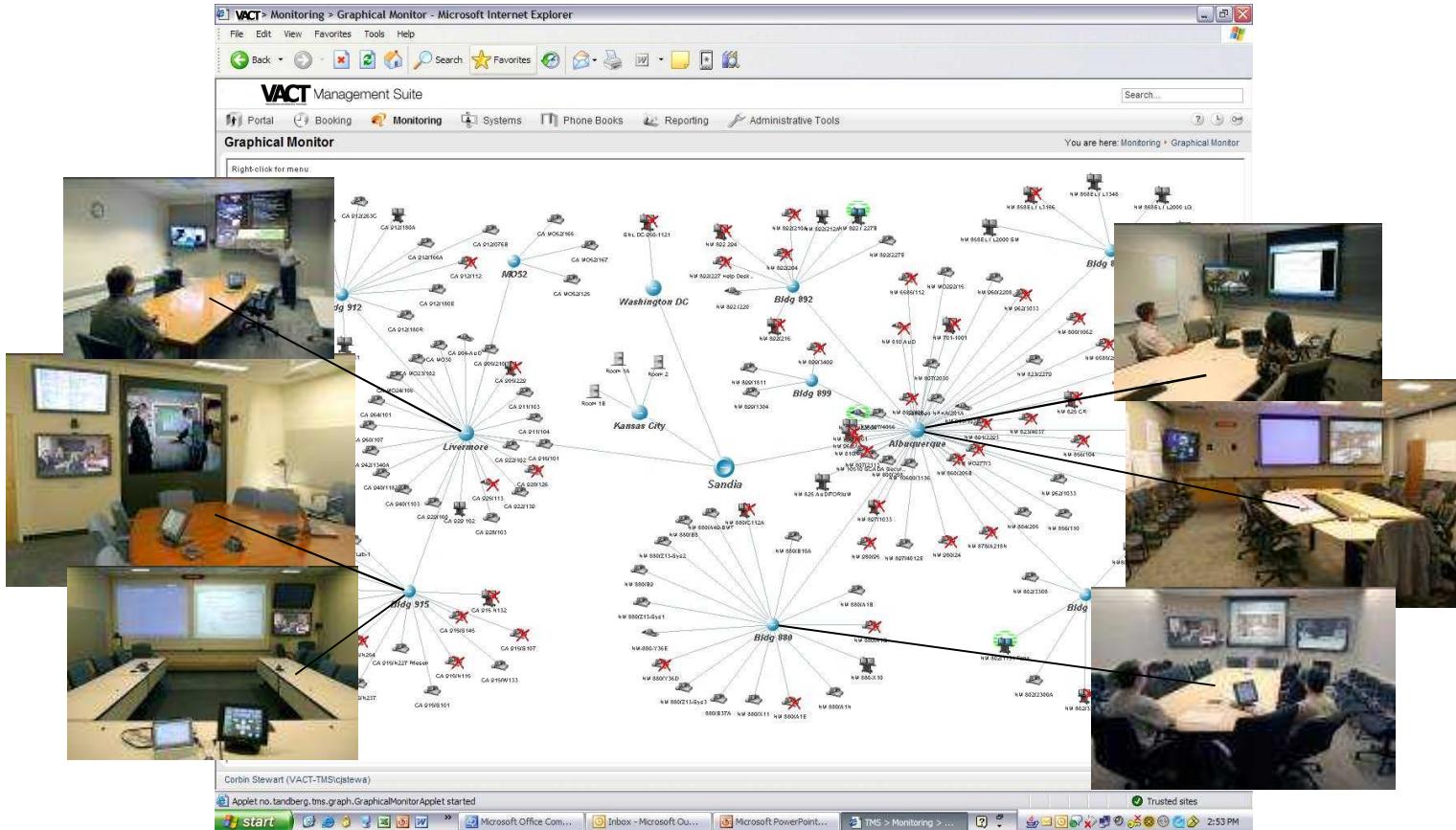
- Prior to FY03
  - No formal corporate standards existed for videoconferencing and collaborative systems
  - Systems were deployed ad-hoc and unique



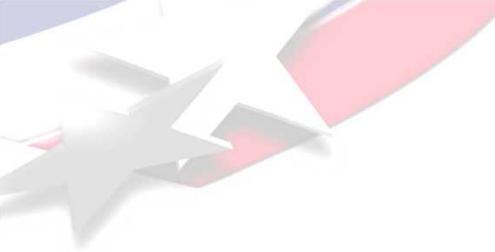
# Application of Enterprise-wide Standards

