**Test Assertions for VVSG 1.1, Volume 1, Section 7.4.4**

**September 23, 2016**

**VVSG 1.1, Vol 1, Requirement 7.4.4:** **Software Distribution**

1. The manufacturer **shall** document all software including voting system software, third party software (such as operating systems and drivers) to be installed on the voting system, and installation programs.
   * 1. The documentation **shall** have a unique identifier (such as a serial number or part number) for the following set of information: documentation, software manufacturer name, product name, version, the certification application number of the voting system, file names and paths or other location information (such as storage addresses) of the software.
     2. The documentation **shall** designate all software files as static, semi-static or dynamic.

**Discussion:** Static voting system software such as executable code does not change based on the election being conducted or the voting equipment upon which it is installed. Semi-static voting system software contains configuration information for the voting system based on the voting equipment that is installed and the election being conducted. Semi-static software is only modified during the installation of (a) the voting system software on voting equipment or (b) the election-specific software such as ballot formats. Dynamic voting system software changes over time once installed on voting equipment. However, the specific time or value of the change in the dynamic software is usually unknown in advance, making it impossible to create reference information to verify the software.

**Test Assertions**

**TA744a-1:** The manufacturer SHALL document, in the TDP, all software that is installed on the certified voting system.

**TA744a-1-1:** This software, which will be documented, SHALL include, but is not limited to, voting system software and third party software (including operating systems and drivers).

**TA744ai-1:** The software documentation SHALL include a unique identifier.

**TA744ai-1-1:** The documentation SHALL include a unique identifier for the software manufacturer name.

**TA744ai-1-2:** The documentation SHALL include a unique identifier for the software product name.

**TA744ai-1-3:** The documentation SHALL include a unique identifier for the software version.

**TA744ai-1-4:** The documentation SHALL include a unique identifier for the certification application number of the voting system.

**TA744ai-1-5:** The documentation SHALL include a unique identifier for the file names of the software.

**TA744ai-1-6:** The documentation SHALL include a unique identifier for the file paths of the software.

**TA744ai-1-7:** The documentation SHALL include a unique identifier for all other location information of the software, besides file paths.

**TA744ai-1-7-1:** The other location information SHALL include, but is not limited to, storage addresses.

**TA744aii-1:** The documentation SHALL designate all software files as one of the following: EITHER static OR semi-static OR dynamic.

**TA744a-2:** The manufacturer SHALL document, in the TDP, all installation programs.

**TA744a-2-1:** This installation program software, which will be documented, SHALL include, but is not limited to, voting system software and third party software (including operating systems and drivers).

**TA744ai-2:** The installation program documentation SHALL include a unique identifier.

**TA744ai-2-1:** The installation program documentation SHALL include a unique identifier for the software vendor name.

**TA744ai-2-2:** The installation program documentation SHALL include a unique identifier for the software product name.

**TA744ai-2-3:** The installation program documentation SHALL include a unique identifier for the software version.

**TA744ai-2-4:** The installation program documentation SHALL include a unique identifier for the certification application number of the voting system.

**TA744ai-2-5:** The installation program documentation SHALL include a unique identifier for the file names of the software.

**TA744ai-2-6:** The installation program documentation SHALL include a unique identifier for the file paths of the software.

**TA744ai-2-7:** The installation program documentation SHALL include a unique identifier for all other location information of the software, besides file paths.

**TA744ai-2-7-1:** The other location information SHALL include, but is not limited to, storage addresses.

**TA744aii-2-2:** The installation program documentation SHALL designate all software files as one of the following: EITHER static OR semi-static OR dynamic.