

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



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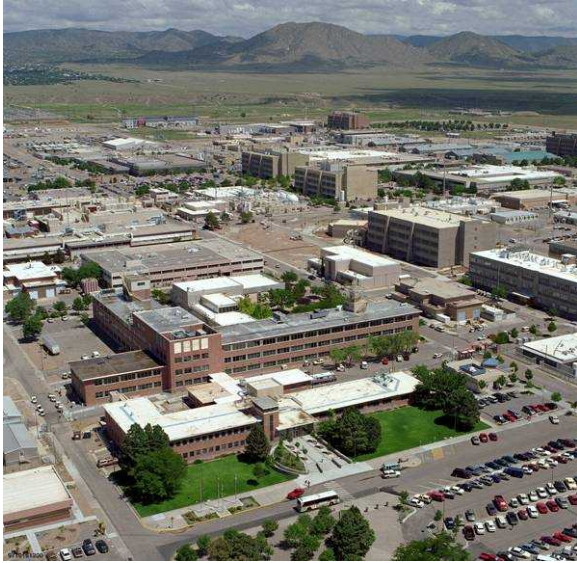
Mission-Driven Laboratory



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**



**Tonopah Test Range,
Nevada**



**Yucca Mountain,
Nevada**



WIPP, New Mexico



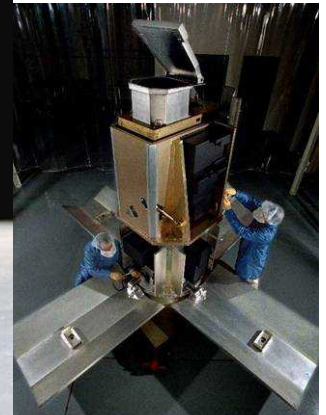
Pantex, Texas



Livermore, California

Four Mission Areas

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

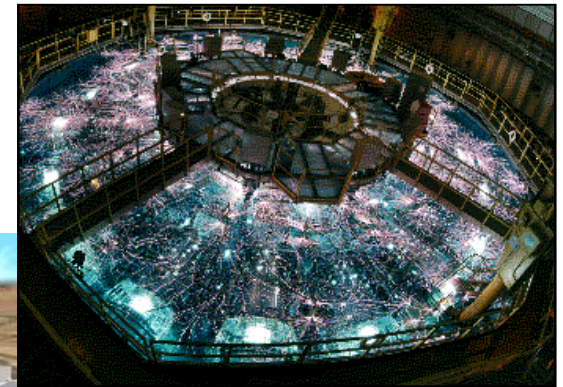


Nuclear Deterrence for National Security

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.