- In FY03, we began a process to
  - Define corporate standards for systems and integration
  - Benchmark our services (through a third party) in order to establish a baseline for measurable improvements
  - Award a contract for integration that would allow us to partner with industry leaders in the deployment of enterprise-class, standards-based systems
  - Market and deploy our processes and product to the enterprise

# Enterprise - Class Collaboration Systems

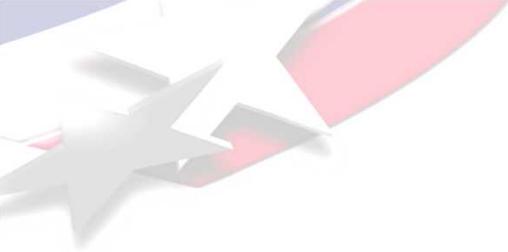


Standards – based and network centric



# An enterprise, standards-based approach results in

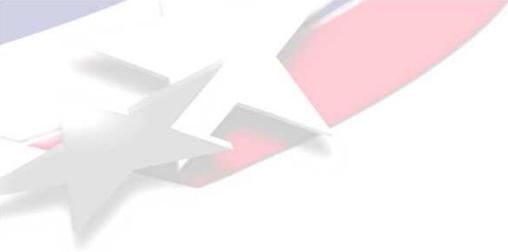
- A consistent, reliable, and positive user experience
- The proper application of security requirements and guidelines
- The support of crisis management/intervention tools and remote management schemas



# FY03 Benchmark Results\*

- The bottom line
  - **“Lack of Sandia-wide standards is the limiting factor in performance and capabilities”**
  - “Applying standards across the enterprise will have impact in all areas of performance”
    - Much higher service quality
    - Increased efficiency/reduced cost
    - Higher usage levels – greater benefit to the organization

\*Source: Sandia Videoconferencing Performance Benchmark,  
copyright 2003 DesigNet International. Used with permission

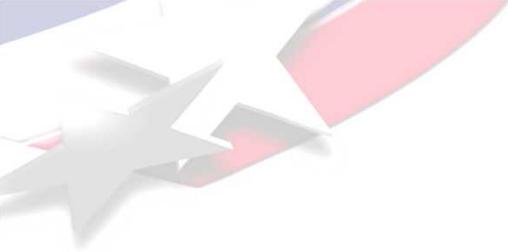


# Lack of Standards

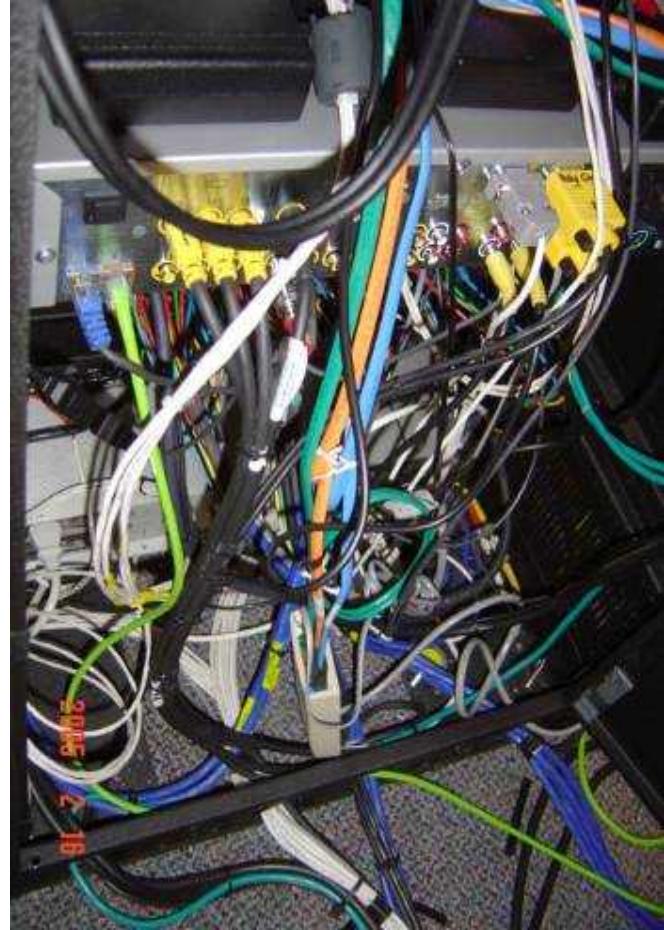
- Lack of standards results in ad-hoc systems

