Trusted Computing Group Optical Storage Subgroup FAQ
October 2008

Q. What is the Optical Storage Subgroup?
A. The Optical Storage Subgroup is an organization within the Storage Work Group of the Trusted Computing Group. It consists of TCG member companies with interests in the implementation of the Trusted Computing Group's methodologies for optical storage. For more information on the Storage Work Group, please see the documents at https://www.trustedcomputinggroup.org/groups/storage/.

Q. What is the purpose of the Optical Storage Subgroup?
A. The purpose of the Optical Storage Subgroup is to provide a set of specifications that enable the implementation of Trusted Optical Storage. Using standards-based encryption techniques and methodologies, the new optical specifications will allow users to create, edit, and share optical discs, with protection against theft or loss. An authority will be available to ensure interoperability among device manufacturers. For questions, please email: optical_storage@trustedcomputinggroup.org.

Q. How is the Optical Storage Subgroup organized?
A. The Subgroup operates under the auspices of the TCG Storage Workgroup. Membership in the Optical Storage Subgroup is determined by TCG bylaws and is open to all TCG members.

Q. Why is a subgroup necessary to address optical storage?
A. The Optical Storage Subgroup is required to address the specific compatibility and inherent interoperability issues of optical storage. The subgroup was formed to develop the specification with regards to host applications, drive manufacturers, IC controller providers, software vendors, and media manufacturers.

Q. Who is participating in the Optical Storage Subgroup?
A. Participation in the subgroup includes optical disc drive (ODD) manufacturers, software vendors, and designers of custom, highly integrated components. We also have participation from storage and security management and storage integration vendors. A complete list of TCG members is online at www.trustedcomputinggroup.org.

Q. What is the output of this subgroup?
A. The subgroup has created a Security Subsystem Class, or SSC, that will address trusted optical storage.

Q. What is a Security Subsystem Class (SSC)?
A. The Trusted Storage Core Specification defines all possible TCG-related functions supported by a trusted storage device. However, every trusted storage device is not required to support all functionality defined in this Core Specification. There shall be multiple "classes" of Core Specification functions for compliance, called Security Subsystem Classes (SSCs). Each Security Subsystem Class specification is a companion document to the Core Specification. The Trusted Storage Core Specification can be found at:
https://www.trustedcomputinggroup.org/specs/Storage/TCG_Storage_Architecture_Core_Specification_v01.9.pdf.

Q. What is the Optical Storage Security Subsystem Class (SSC)?
A. The Optical Storage Security Subsystem Class defines the specifications and methodologies for implementing the Core Specification for an optical storage device.

Q. How would Trusted Optical Storage be implemented?
A. The Use Case section of the Optical Storage SSC outlines three phases for implementation of Trusted Optical Storage devices:
    1) External: a non-SSC-based optical drive is integrated into TCG
        Compliant devices
    2) ASIC: a TCG compliant ASIC is integrated into the device PCBA
    3) Integrated: the TCG compliant functionality is integrated into the optical device controller

Q. Is any one of these phases better than the other and how will they be implemented?
A. We believe that, initially, some OEMs might choose to integrate a trusted external optical drive, but, eventually, many manufacturers will choose to integrate this functionality into the optical device controller. We think this will be an evolution over a period of some time.

Q. Why would a developer want to develop such a device?
A. Based on the growing number of security breaches involving lost or stolen optical discs, the marketplace is ready for a secure solution with the capability of integration with other devices/systems based on TCG specifications.

Q. How will this device be used?
A. Initially, the device will be used in many different market segments: governmental agencies, financial services, healthcare, insurance, military, and others. We anticipate the functionality will be available over time for all optical consumer applications, giving all users a secure way of protecting their data on a removable optical disc.

Q. What about DRM?
A. Trusted optical drives can be provided to help users protect their data and for content owners to protect theirs. As is true with all Trusted Computing Group specifications, the specifications do not specifically provide DRM capabilities or software and do not "lock" a user to a specific software or platform, nor are they intended to reduce a user's access to his or her own content or applications.

Q. When will such devices be available?

A. TCG develops specifications, not products, so we cannot speculate on product timelines, but the level of interest from the marketplace suggests trusted optical devices will appear in the near future.

Q. Would Trusted Optical Drives require a TPM? Are they required to be used in systems with TPMs?
A. No, a Trusted optical drive itself does not require a TPM, but for optimal data security and protection, we recommend pairing these drives with clients that have TPMs.

Q. How much redesign of a standard optical drive will be necessary and what will related costs be?
A. Since the TCG Optical SSC does not specify any modification of recording methods or optical disc formats, it is only the optical controller that requires modification. Although this is not a small modification, high-integration ICs (integrated circuits) will ultimately minimize both the cost and complexity of the implementation.

Q. Have you taken into account existing standards such as those for SCSI and ATA?
A. SCSI (T10) and ATA (T13) are ANSI/INCITS standards committees that input their standards to ISO and provide the interface standards for a great variety of storage devices, including USB-attached storage (i.e., SCSI command set). TCG Storage WG members are also involved in these public standards in order that the specific needs of TCG Storage WG devices are provided in those public standards. The Storage WG has a specific Storage Interface Interactions Subgroup to handle any necessary interactions with T10 or T13.

Q. What about MMC (Multi Media Commmands) being created by another standards body?
A. The TCG Optical SSC command set descriptions and supported media types and formats are described in MMC 6. MMC 6 is expected to be completed later this year by an ANSI/INCITS standards committee.

Q. When is the specification for trusted optical storage available?
A. The document, which is a companion to TCG's Trusted Storage Specification, is available now. More information on the Optical Storage Subgroup, the Storage Workgroup and TCG are at www.trustedcomputinggroup.org.

Contact: Anne Price
                602-840-6495
                press@trustedcomputinggroup.org