SAND2011-1476P

RFQ 58636
AV and Videoconference Integration
Bidder's Conference

Videoconference and Collaborative Technologies Department (VACT)

Sandia National Laboratories

VACT

RFQ 58636 Technical Evaluation Team

David Dirks

Diane Gomes

Bob Fischer, Advisor
(Lovelace Respiratory Research, Inc.)

Alan Pomplun

Sandia National Laboratories

VACT

Please do not contact any Technical Team member regarding RFQ 58636 or integration work at Sandia National Labs.

For questions, contact Pam Williams, Procurement, directly

Sandia National Laboratories

VACT

Sandia is a Mission-Driven Laboratory

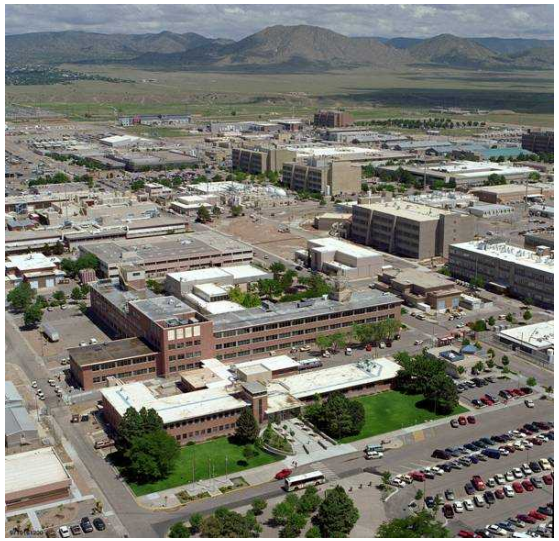
We serve many agencies of the US Government with:

- 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

Sandia National Laboratories

VACT

Distributed Facilities to Meet National Needs



Albuquerque, New Mexico

Tonopah Test Range, Nevada

L'Enfant Plaza, Washington DC

Kauai Test Facility, Hawaii

Livermore, California

WIPP, New Mexico

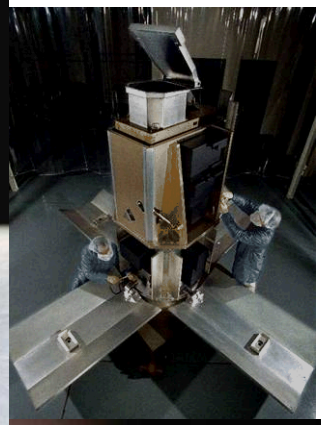
Pantex, Texas

Sandia National Laboratories

VACT

Four Mission Areas

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



Sandia National Laboratories

VACT

Nuclear Deterrence for National Security

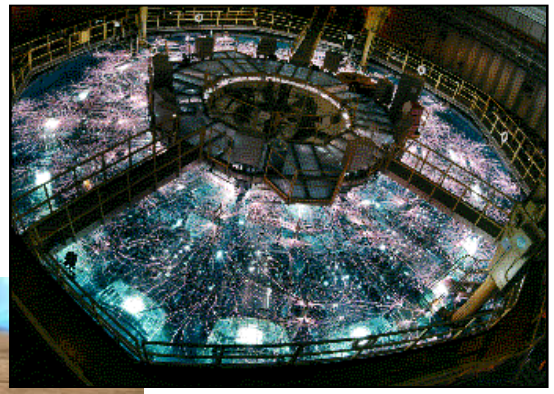
Our Defense Programs Mission

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.

B1 bomber drops B83

Microsystems, Engineering Sciences and Applications (MESA) complex



Z Pulsed Power Machine

Sandia National Laboratories

VACT

Sandia is a major user of collaboration technology

- Sandia is geographically diverse
- Volume of video calls
  - In FY10, videoconferencing sessions logged over 9,000 calls
- Size of deployed systems
  - 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