Resulting in

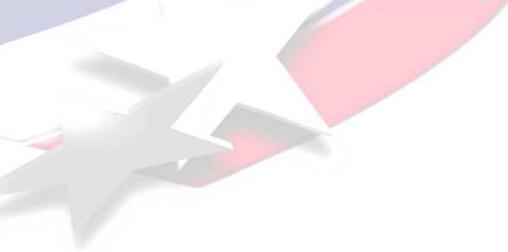
- Systems that do not conform to industry standards for videoconferencing, Sandia standards for quality and maintainability, and videoconferencing standards for interoperability.
- No Statement of Work, accountability, or process to resolve issues and deal with maintenance.



# Lack of Standards – Example 1

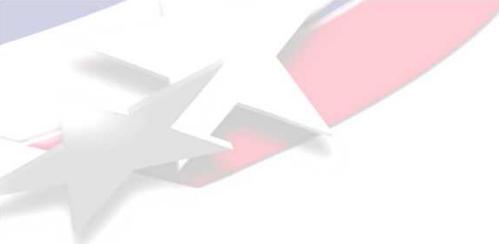


- Not wired to industry standards
- Does not interoperate with other rooms
- No documentation



# Lack of Standards – Example 2



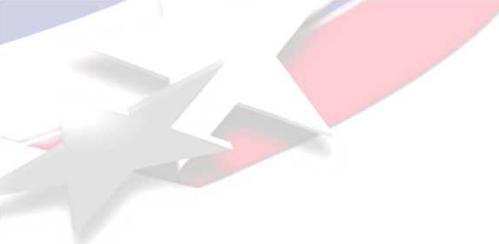


# Business Benefits of Applying Standards

- Business case
  - Provides a lower Total Cost of Ownership for the corporation
    - No “forklift” upgrades
    - Increases ROI for collaboration systems
- Operations case
  - Users are more familiar with the systems and require less intervention

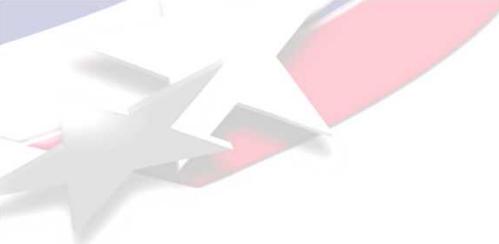
## Lesson learned

*Application of standards creates a perceived 5 nines reliability*



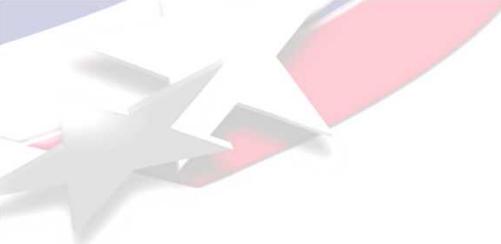
# Business Benefits of Applying Standards

- Technology case
  - Systems are extensible and scalable
  - Systems are maintainable
- Security case
  - Allows for more effectively monitoring and assessment of vulnerabilities
  - Consistent deployment of secure systems
    - VACT developed and received approval for Red/Black systems integration
    - Red/Black Selector – Patent Pending



