

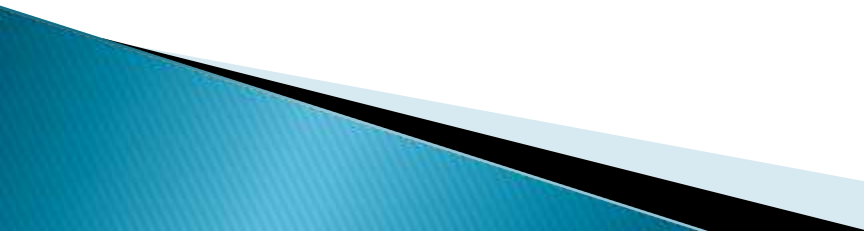
Acceptance Testing of Voting Systems

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Acceptance Testing – What is it?

- ▶ A testing program for a system to determine that it meets the requirements of the customer.
 - It is not part of the vendor's Quality Assurance testing program.
 - Testing is conducted by the customer, prior to entry into service.
 - For a voting system, individual components, as well as the system as a whole must be tested.
 - A Boolean test is carried out on each piece of equipment. It is a pass/fail test.


Acceptance Testing – Why Test?

- ▶ Verify the equipment delivered meets the customer's requirements, as specified by the the Request for Proposals (RFP), and satisfies their expectations.
 - ▶ Ensure that each component is free from defects, fully functional, and is performing as expected.
 - ▶ The most important testing that can be carried on a voting system. It cannot wait until Logic and Accuracy testing.
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When to Perform Acceptance Testing.

- ▶ Initial purchase
 - Acceptance testing, and preferably an election run, should be complete before payment is made.
 - ▶ A significant change
 - Hardware or software upgrade.
 - ▶ After Equipment Repair
 - Whether conducted by vendor or 'in-house'.
 - ▶ Any other time to provide confidence in the system's integrity.
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The Importance of Election Officials Performing Acceptance Testing.

- ▶ State and Local Election Officials must be in the 'driving seat'.
 - In Maryland, designing, planning and executing an acceptance testing program is carried out by election officials.
 - ▶ Familiarity with, and experience of, a new or changed system.
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Acceptance Testing – Issues

- ▶ Acceptance testing is labor intensive. Maryland has 32,000 pieces of equipment that required acceptance testing.
 - ▶ There are logistical considerations. For instance, in the case of an initial purchase, acceptance testing will need to keep pace with equipment delivery.
 - ▶ Depending on the size of the acceptance testing program, costs can be significant.
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Acceptance Testing – Considerations

- ▶ Who will perform the testing ?
 - Will additional staff be needed, or assistance from a third party? Maryland has a separate contract for voting system services, unrelated to a voting system vendor.
 - ▶ Where will the testing take place ?
 - Will a separate facility be needed? Maryland has previously leased a separate warehouse.
 - ▶ The role of the vendor.
 - Will a representative of the vendor to be onsite to assist, when requested?
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Acceptance Testing – Scripts and Documentation

- In Maryland, acceptance testing scripts were supplied by the vendor, and the State has made changes, and continues to make changes to them as needed, for instance, for software upgrades.
 - Documentation of acceptance testing for individual pieces of equipment, is maintained by the jurisdiction.
 - Each piece of equipment has a history folder, where the acceptance testing documentation is kept. The documentation is kept for the life of the piece.
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Acceptance Testing

- ▶ Questions?