A. Purpose:

To outline the steps taken to quality control check that non-standard / newly obtained software is capable of performing the task that it was designed to do with respect to the analysis of digital evidence.

B. Responsibility:

Forensic examiners

C. Definitions/Abbreviations:

Refer to CC SOP-26 - Definitions and Abbreviations.

D. Procedure:

1. Assemble a QC media device with the appropriate controlled media to test the software. Controlled media image files and associated guidelines can be obtained from the shared directory- i.e. DCFL Control Standard or other.
2. Prepare a "QC Protocol - Non-Standard - Software" (QR-CC-27) record by filling in the date and examiner fields.
3. Perform a pre-QC hash of the QC media using an approved hashing tool. Record the information in the appropriate fields on the worksheet.
4. Connect the QC media to the forensic computer that will be testing the software.
5. Run the software on the QC media device. Follow the control standard guidelines and verify the artifacts listed are present and located at the given offsets. Conduct the necessary processing of the images using the software to verify the elements listed in the guidelines. Record all pertinent information listed on the QC worksheet (QR-CC-27) and additional information in the Notes section including errors or deviations from expected results.
6. Perform a post-QC media hash. Record the information in the appropriate fields on the worksheet.
7. Repeat the process.
8. The software successfully passes the QC validation if the two (2) following criteria are met:
   a. The pre-QC hash values and the post-QC hash values match.
   b. The expected results were obtained with consideration of defined functional limitations and were reproducible.
9. In the event that the QC test fails, repeat the validation process in an attempt to rule out any processing errors.
10. If a second attempt fails, drawing upon your training, knowledge and experience, as well as, consulting with co-workers and technical support, attempt to isolate the issue and/or define the functional limitations of the software. Record any limitations in the Notes section of "QC Worksheet (QR-CC-27).
11. If the issue cannot be resolved and there are no defined functional limitations, the software cannot be used for case examination.

12. Retain a copy of the filled out "QC Protocol - Non-Standard Methods - Software" (QR-CC-27) for your records. The records may also be archived electronically in PDF format in the designated examiner folder located in the " iso directory" of the unit server.
13. This quality control check should be performed on non-standard software prior to being incorporated as approved software and re-evaluated when major software versions are released.

E. References:

1. Specific software's user guide and manuals