FREEMAN, CRAFT, MCGREGOR GROUP

Acceptance Testing
More Important Than Ever

Texas Association of Election Administrators

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Introduction

The EAC defines an acceptance test as a test that is performed on an individual unit of a voting system in order to verify that the unit is physically, electronically, mechanically and functionally correct. In this sense, correct means that the unit is identical in every respect, including software/firmware to the unit that was originally purchased.

Acceptance testing provides assurance that the voting system is functioning correctly, that the voting system complies with the conditions of the product acquisition document and the voting system is correctly configured for use in an election.

What is a Voting System?

Section 121.003 Texas Statutes defines a voting system as: "a method of casting and processing votes that is designed to function wholly or partly by use of mechanical, electromechanical or electronic apparatus and includes the procedures of casting and processing votes and the programs, operating manuals, tabulating cards, printouts and other software necessary for the system's operation."
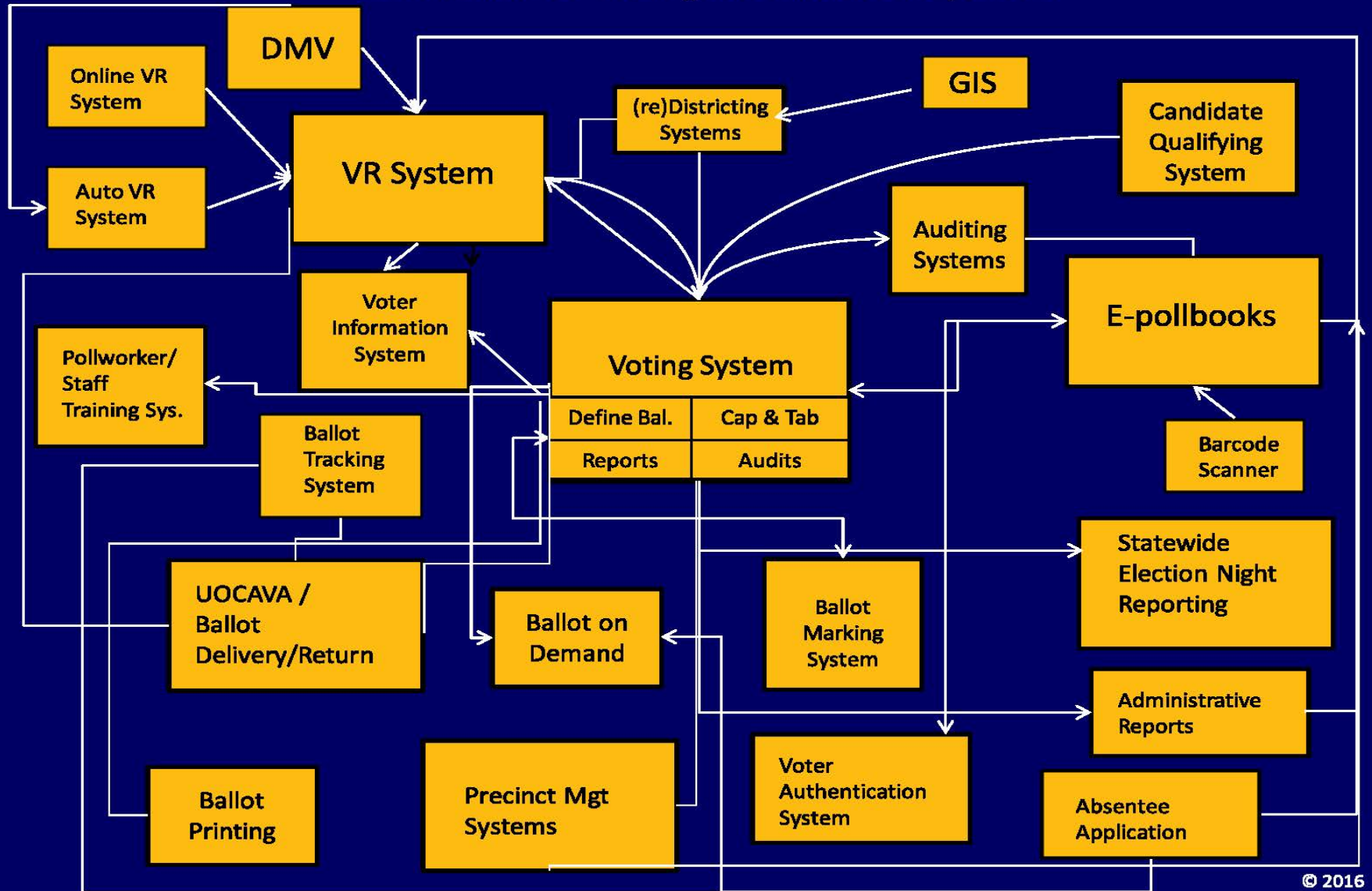
Voting System	
Define Bal.	Cap & Tab
Reports	Audits
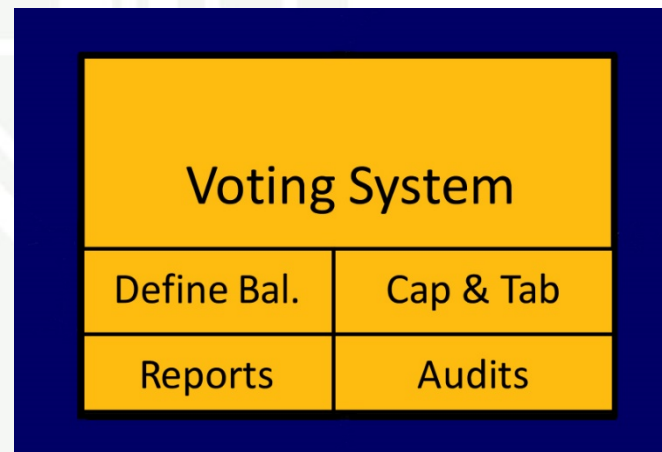
Why is acceptance testing becoming more important?