# Business Benefits of Applying Standards

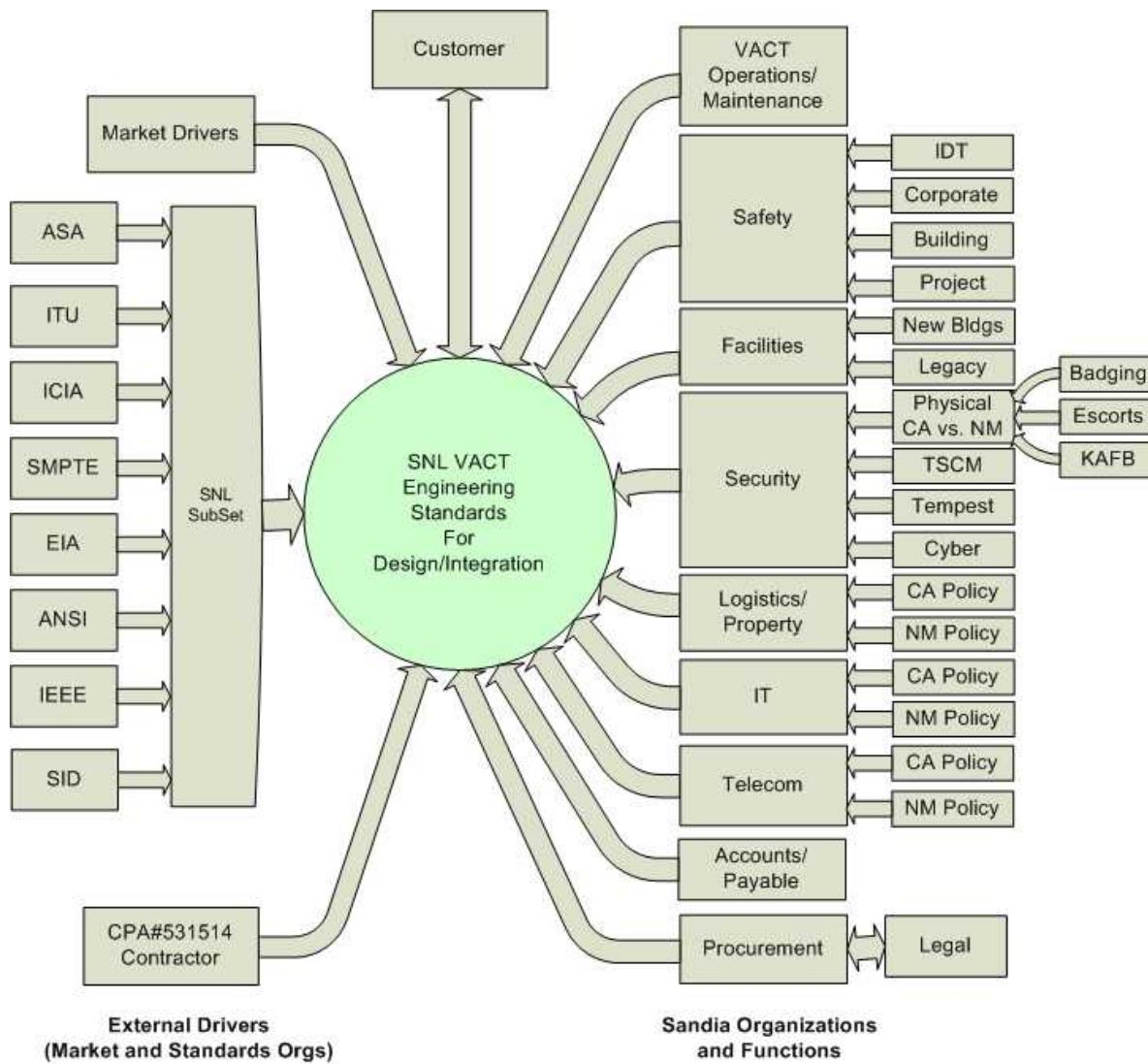
- Results:
  - Satisfaction rating by customers of 4.5 out of 5
    - Our customers become our advocates
  - We are commissioning new benchmarks this year to quantify the impact of the program



# VACT Standards for Design and Integration

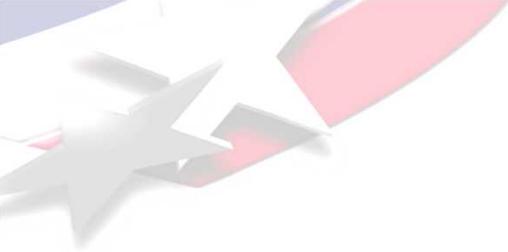
- Documents cover the following:
  - Design of pre-defined systems
  - Approved A/V components
  - Room layout preferences
    - Component placement
    - Table specifications
  - Facilitization requirements
    - HVAC, acoustics, lighting, electrical, room colors
  - Network and telecom requirements
  - Procurement processes
  - Security, ES&H, and site specific work requirements

# Integration Standards Drivers





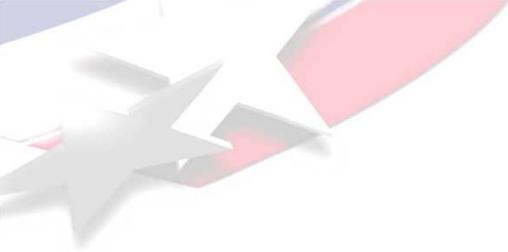
**In FY03, a detailed, rigorous process was applied to the solicitation and evaluation of vendors who could supply enterprise-wide integration services that conform to Sandia standards.**