**Z Pulsed Power
Machine**

**Microsystems, Engineering Sciences
and Applications (MESA) complex**



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

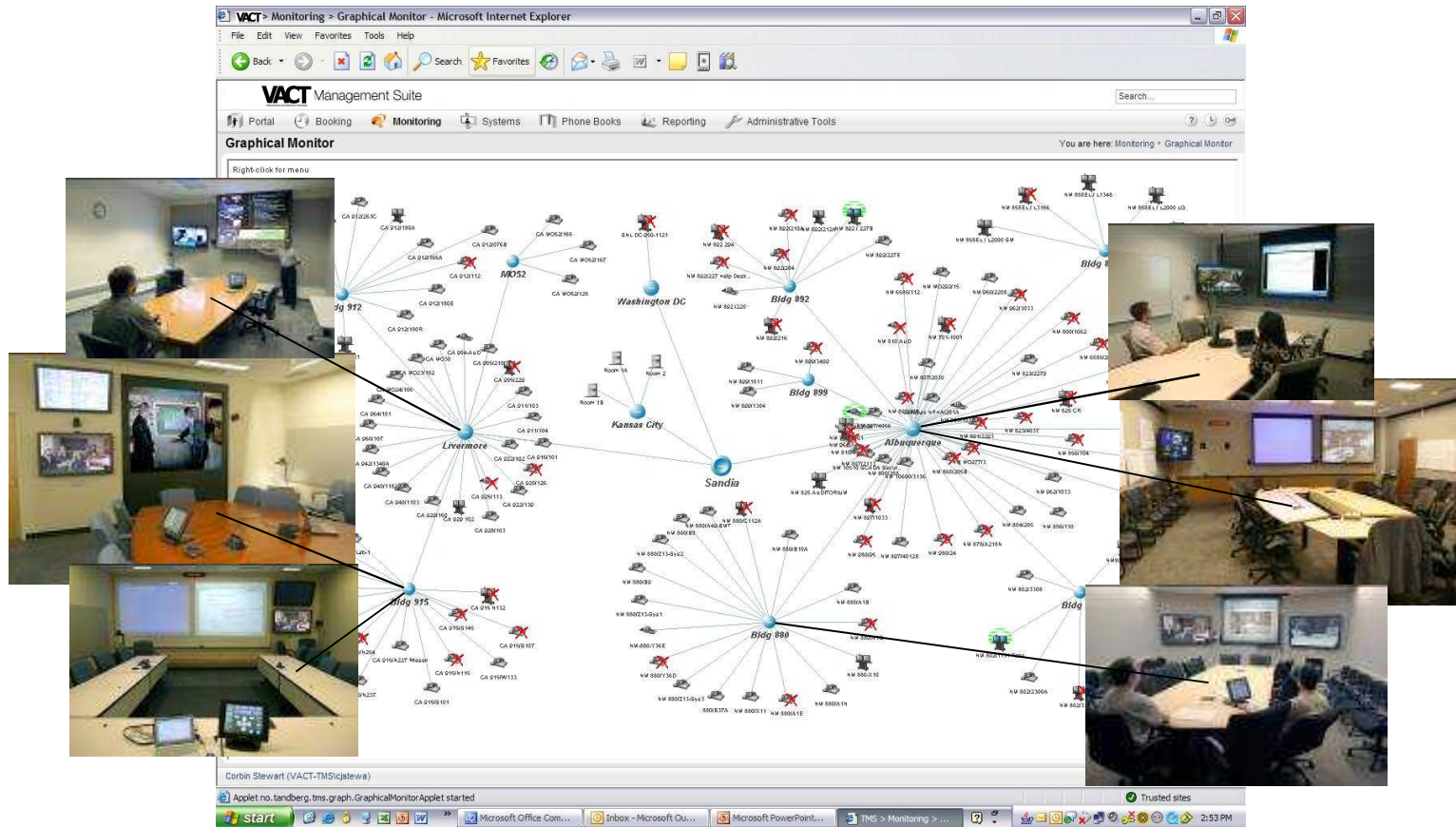
- Prior to FY03
 - No formal corporate standards existed for videoconferencing and collaborative systems
 - Systems were deployed ad-hoc and unique



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 DesignNet 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

