## EAC Decision on Request for Interpretation 2007-05, 2005 VVSG Vol. 1 Section 4.2.1 (Testing Focus and Applicability)

### *Date:*

November 6, 2007

### *Question:*

Because Section 4.2.1 of the VVSG does not define what is meant by "equivalent of these Guidelines," the VSTLs and manufacturers are not clear what COTS testing should encompass. The requestors note that while COTS hardware equipment is typically designed to rigorous standards, they are not identical to those required by the VVSG, but encompass the same technical areas such as EMI, temperature ranges, power fluctuations, etc. Interpretation is requested on whether COTS hardware used in a voting system, which has been tested to rigorous Information Technology Equipment (ITE) standards, must also meet **all** of the VVSG requirements.

### *Facts:*

For purposes of this interpretation, requestor limits their discussion of COTS equipment to standalone products such as PCs, printers, scanners, and other such equipment. COTS components such as motherboards and disk drives that may be built into voting systems are not included in this request for clarification as the VVSG is sufficiently clear in this regard.

Requestor notes that while Section 4.2.1 of the 2005 VVSG is generally amenable to the use of COTS equipment in voting systems with reduced testing, the last sentence of the section may lend itself to alternative interpretations. Requestor has interpreted the last sentence of this section to mean that COTS equipment was subject to all testing required by the VVSG.

### *Section of Standards or Guidelines:*

Section 4.2.1 of the 2005 VVSG Vol. 1 reads:

"All hardware components that are custom-designed for election use shall be tested in accordance with the applicable procedures contained in this section. Unmodified COTS

hardware will not be subject to all tests. Generally, such equipment has already been designed to rigorous industrial standards and has been in wide use, permitting an evaluation of its performance history. To enable reduced testing of such equipment, vendors shall provide the manufacturer specifications and evidence that the equipment has been tested to the equivalent of these Guidelines."

## *Conclusion:*

The requestor proposed, in part, that the interpretation state that:

> "Any COTS hardware specified or used as part of a voting system shall have FCC Class B and CE marks affixed to the unit indicating that it has been certified to meet the emissions, immunity and safety requirements of the domestic and international ITE standards. Such equipment will not require additional VVSG-specified hardware testing."

To properly frame this interpretation, some background information on FCC (**F**ederal **C**ommunications **C**ommission) Class B (**Class B** is for areas where emissions must be low—near an airport, ATM equipment, hospitals or residential areas—and is more stringent on the level of radiated emissions allowed.) and CE Mark (The letters "**CE**" are the abbreviation of French phrase "**C**onformité **E**uropéene" which literally means "European Conformity".) requirements is necessary. The United States has NO legal requirements for RF (**R**adio **F**requency) disruption. While manufacturers typically test their equipment in order to improve customer satisfaction, to assure this was done would require some affirmative statement from the manufacturer.

Europe does require immunity to RF disruption and several other areas not mandatory in the United States. The CE Mark is a manufacturer's *self-declaration* that a device meets the applicable standards. Note that the manufacturer is *not required to do any testing*, (although the majority of larger companies do perform rigorous testing) but *is* required to be prepared to defend their claim. The manufacturer is required to present at import a Declaration of Conformity listing the standards to which it is claiming to be compliant. If a European regulatory body requests it, the manufacturer has 10 days to deliver a Technical Construction File which contains the justification for the manufacturer's claims. Typically this file will contain the test reports and other documentation.

Given these facts, and the other information presented, the EAC interprets Section 4.2.1 of Volume 1 of the 2005 VVSG to permit voting system manufacturers to use COTS hardware (as defined for this interpretation and noted above) in their system provided the following requirements are met:

1. As required by the VVSG, any COTS products modified by the manufacturer in any way are tested to the full requirements of the 2005 VVSG.
2. COTS products falling under this interpretation used as part of a voting system shall have FCC Class B and CE Marks affixed to the unit indicating that the product has been certified to meet these requirements. The VSTL shall receive, as part of the Technical Data Package, a copy of the COTS manufacturer's Declaration of Conformity confirming that the manufacturer is claiming

compliance with the standards stated. If the VSTL is at any time uncertain of a products status, or has reason to question this status, the VSTL shall request and be sent the Technical Construction File within 10 days of such request so that the VSTL may independently verify that the product has been tested to "the equivalent of these Guidelines." The EAC, at its discretion, shall also have the authority to request the Technical Construction File from the product manufacturer, to verify claims of conformance, and to receive the file within 10 days of such request.

3. The VSTLs shall perform full independent functional integration and attachment testing of the COTS hardware product specified by the manufacturer.

The EAC finds no merit in the interpretation that Section 4.2.1 requires full testing of unmodified COTS equipment to every applicable standard in the 2005 VVSG.