



2011 Initiatives

Technical Guidelines Development
Committee
NIST-EAC
July 26th 2011



What is the Key Election System Issue

- **Military Voter Registration Not the Problem**
 - 71% = General Electorate
 - 77% = Military voters
- **Voter Participation Rates not the problem**
 - 64% = General Electorate
 - 53% = Military voters
 - 71% = Adjusted military voters
- **Overwhelming voting failure is in ballot delivery and return times**
- **Absentee Ballot Return Rates:**
 - 91% = General Population
 - 67% = UOCAVA voters
 - 62% = Military Voters

2008 Election		
Stage of voting process	Number of additional failures over general voting population	% of total failure
Registration Failure	4,057	1.5%
Ballot Delivery Failure	20,068	7.5%
Ballot Return Failure	206,771	77.6%
Ballot Casting Failure	35,645	13.4%
Total	266,540	



FVAP Key Initiatives

- **Direct to the Voter Assistance**
 - Eliminate much of the need for Voting Assistance Officers
 - Make the process easy, quick, intuitive and seamless
 - Communicate in effective terms and modes
- **Expanded Assistance for Election Officials:**
 - Provide voters tools that States will use
 - Assist in compliance
- **Transparency and Data-Driven Operations:**
 - Improve Post-Election Surveys to correct incorrect policies based on poor data
 - Post all data and methodology online
 - Combine data collection with EAC



Leverage Technology

- **Focus**

- Improve ballot delivery and return times
 - 30 milliseconds to voter; not 30 days
 - 45 days prior (MOVE Act)
 - <7 days back from voter
- Reduce voter error; easy voter use
- Tailor to State requirements
- All available through FVAP.gov

- **Tools**

- Online FPCA
 - Online FWAB
- } All use hard-copy print-out
} wet signature, postal return
- Online delivery and marking of full, precinct-level ballots
 - Electronic Absentee Voting Demonstration & Pilot Programs

Online Tools

Registration Wizard

- All States
- **92,565** Downloaded (2010)
- Online registration and absentee ballot request
- Only have to know addresses and personal information
- Automatically completes all forms
- Provides complete instructions, pre-addressed envelopes
- Print out, sign, send in by mail

Full Ballot Wizard

- 17 States participated
- **3,097** ballots downloaded
- Online delivery of blank ballot
- ALL races and candidates
 - Federal, State and local elections
 - By precinct
- Online marking option
- Provides complete instructions, pre-addressed envelopes
- Print out, sign, send in by mail

Back-Up Ballot Wizard

- All States
- **20,536** Downloaded (2010)
- Online marking for Federal races and candidates
 - By Congressional District
 - Allows for additional write-ins for State and local if allowed by State
- Provides complete instructions & pre-addressed envelopes
- Print out, sign & send in by mail



Demonstration and Pilot Projects

- DoD required by law to conduct electronic absentee voting demonstration project
 - 42 USC 1073ff note; 2002 and 2005 NDAA's
 - Mandates
 - Cast Ballots through electronic voting system
 - Only Uniformed services voters specified
 - States must agree to participate
 - Report afterwards
 - Statistically significant number of participants
- DoD allowed to wait for EAC certified guidelines
 - EAC establishes guidelines
 - EAC also certifies it will assist in project
 - Different requirement than MOVE Act
 - DoD may further delay implementation



2011 Efforts

- Wounded Warrior Research
 - Disability Analysis
 - Voting Assistance Analysis
 - Operation Vote
- VSTL Testing
- Penetration Testing
- Grants
- Cyber Security Analysis Group
- UOCAVA Solutions Summit



Wounded Warrior Research Initiative

Purpose: To analyze voting assistance requirements for wounded and injured military voters

- **Individual Interviews**
 - Wounded Warrior
 - Voting Assistance Officers
 - Coordinated with EAC and Heroes Grant recipient
- **1st phase complete:**
 - Over 100 interviews
 - Assess current level of accessibility and engagement with Voting Assistance Program
- **2nd phase in-process:**
 - Execution of Operation VOTE
 - Validate research findings
 - observe usability challenges with existing fvap.gov tools and EVSW implementation



VSTL Testing

Purpose: Establish System Security Baseline

- Evaluate the quality of testing across VSTLs
- Evaluate the sufficiency of the EAC 2010UOCAVA Pilot Program Testing Requirements
- Identify common gaps across vendors
- Establish a baseline on how well vendors are complying