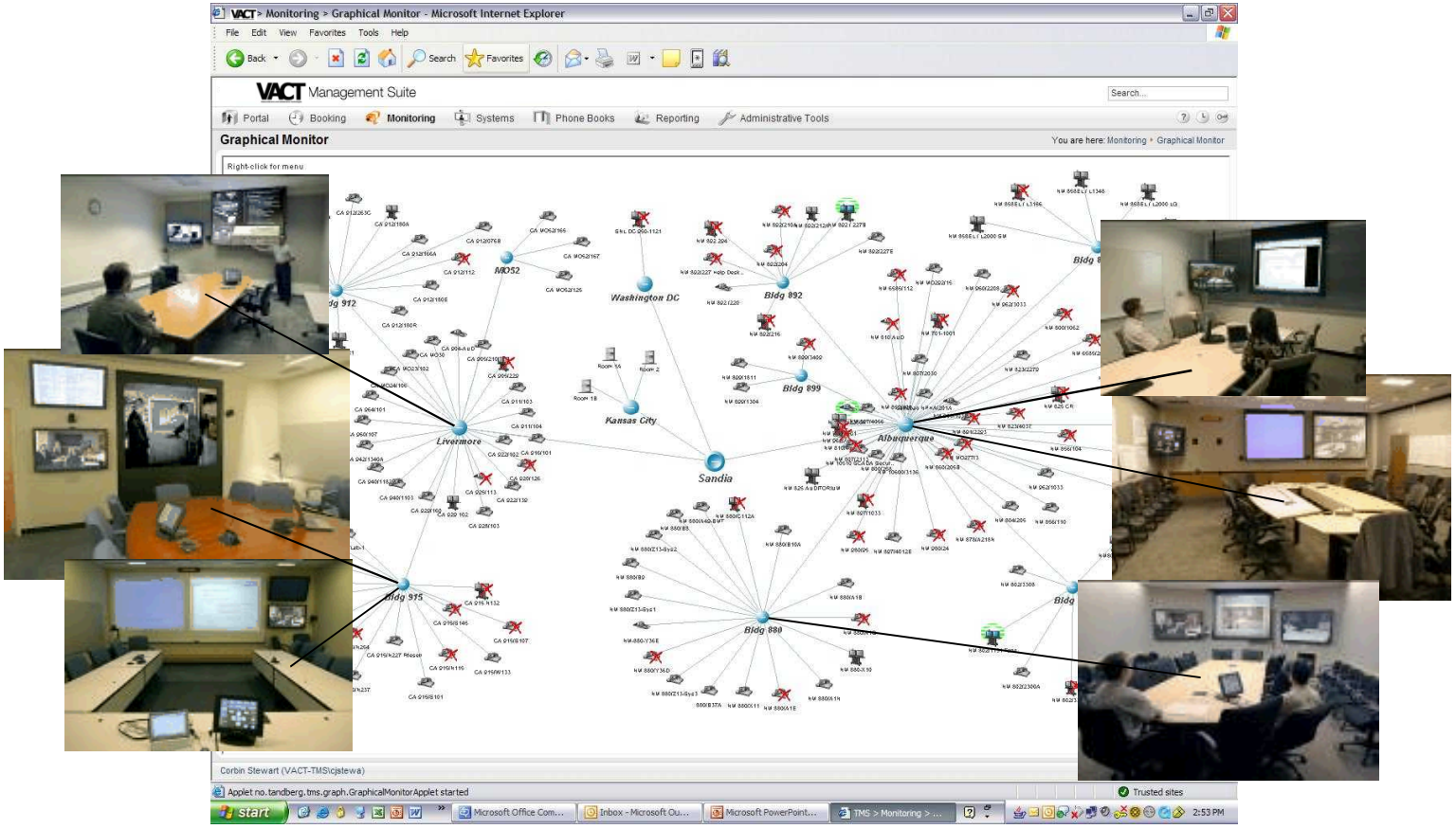
Sandia National Laboratories

VACT

Application of Enterprise-wide Standards

- Benchmark our services (through a third party) in order to establish a baseline for measurable improvements
- Defined corporate standards for systems and integration
  - SAND2008-3830 (OUO) and Standards Docs
- Awarded a contract for integration that allowed us to deploy enterprise-class, standards-based systems
  - CPA for integration
- Market and deploy our processes and product to the enterprise