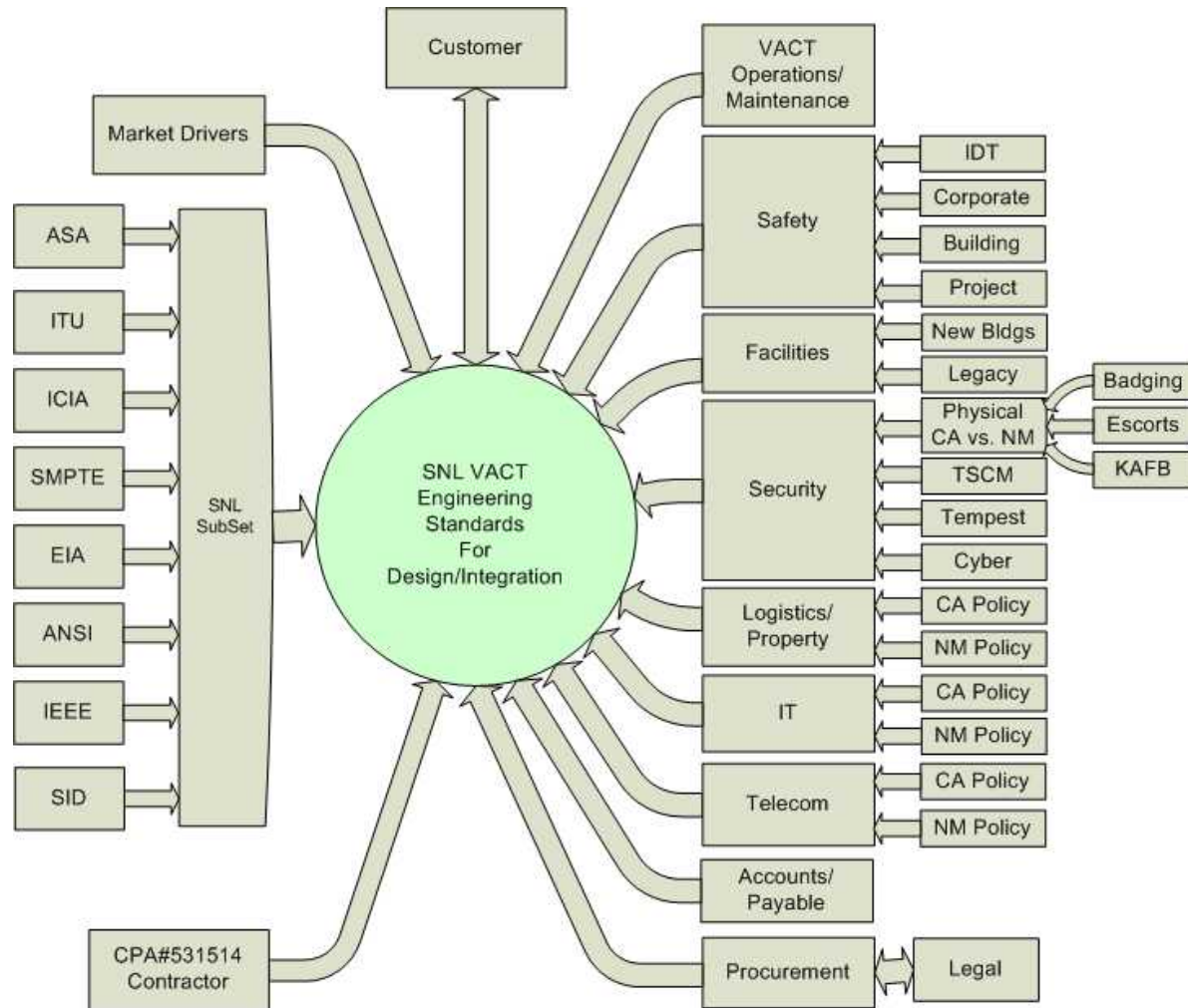
- Results:
 - Satisfaction rating by customers of 4.5 out of 5
 - Our customers become our advocates
 - We are commissioning new benchmarks this year to quantify the impact of the program



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 warrantee plan on all systems
 - Local (Albuquerque and San Francisco/Bay Area) support

Benefits of the CPA contract

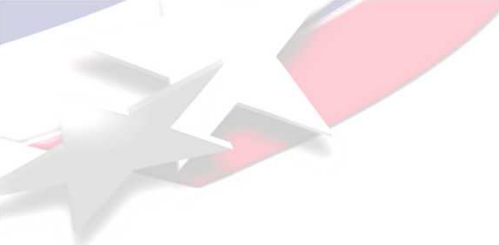


- Sandia customers have a single supplier for all A/V, videoconferencing and collaboration requirements
- Sandia buyers have a stream-lined, easy-to-use purchasing vehicle