Execution:

- FVAP Funded Testing at Wyle Laboratories, Inc. and SLI Global Solutions

EVSU Systems

- Credence
- Democracy Live
- Everyone Counts
- Konnech

Voting Systems

- Dominion Voting
- ES&S
- Scytl

- Results will not be vendor-specific



Penetration Testing

Establish System Security Baseline (cont'd)

- Active Penetration Testing
 - Conducted during “mock” election with votes being cast online
 - Dominion Voting
 - Everyone Counts
 - ScytI
 - Three Red Teams
 - Air Force Institute of Technology Center for Cyber Space Research
 - RedPhone, LLC
 - DoD
 - 72-hour testing period
- Evaluate the sufficiency of the UOCAVA Pilot Program Testing Requirements
- Identity common vulnerabilities across vendors
- Results will not be vendor specific



Grants Process

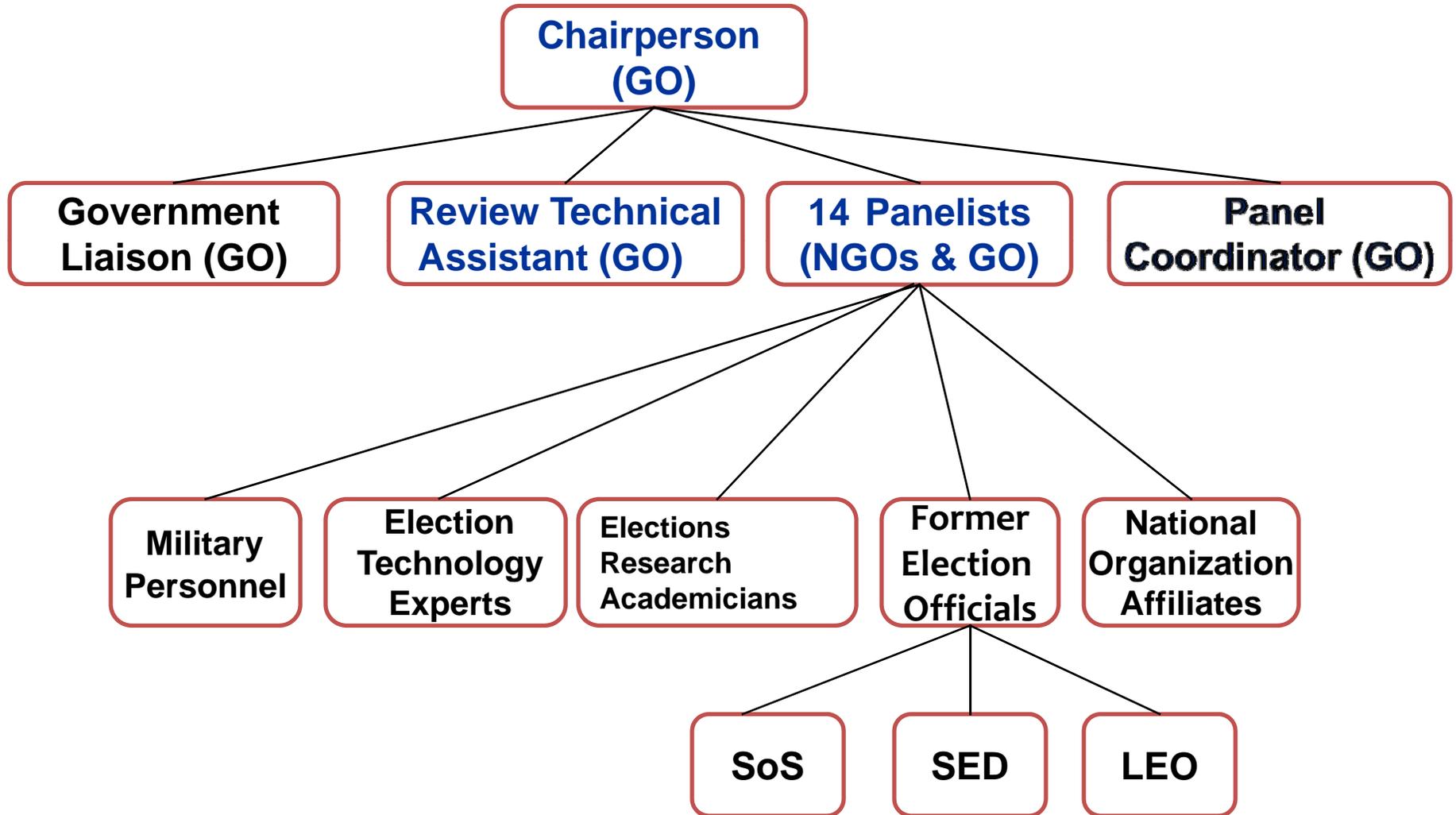
General Info

- **Multiple competitive awards totaling \$16,200,000**
- State and local governments
- Full Grant **notice available from www.Grants.gov**
 - Announcement Number BAA HQ0034-FVAP-11-BAA-0001
 - Or go to Grants.gov and search under “FVAP” keyword search
- **Applications closed 13 July**

Technical Criteria

- **Significance:** Addresses key problems
- **Sustainability:** Available beyond term of grant
- **Impact:** Number of UOCAVA voters served;
- **Strategic Approach:** Well-defined hypothesis and plan to test validity of hypothesis
- **Innovation:** Discovery or implementation of new technologies
- **Scalability:** application across jurisdictions
- **Collaboration:** Involvement of other election jurisdictions/partners
- **Cost Benefit Analysis:** Anticipated Return on Investment

Grants Technical Review





Cyber Security Analysis Group

- Government-only Review Group
 - Provides independent review and advice on FVAP efforts
 - review cyber security efforts in support of the remote electronic voting demonstration project

NIST	EAC
FVAP	FBI
Air Force Institute of Technology	Defense Information Systems Agency