Enterprise - Class Collaboration Systems



Standards – based and network centric

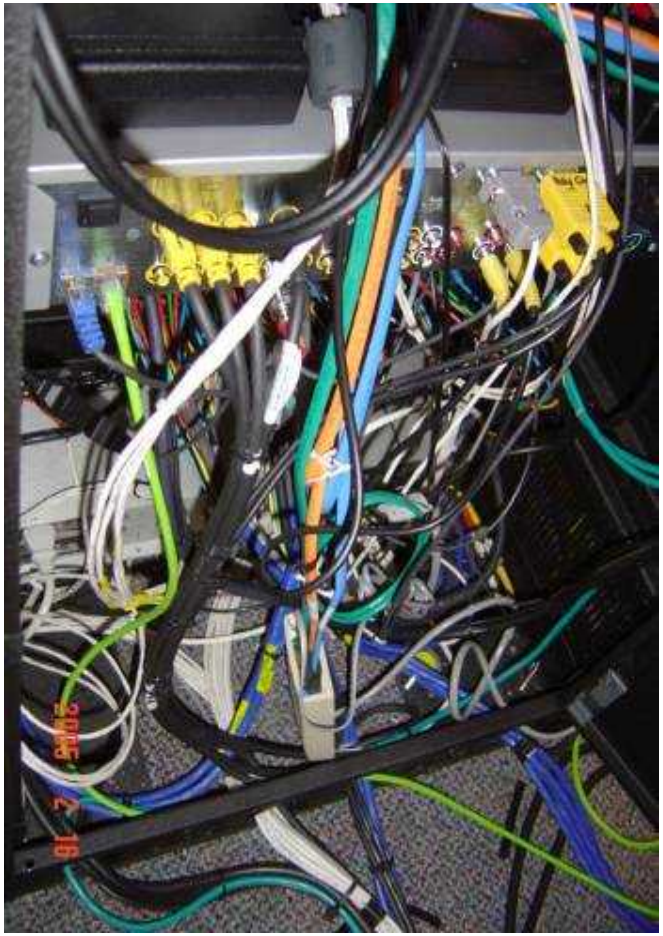
Sandia National Laboratories

VACT

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

Lack of Standards – Example 1

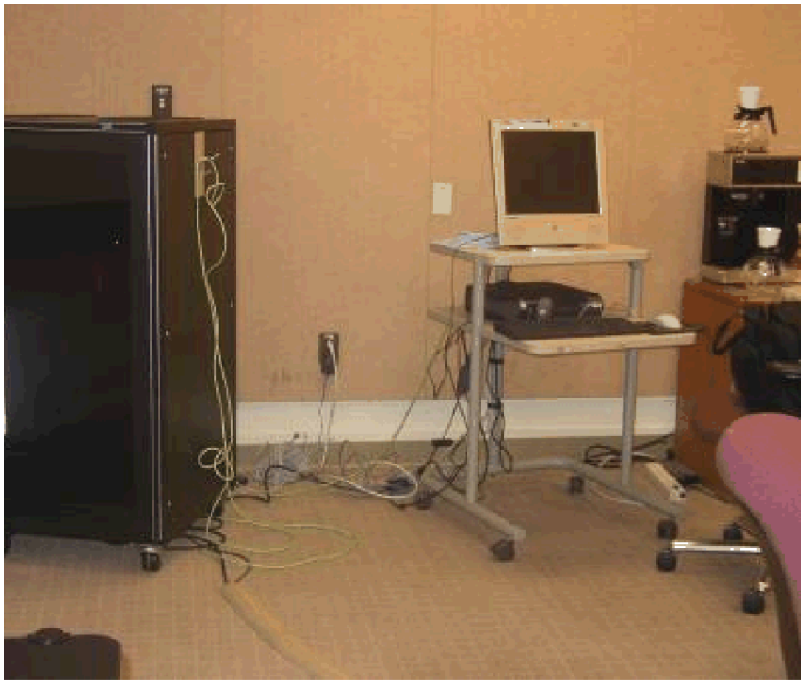


- Not wired to industry standards
- Does not interoperate with other rooms
- No documentation

Sandia National Laboratories

VACT

Lack of Standards – Example 2



Business Benefits of Applying Standards

- Business case
  - Provides a lower Total Cost of Ownership for the corporation
    - Reduces need for “forklift” upgrades
    - Increases ROI for collaboration systems
- Operations case
  - Users are more familiar with the systems and require less intervention