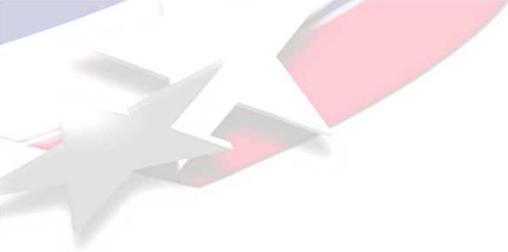
**A contract was awarded to Integrated Media Systems,  
Anaheim in December 2003 for a 5 year term**

**Within 7 months we procured 85% of the contract total  
amount**

**Lesson Learned**  
*Quality and consistency drive conformity*

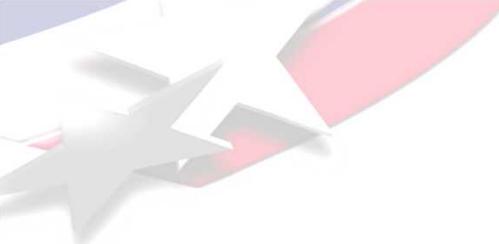


**A new Contract Purchasing Agreement (CPA) with a higher dollar limit was vetted through competition and awarded to Integrated Media Systems in August 2006**



# Contract Scope

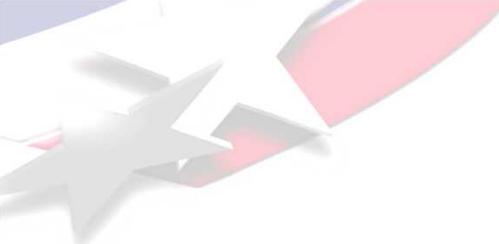
- Sandia VACT department developed the design and integration standards documents that govern the work under the contract
- The Contractor provides:
  - Standardized components and systems based on VACT engineering design standards that range from office spaces to auditoriums in scope
  - Expertise for working in both legacy buildings and new construction
  - Three year extended warranty plan on all systems
  - Local (Albuquerque and San Francisco/Bay Area) support



# Benefits of the CPA contract

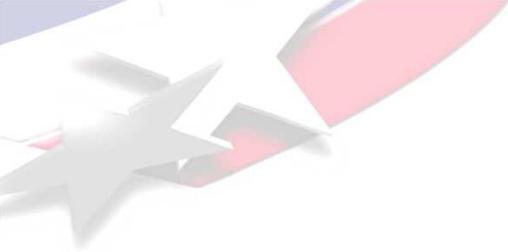


- Sandia customers have a single supplier for all A/V, videoconferencing and collaboration requirements
- Sandia buyers have a stream-lined, easy-to-use purchasing vehicle



# Benefits of partnering with a small business

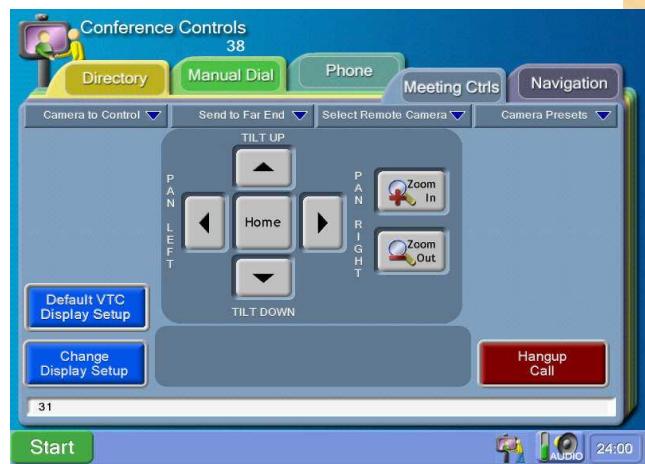
- We provide the internal Project Management
- IMS provides the integration expertise and industry experts
- Sandia has opportunity to influence the small business processes and to grow a relationship
- Sandia and IMS have developed a common language, processes, knowledge management, and shared expertise
  - A shared, OUO approved, knowledge management web application tool is used to track all projects and store archival data