Benefits of partnering with a small business

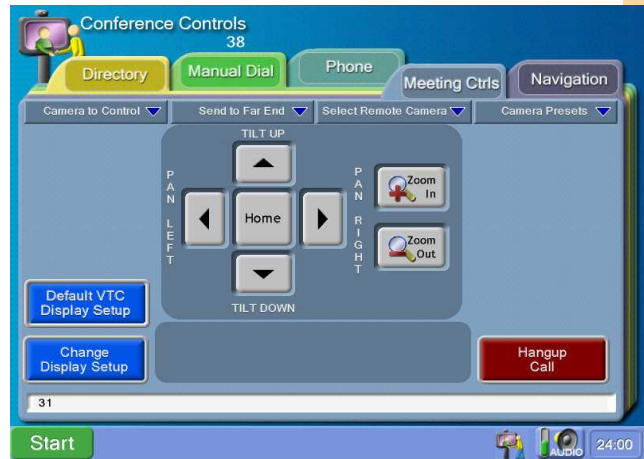
- We provide the internal Project Management
- IMS provides the integration expertise and industry experts
- Sandia has opportunity to influence the small business processes and to grow a relationship
- Sandia and IMS have developed a common language, processes, knowledge management, and shared expertise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



Standards Based Systems

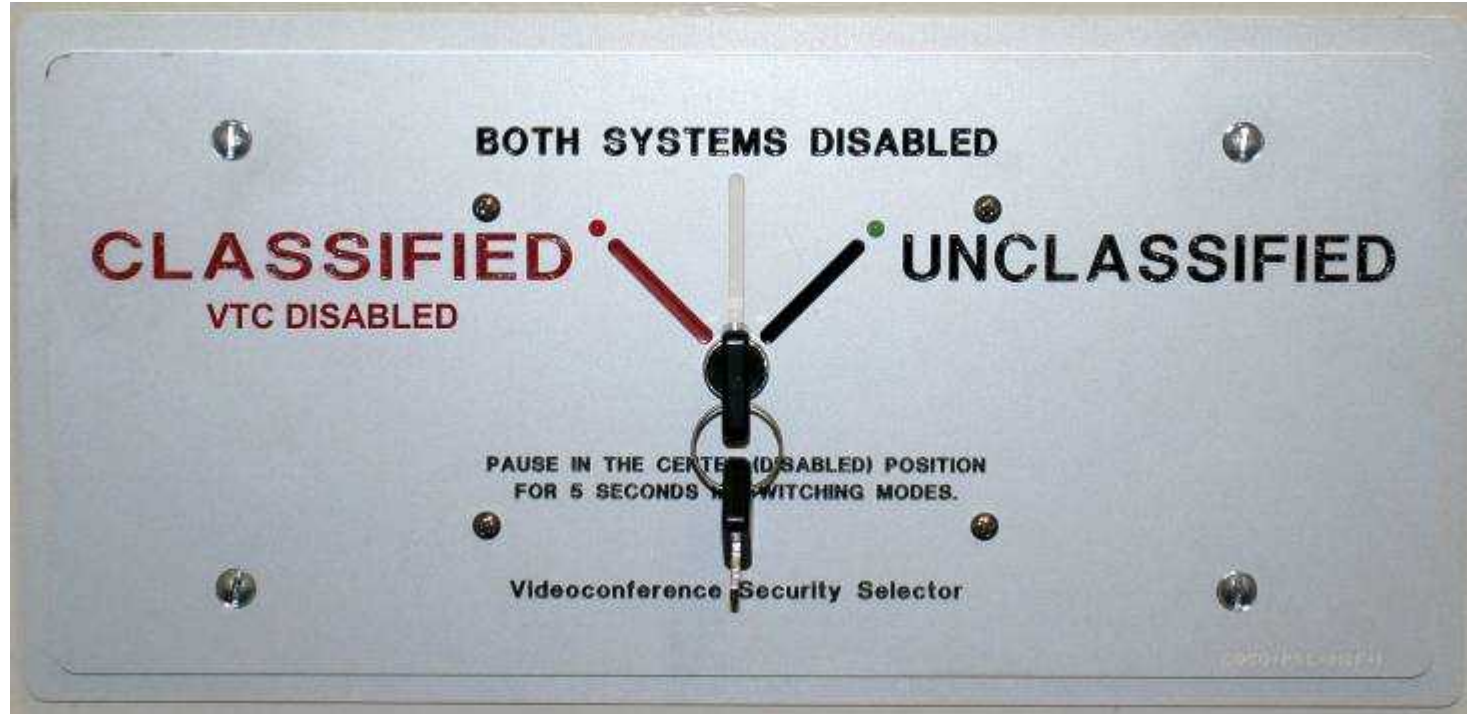
Examples

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

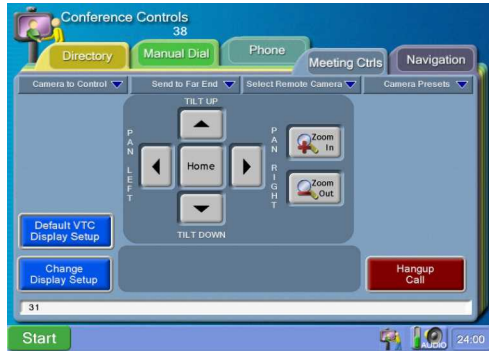
NM 825 CR



CA DISL W133



MESA microLab (MESA CLASS C Room)



NM 870 1030



NM 870 1030



NM 870 1030



CA DSL Executive Office



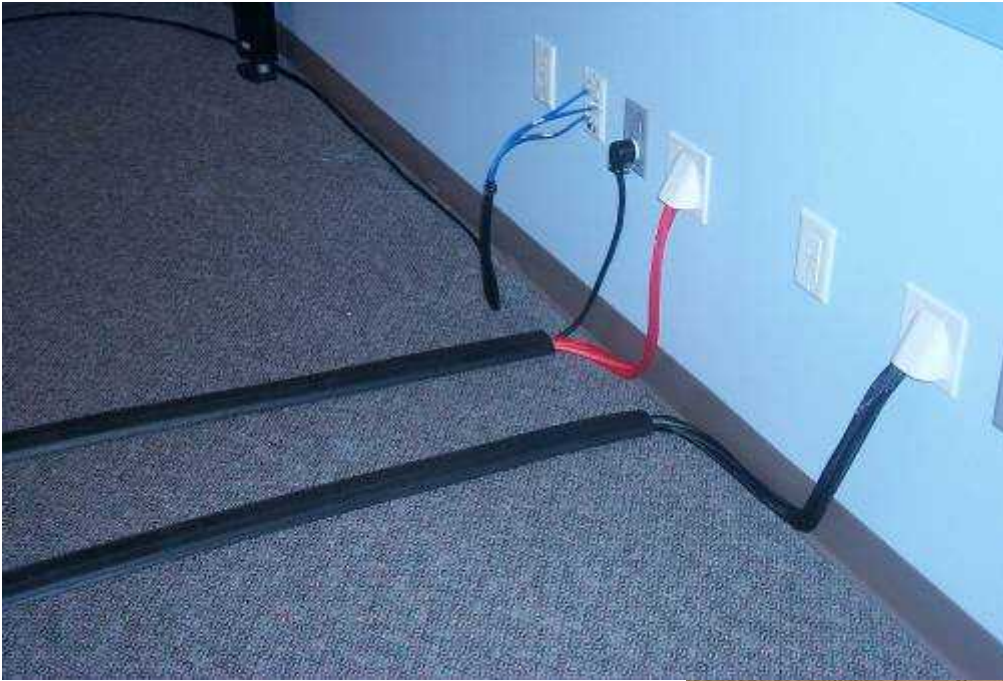
System Components



System Components



System Components





Questions?