Summary of Alternative Technologies for Data Destruction on Flash Media and Solid State Hard Drives

Tier 1	**File Delete** 100% of the digital information remains. Good only for cosmetic purposes.
Tier 2	**Physical damage of the case** Breaking the flash device in half can leave up to 100% of the digital data retained on the solid state medium inside the flash or solid state HDD. Requires re-assembly of memory medium in a new external case.
Tier 3	**Physical damage of the memory component** This requires lab level reassembly. Due to file structure on flash and solid state devices, and based on the extent of the damage, this would be considered safe for sensitive information.
Tier 4	**Physical destruction of the entire drive or flash unit** If physical destruction is conducted to a 1mm by 1mm particle size, it would take heroic efforts to reconstitute any information. Proposed for Classified Secret containing data
Tier 5	**Disintegration and melting, or autoclaving** This alters the material composition of flash and solid state memory. The physical alteration removes all digital records. Proposed for Classified Top Secret containing data.

Tier 1
File Delete
- Only removes file name,
- Data still 100% intact
- Good only for cosmetic purposes

100% of Data Recoverable

Tier 2
Physical Case Damage
- Breaking the case reults in digital data retained on the solid state medium
- Requires reassembly of memory medium in a new external case

Up to 100% of Data Recoverable

Tier 3
Physical Damage of Memory Component
- Requires lab-level reassembly
- Due to file structure on flash and solid-stae devices and based on extent of damage, this would be considered safe for sensitive information

Percentage recoverable by lab analysis in process

Tier 4
Physical Destruction of Entire Drive or Flash
- (Proposed for Classified Secret or Corporate Sensitive Information)
- Physical destruction results in pieces 1mm by 1mm or less
- Would require laboratory level forensic recovery

Percentage recoverable by lab analysis in process

Tier 5
Distintegration, Melting or Autoclaving
- (Proposed for Classified Top Secret or Corporate Confidential Information)
- Alters material composition of flash and solid state memory
- Physical alteration removes all digital records

0% of Data Recoverable