# Standards Based Systems

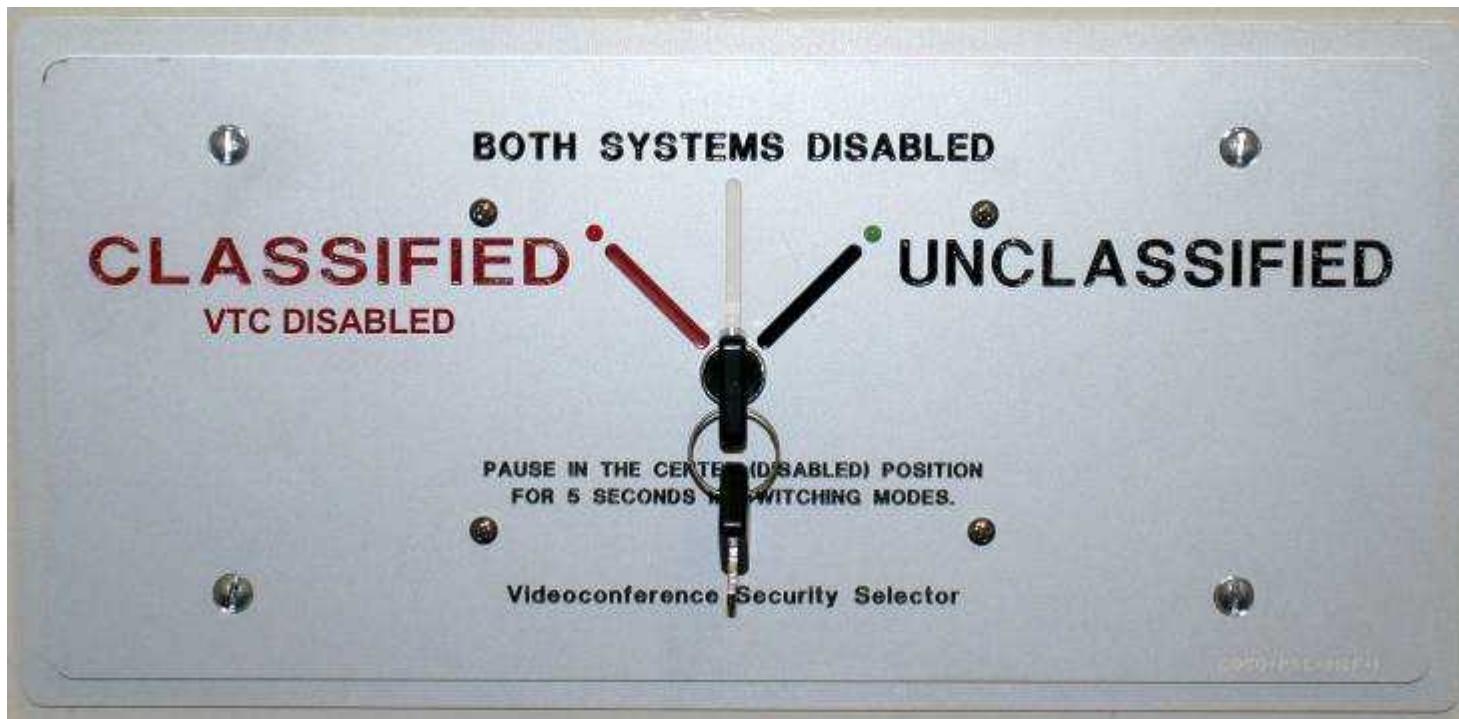
## Examples

# Room Control GUI v.11.0

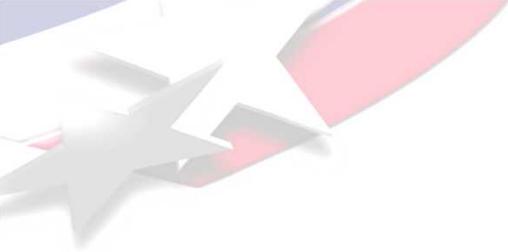


A/V equipment and codec agnostic interface

# S3 (S-Cubed) Security Selector



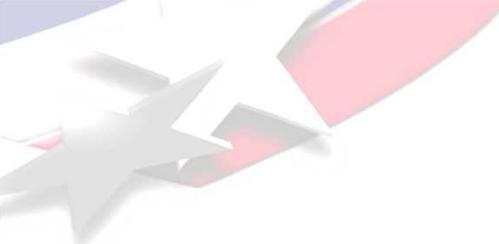
- S3 – Sandia Security Selector - Patent Pending
- Red/Black and Cutoff (Disable VTC) Selector
- Licensed for marketing and distribution by IMS



