EAC Decision on Request for Interpretation 2015-03
(Ballot Reading Accuracy)

VVSG 1.1 Volume 1: 4.1.5.2 Ballot Reading Accuracy

Date:

September 9, 2015

Question:

How should VSTLs conduct negative testing with different colored marking instruments?

Section of Guidelines:

VVSG 1.1 V1: 4.1.5.2

4.1.5.2 Ballot Reading Accuracy

This paper-based system requirement governs the conversion of the physical ballot into electronic data. Reading accuracy for ballot conversion refers to the ability to:

a. Recognize vote punches or marks, or the absence thereof, for each possible selection on the ballot
b. Discriminate between valid punches or marks and extraneous perforations, smudges, and folds
c. Convert the vote punches or marks, or the absence thereof, for each possible selection on the ballot into digital signals

To ensure accuracy, paper-based systems shall:

d. Detect marks that conform to manufacturer specifications with an error rate that enables satisfaction of the system-level accuracy requirement indicated in Subsection 4.1.1
e. Ignore, and not record, extraneous perforations, smudges, and folds

Discussion:

EAC requires accuracy testing for mark reading in all campaigns. This RFI is an effort to clarify the process for negative testing of different colored marking instrument during the campaign.

In previous campaigns, EAC and the VSTLs occasionally noted that certain colors are not read well and/or accurately by optical scan systems. The testing method proposed below is an effort to identify any colors that may not read accurately during VSTL testing.

Although it is not possible, due to time and financial concerns, to test every available marking instrument and color during a test campaign, EAC believes that doing a sampling of colors provides useful information to the manufacturers, EAC and voting system customers.

Conclusion:

EAC, the VSTL and the Manufacturer will work together early in a campaign to create a test ballot with marks filled in a range of colors. Once all parties agree on the ballot, this template may be used for future campaigns, if EAC determines reuse is acceptable.

One of each of the following colors must be used: red, orange, yellow, green, blue, indigo, violet, black, and gray. The manufacturer will identify the Pantone color used for each mark in their documentation; the lab will verify this during testing and document review.

Applicability:

Immediate for all voting system applications submitted to VVSG 1.1.