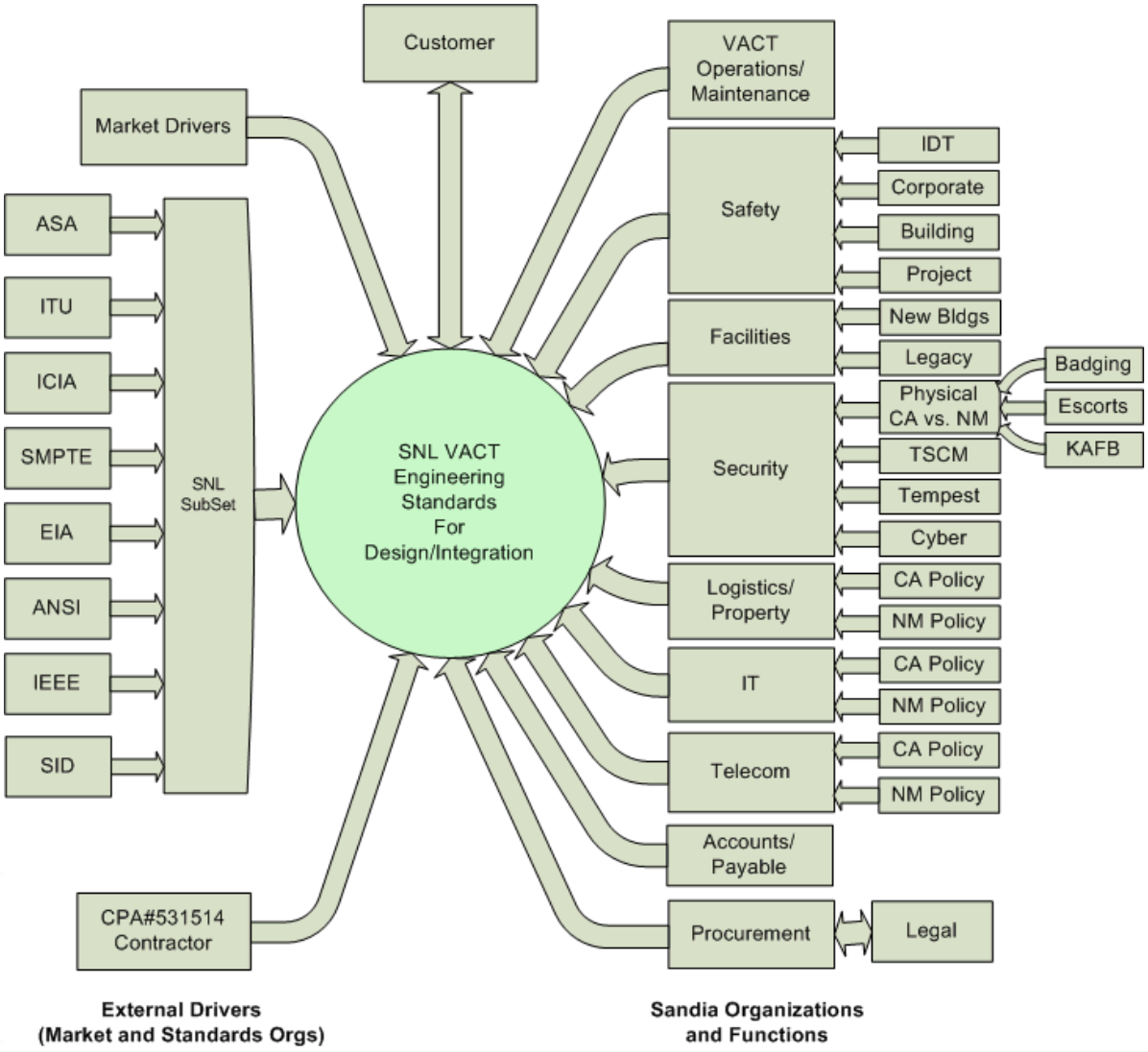
Lesson learned

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
  - Only equipment that meets cyber security requirements is deployed
  - Consistent deployment of secure systems
    - VACT developed and received approval for Red/Black systems integration
    - S3 Security Selector – Patent 7477614B2; other patents pending
    - S4 Security Selector – Patent pending