# S3 Installed



The S3 is a standard component of every system



# NM 825 CR

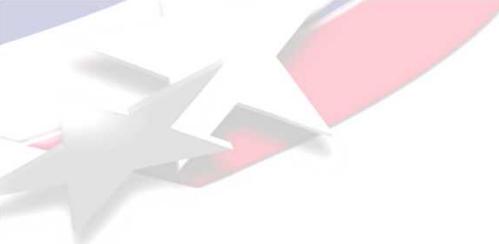


# CA DISL W133



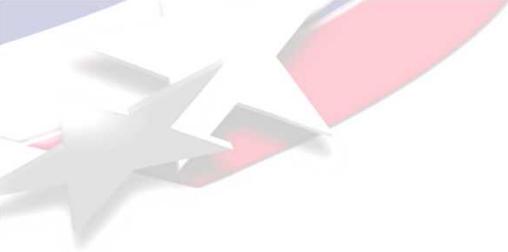
# MESA microLab (MESA CLASS C Room)





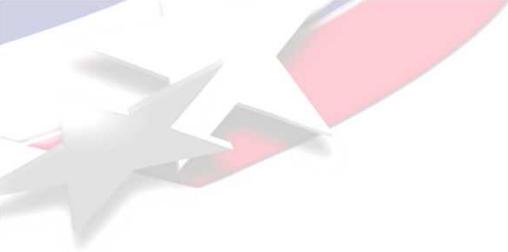
# NM 870 1030





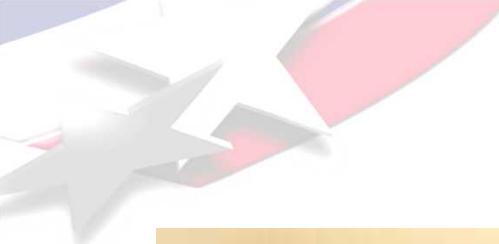
# NM 870 1030





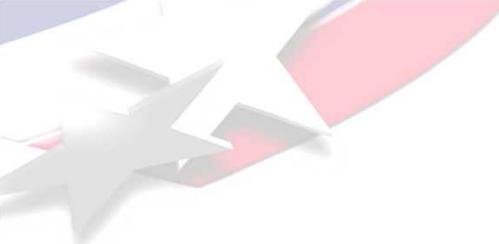