Defense Intelligence Agency	Defense Technical Information Center
National Security Agency	Naval Research Laboratory
DoD Chief Information Officer	Under Secretary of Defense (Personnel & Readiness)

- Raised the idea of developing a Concept of Operations



UOCAVA Solutions Summit

Purpose: Provides for an open dialogue and exchange of ideas on electronic voting properties and build out of risk matrix for current UOCAVA Absentee voting environment.

Invitees :

- Public advocates and critics
- Advocacy groups
- Service providers
- Government agencies
 - EAC
 - NIST
 - Members of Cyber Security Review Group

Next meeting:

- San Francisco, 6-7 AUG 2011
- Prior to EVT/WOTE and USENIX
- Topic: Identify risk drivers to allow for comparative risk & policy analysis



How Electronics Standards Development Should Be Framed

GAO Guidance

- FVAP & EAC need detailed plans
- Necessary plan elements:
 - results-oriented action plan
 - Goals, tasks, milestones, timeframes, and contingencies
- FVAP-EAC Memorandum of Understanding
- EAC-NIST Interagency Agreement
- MOVE Act also requires EAC to develop detailed timeline for development of electronic absentee ballot guidelines

Risk = % x impact

- Acceptable risk level policy decision already made
 - It **IS** the current voting system
 - Accepts 1/3 of absentee ballots never returned
- We should accept equivalent risk in new UOCAVA systems
 - May have different probability or impact
 - Can reduce probability and/or mitigate impact
 - Goal is to keep risk level at least the same, if not better

Path Forward

Define the Risk

- Use the EAC Risk Assessment Tool & NIST IT Risk Assessment Tools
- Evaluate the current UOCAVA absentee ballot system as the baseline
- Develop comparable measures for future voting systems

Establish Properties

- What “properties” are unique to an electronic absentee voting system?
- To achieve the same level of risk as current system
- Even if DON”T believe properties are technologically feasible
- Not system specific