Increased complexity of elections and election systems.

The "Voting System" has become only a component of the "Election System" that we use to conduct elections.

Federal and State certifications may not, will not, and cannot cover all the elements of an "Election System."

Interaction of Voting and Election Systems

Courtesy of Dr. Merle King, Center for Election Systems, Kennesaw State University
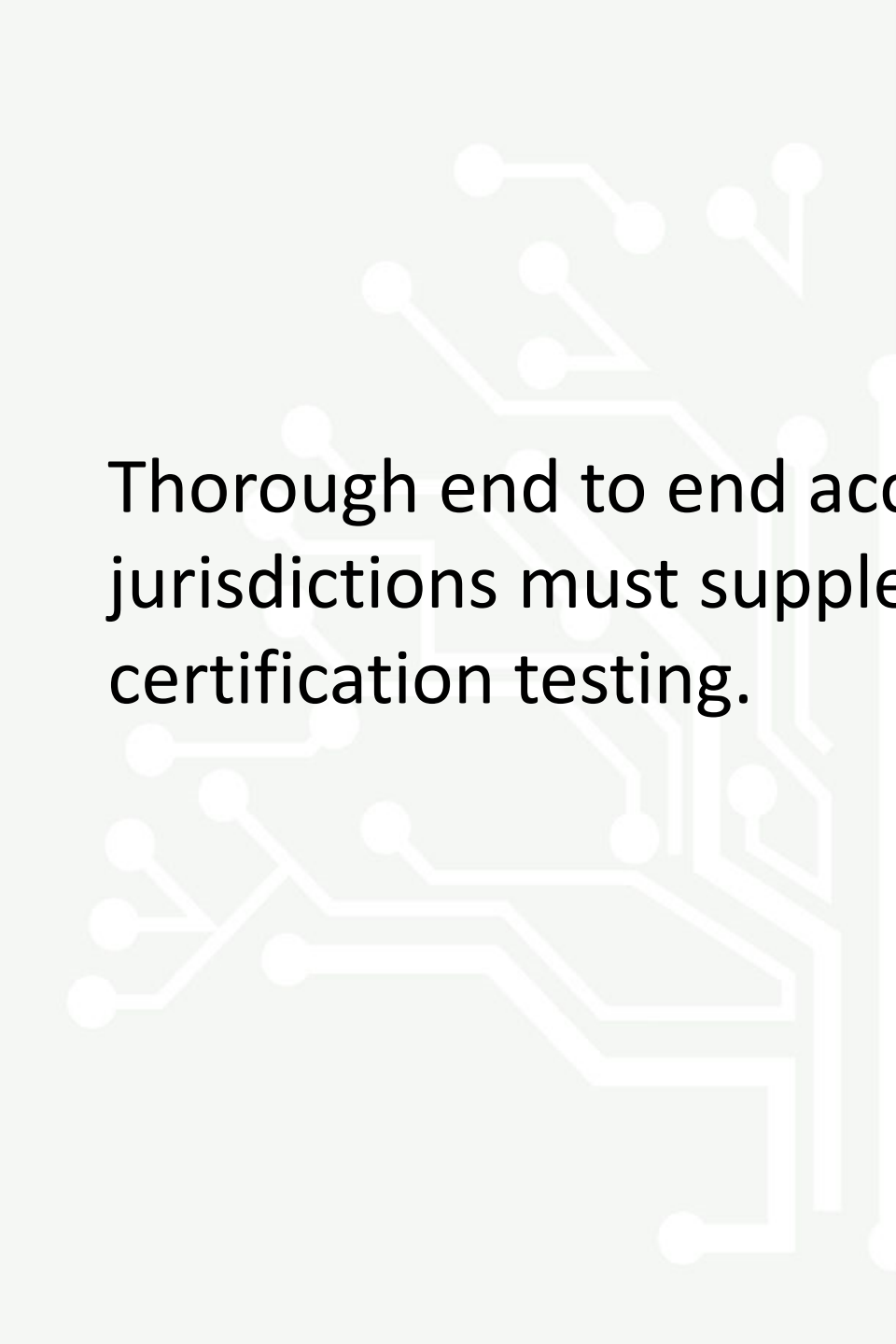
Certification of static systems is becoming increasingly difficult to administer.

Vendors are having more difficulty keeping systems static.

Users may assemble blended systems.

Devices serving or supporting the voter may be selected and owned by the voter or third parties

The boundary between office automation in the elections office and the election system is blurred.

Thorough end to end acceptance testing by local jurisdictions must supplement federal and state certification testing.

Acceptance Testing Requirements

Must be conducted by the Chief Election Official of the jurisdiction. NOT the vendor.

Must produce assurance and documentation.

Must be included in the RFP and resulting contracts.

Must be conducted at purchase and when chain of custody has been lost and regained on a component of the system.

Must include: Physical Analysis, Diagnostic Analysis, Functional Analysis, and Validation of Operating Systems, Software and Firmware.

What to do?

Local election officials need to perform a thorough end to end acceptance test of the entire election system to assure that the system is secure, reliable, complies with federal, state and local requirements, and is capable of conducting an election within their resources, practices, and other local requirements.

State assisted acceptance testing could be invaluable to local jurisdictions.

User groups and local election administrator organizations could assist their members with acceptance testing.

Training.

Resources

The following references provide excellent information of setting up and conducting Acceptance Tests.

EAC Election Management Guidelines, Chap 4 Acceptance Testing

https://www.eac.gov/assets/1/6/Chap_4_Acceptance_Testing_261.pdf

EAC Quick Start Management Guide, Acceptance Testing, Oct 2007

https://www.eac.gov/assets/1/1/Quick%20Start%20Guide%20-%20Acceptance%20Testing.pdf

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