with the particular hard disk being sanitized. In addition, some software product versions may not have the capability to remove the OS during the overwriting process. To ensure the integrity of the sanitization process, overwriting software must have the following functions and capabilities:

2.1.1. The ability to purge all data or information, including the OS, from the physical or virtual drives, thereby making it impossible to recover any meaningful data by keyboard or laboratory attack.

2.1.2. A compatibility with, or capability to run independent of, the OS loaded on the hard drive.

2.1.3. A compatibility with, or capability to run independent of, the type of hard drive being sanitized (e.g., ATA/IDE or SCSI type hard drives).

2.1.4. A capability to overwrite the entire hard disk drive independent of any BIOS or firmware capacity limitation that the system may have.

2.1.5. A capability to overwrite using a minimum of three cycles (six passes) of data patterns on all sectors, blocks, tracks, and slack or unused disk space on the entire hard disk medium.

2.1.6. A method to verify that all data has been removed from the entire hard drive and to view the overwrite pattern.

2.1.7. Although not mandatory, selected software should also:

2.7.1.1. Provide the user with a validation certificate indicating that the overwriting procedure was completed properly.

2.7.1.2. Provide a defects log, or listing of any bad sectors, that could not be overwritten by the software.

2.2. Software Available for Overwriting: Listed below are products and manufacturers that produce overwriting software tools. These products are currently in use by DoD Components and are considered to meet the minimum standards called out in this policy. Note: This listing is not all-inclusive and there may be other products that meet the required specifications in addition to the products listed below.

2.2.1. Product Name: "No Trace"
Communication Technologies, Inc.,
14151 Newbrook Drive, Suite 400, Herndon, VA 20170
Tel: (703) 961-9080
Fax: (703) 961-1330
Web: www.comtechnologies.com

2.2.2. Product Name: "DataEraser"
ONTRACK Data International, Inc.
9023 Columbine Road, Eden Prairie, MN 55347
Toll Free: 1 (800)-872-2599
Tel: 1 (952) 937-5161
Fax: 1 (952) 937-5750
Web: www.ontrack.com
Technical Support: 1 (952) 937-2121

2.2.3. Product Name: "UniShred Pro"
Los Altos Technologies,
1381 Kildaire Farm Road, Suite 415, Cary, NC 27511
Toll Free: 1 (800) 999-8649
Tel: 1 (919) 233-9889
Fax: 1 (919) 233-6761
Web: www.lat.com
Technical Support: 1 (919) 223-9889

2.2.4. Product Name: "CleanDrive"
Access Data Corporation
2500 North University Ave., Suite 200, Provo, UT 84604-3864
Toll Free: 1 (800) 574-5199
Tel: 1 (801) 377-5410
Fax: 1 (801) 377-5426
Web: www.accessdata.com
Technical Support: 1 (800) 489-5199

2.2.5. Product Name: "Sanitizer" D 4.01
Infraworks
6207 Bee Cave Road Austin, TX 78746
Tel: 1 (512) 583-5000
Fax: 1 (512) 583-5075
Web: www.infraworks.com/products/santizer.html

2.3. Damaged Hard Disks: A hard disk platter may develop damaged or unusable tracks and sectors. However, sensitive data may have been recorded in areas of the disk that should be purged. If features or malfunctions of the storage media inhibit overwriting, the storage media should be degaussed or destroyed.

3. Degaussing Hard Drives for Sanitization: Degaussing is a process whereby the magnetic media are erased, (i.e., returned to a zero state). Degaussing (demagnetizing) reduces the magnetic flux to virtual zero by applying a reverse magnetizing field. Properly applied, degaussing renders any previously stored data on magnetic media unreadable by keyboard or laboratory attack.