Standards Drivers



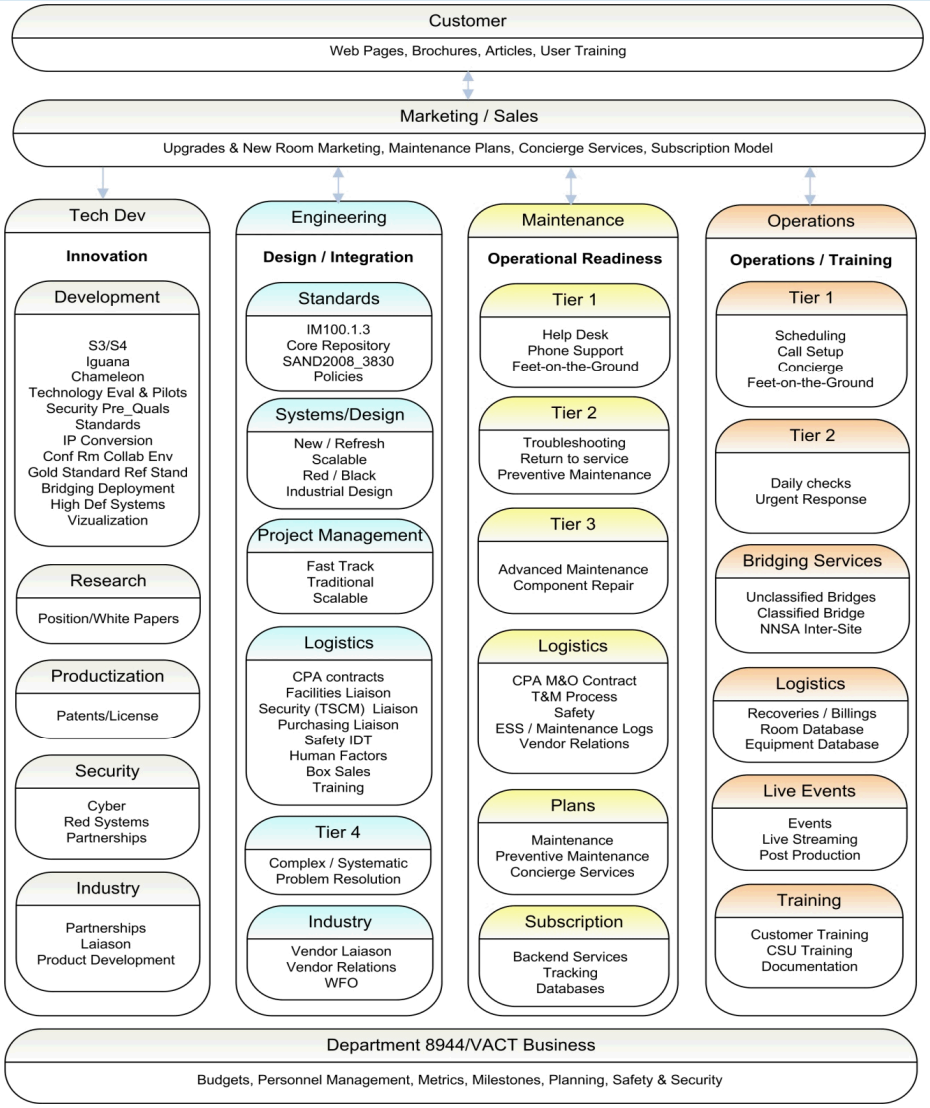
Sandia National Laboratories

VACT

Videoconference and Collaborative Technologies (VACT

- Provide standards and services for videoconference and collaboration corporate-wide
- Awarded “Center of Excellence” for NNSA by CIO, NNSA
- Providing standards and integration solutions for NNSA and DOE

VACT Functional Overview



Sandia National Laboratories

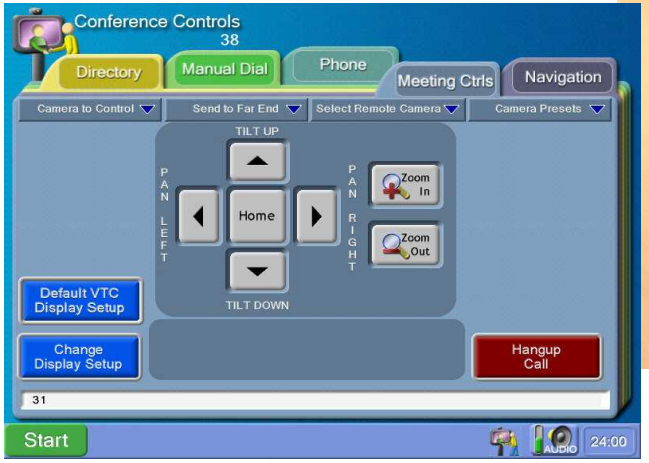
VACT

VACT Developed Core Technologies

- System Control
- Codec Security / Power Management
- DOE Single Codec Red/Black VTC