**NM 870 1030**





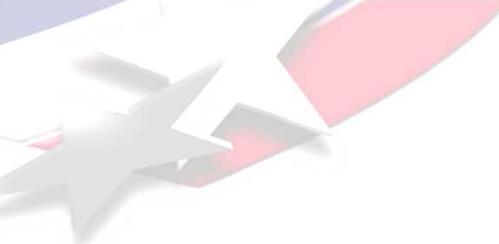
# CA DISL Executive Office



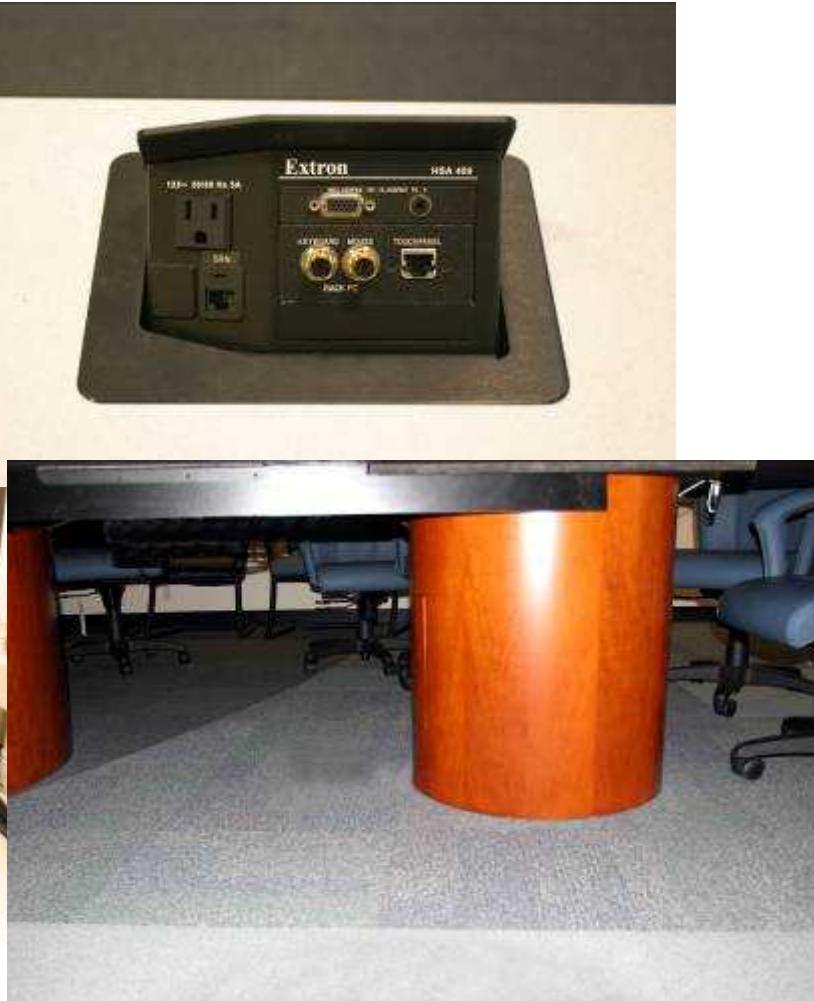


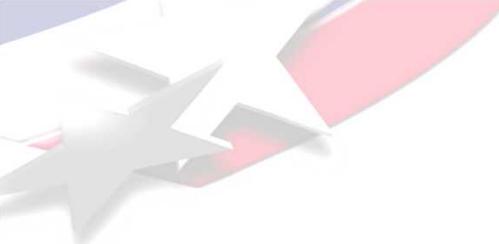
# System Components



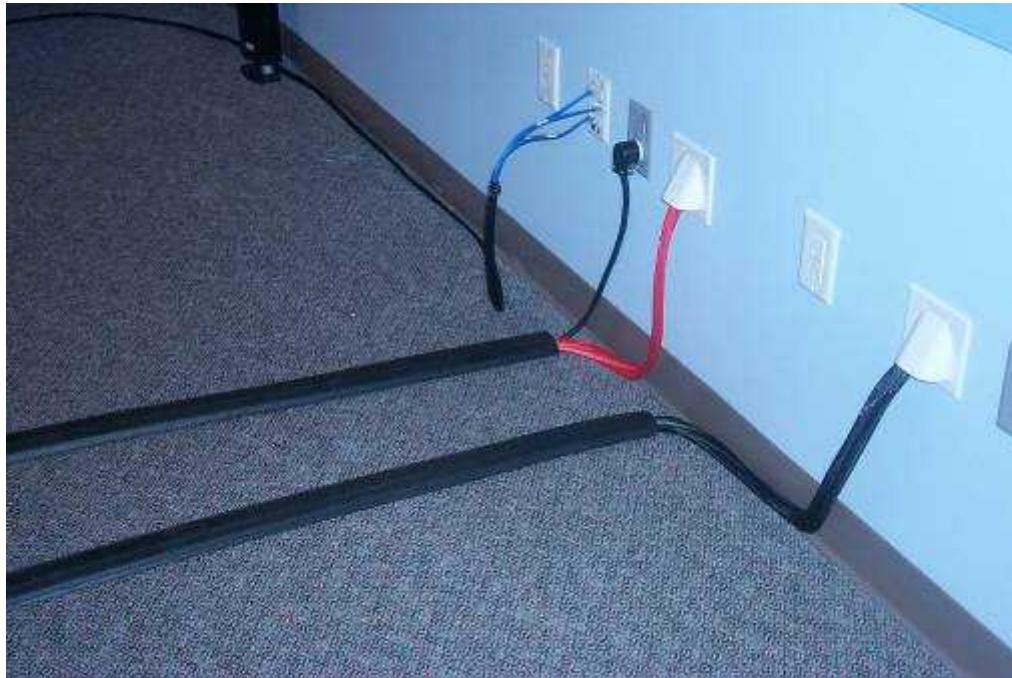


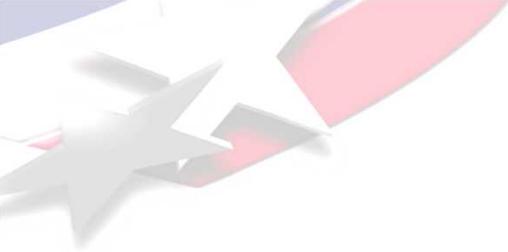
# System Components





# System Components





# Questions?