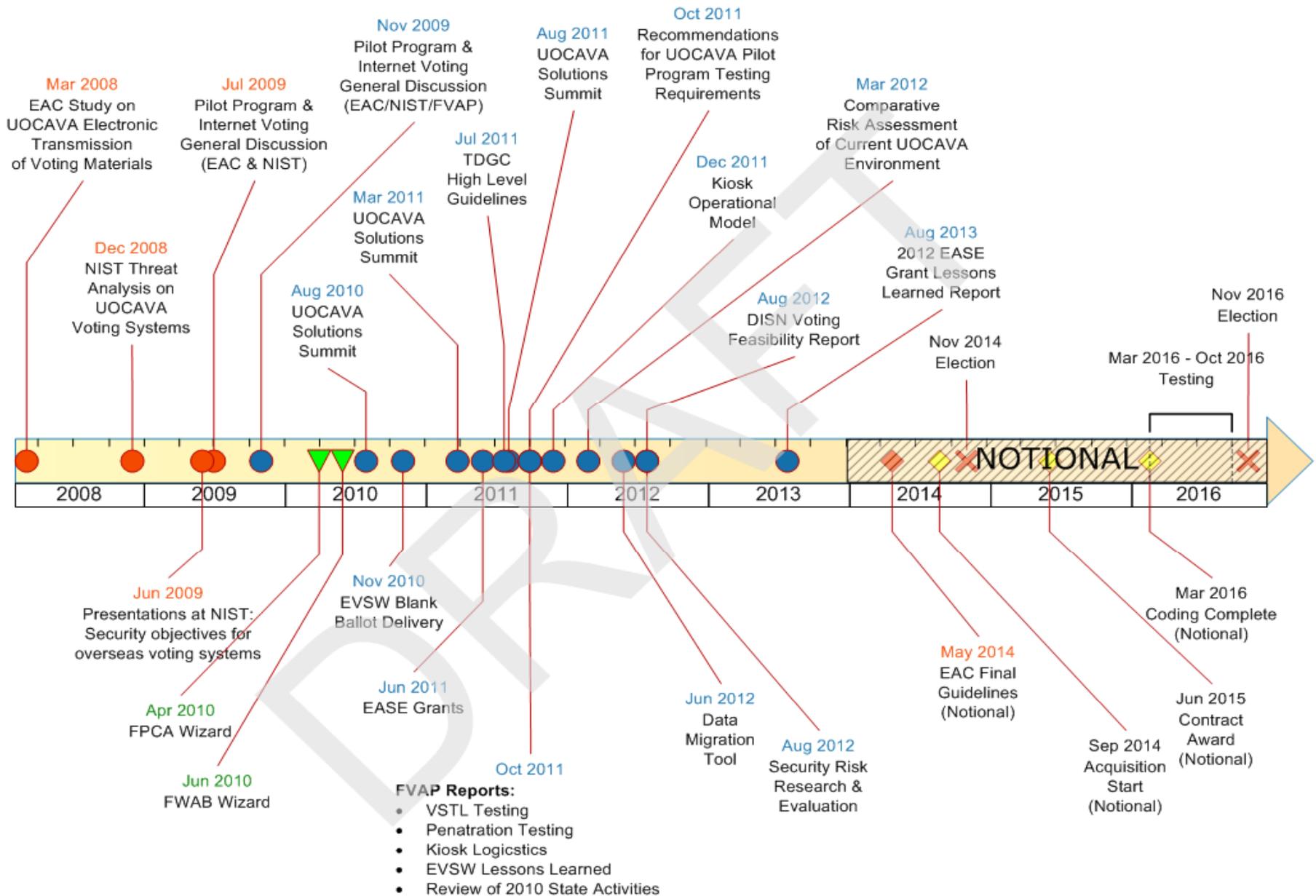
Establish Interim Pilots

- Integrate current work and align with timeline
- Also examine national level threat risks
- Develop decision points for iterative development
- Attach dates for those decision points and milestones



Comparative Risk Assessment

- FVAP conducting a Comparative Risk Analysis
 - EAC Risk Assessment Tool and NIST Risk Management Framework
 - Initial Risk Assessment by March 12
 - Comparative Risk Assessment by August 12
- Assess risks associated with the current UOCAVA Voting Environment
- Compare to risks associated with remote electronic voting
- TDGC Support Needed
 - Review methodologies
 - Comment on preliminary results
 - Incorporate results into High Level Guidelines



Timeline for discussion only – not approved by DoD, EAC, or NIST



Recommended Next Steps

1. Complete the comparative risk assessment
2. Develop High Level Guidelines to frame testable standards for demonstration project
 - Differentiate thresholds from aspirational goals
 - Refrain from “fixing” voting
 - Refrain from prescribing specific technologies
 - High Level Guidelines are not complete until linked back to acceptable risk levels in Step #1.
 - Trade-offs are needed between current level of military voter disenfranchisement vs. future benefits
3. Incorporate FVAP findings from FY 10 and FY 11 research
4. Revise Joint EAC-NIST-FVAP Roadmap



Federal Voting Assistance Program Department of Defense

Bob Carey, Director

**1777 North Kent St., #14003
Arlington, VA 22209**

Phone: 703-588-8118

Fax: 703-696-1352

Email: Robert.Carey@fvap.gov