Room Control GUI v.11.0

release January 2006



A/V equipment and codec agnostic interface

Sandia National Laboratories

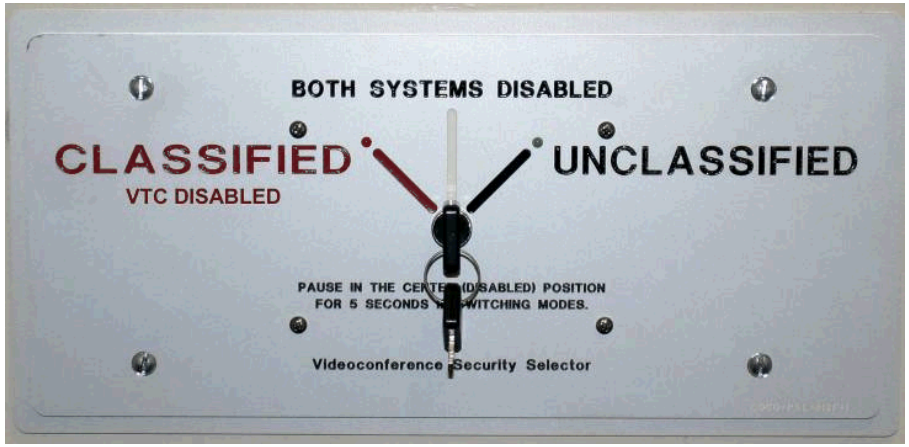
VACT

Iguana

Sandia National Laboratories

VACT

S3
Sandia Security Selector



S3 ver. I – 5 gang box

S3 ver. II – 2 gang box

- Red/Black and Cutoff (Disable VTC) Selector
- Patent 7477614B2; other patents pending

Sandia National Laboratories

VACT

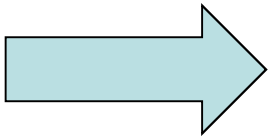
S4 – Sandia Security Selector (2nd Generation – patent pending)

Touch panel LCD in a
2-gang wall box

Sandia National Laboratories

VACT

Chameleon (Red/Black VTC)



Sandia National Laboratories

VACT

NM 825 CR

Sandia National Laboratories

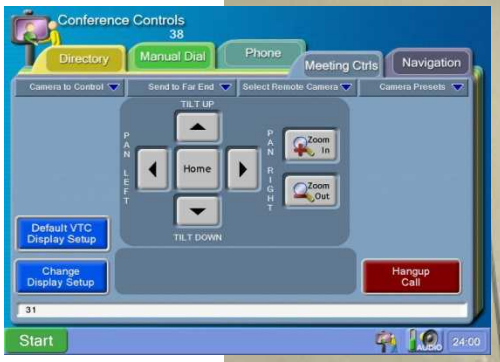
VACT

CA DISL W133

Sandia National Laboratories

VACT

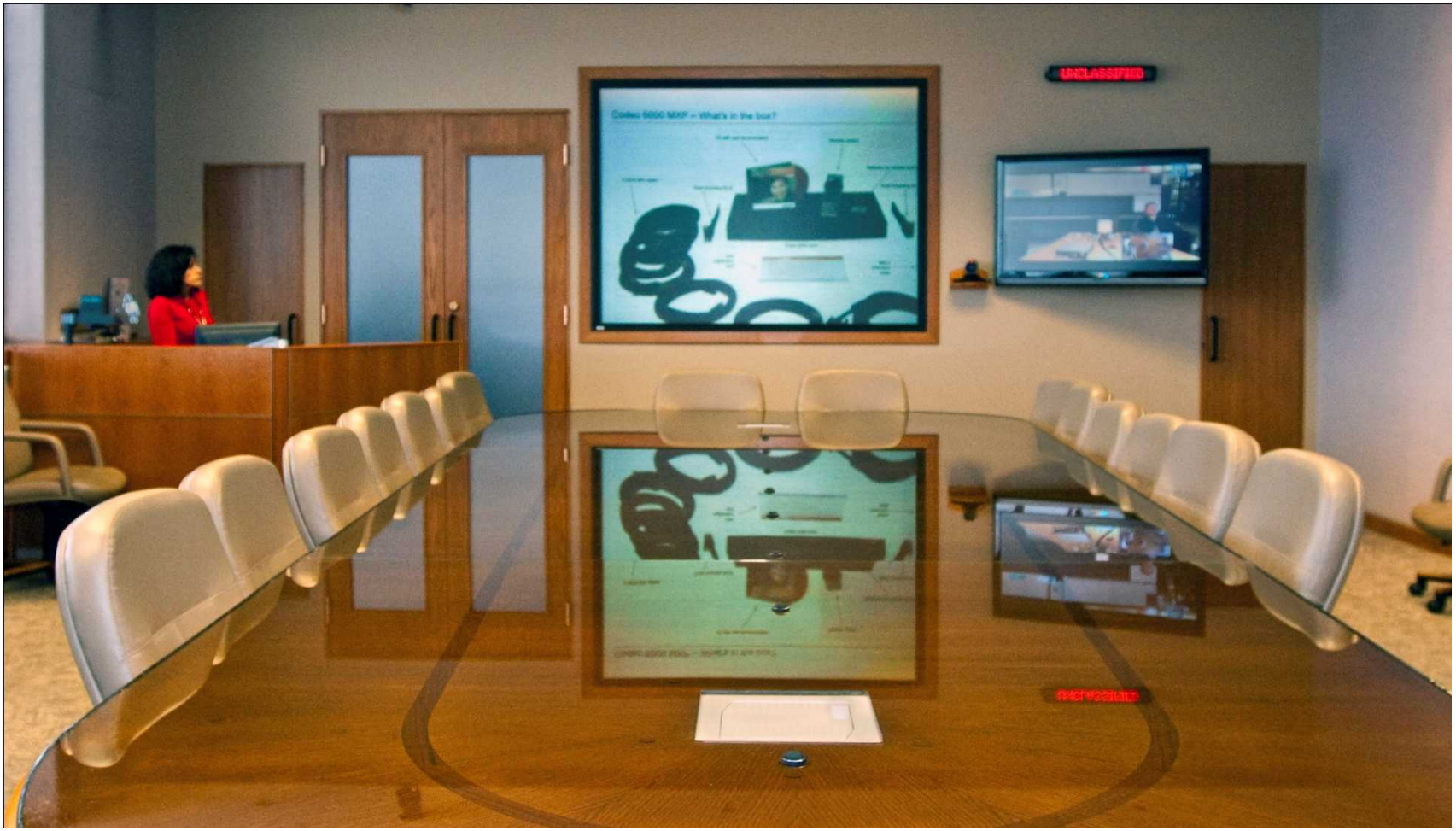
MESA microLab (MESA CLASS C Room)



Sandia National Laboratories

VACT

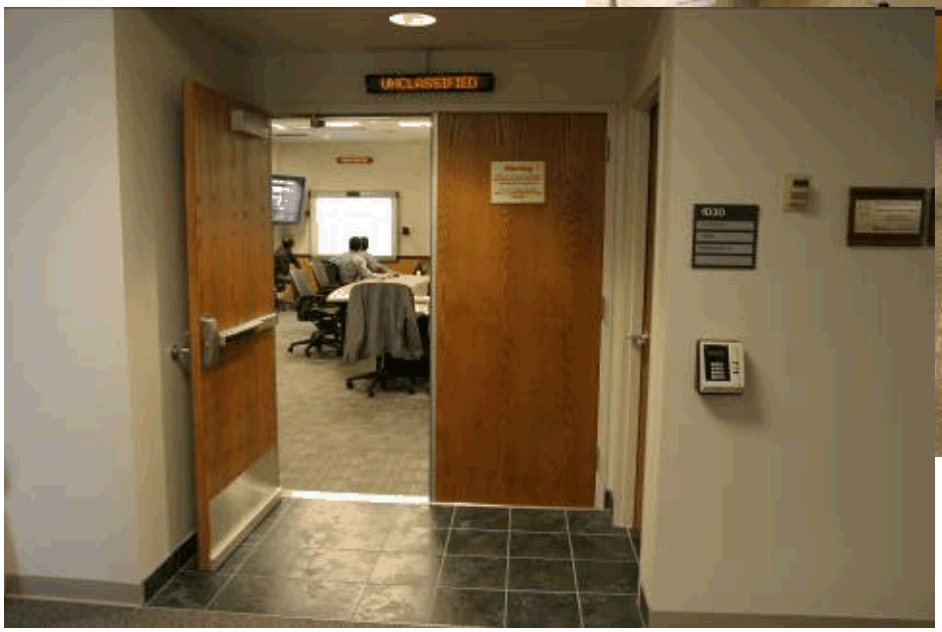
NM 802 3190



Sandia National Laboratories

VACT

NM 870 1030



Sandia National Laboratories

VACT

NM 870 1030

Sandia National Laboratories

VACT

NM 870 1030

CA DISL Executive Office

Sandia National Laboratories

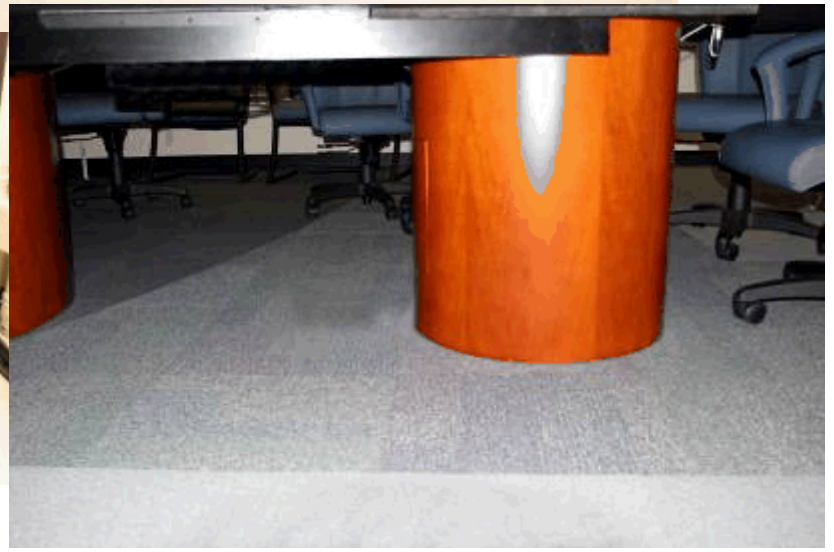
VACT

System Components

Sandia National Laboratories

VACT

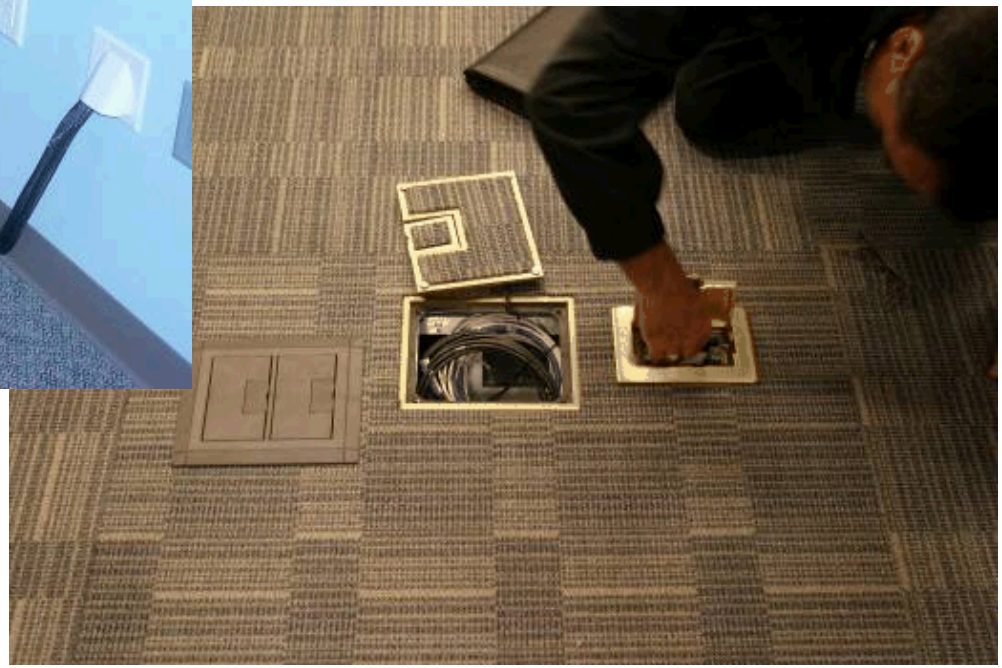
System Components



Sandia National Laboratories

VACT

System Components



Sandia National Laboratories

VACT

Thank You

Sandia National Laboratories

VACT