



## **TRUSTED COMPUTING GROUP (TCG) TIMELINE**

### **May 2007**

#### **2003**

Trusted Computing Group is announced with membership of 14 companies, including Promoters and board members AMD, Hewlett-Packard, IBM, Intel Corporation, Microsoft, Sony Corporation and Sun Microsystems, Inc. TCG structure and vision are created to enable extension of trusted computing beyond the PC into the enterprise, including the network. TCG adopts existing specifications for the Trusted Platform Module (TPM) security chip for clients, and after additional input and review, publishes as an open industry specification.

#### **2004**

TCG announces the Trusted Platform Module (TPM) specification 1.2 and vendors pledge to begin producing security chips to support the key features of the TPM.

Manufacturers begin shipping a variety of enterprise desktop and notebook PCs equipped with TPMs and software to enable applications including data and file encryption, secure email, single sign-on, storage of certificates and passwords and other applications.

Members begin participating in work groups to address security in mobile devices, storage, servers, peripherals and infrastructure requirements.

TCG also announces the Trusted Network Connect (TNC) subgroup to work on an open specification for network access control and endpoint integrity and the addition of almost 30 new members to focus on the effort. Group starts to define requirements and use cases for an open specification. Participants include Foundry Networks, Funk Software, InfoExpress, iPass, Juniper Networks, Network Associates, Sygate, Symantec, Trend Micro, Zone Labs, HP, Intel, Verisign and others.

Membership expands to 98 companies by end of the year, with participation broadening beyond semiconductor and client companies to software developers, networking and storage companies. The group initiates an advisory council of leading IT, privacy, finance and security industry experts.

The group also begins a liaison program with other industry standards groups and begins a mentoring program for those researchers and academic institutions doing research on trusted computing and related topics.

#### **2005**

The group expands its board of directors. Two companies, VeriSign and Seagate Technology, are elected by the membership to the board. Infineon, an early developer and adopter of the TPM, is added to the board as a Promoter member.

TPM adoption continues to grow, as chipmakers offer discrete and integrated versions for desktop and notebook systems, as well as for servers. Analysts predict shipments to top some 250 million by 2010.

The group's Mobile Phone Work Group releases use cases to define how the concepts of trusted computing could be applied in mobile phones. Work group participation expands to include key vendors in handsets, chips and applications.

Hoping to offset the rapid increase in data loss, theft and unauthorized access, the Storage Work Group begins work on an open industry specification for data "at rest" in a variety of mediums, including hard drives, tape and flash memory. The group releases its use cases for industry review and begins working



with existing storage specification groups to ensure command support is created for widely used SCSI and ATA architectures.

The server work group makes its specification for using the TPM in servers available. Vendors begin development of servers that will help ensure a trusted client is connecting to the intended server. The specification also provides for a usage model in which the server is verified to meet minimum standards before being allowed to perform sensitive transactions.

TNC participation swells to some 60 member participants – more than half of TCG's overall membership of 120 some companies. TCG delivers the TNC architecture and a series of open specifications for developing products to support it. Several demos are shown to demonstrate some key concepts of TNC at Interop Las Vegas. First products, including switches and other products, are announced as supporting TNC. Microsoft pledges interoperability of its Network Access Protection architecture with TNC.

## **2006**

Shipments of TPMs for systems are predicted to top some 20 million and virtually every enterprise system shipped from the top 20 vendors contains one of the security chips. The first servers enabled with TPMs begin shipping.

Infineon and Lenovo join TCG's board of directors as promoter companies. Wave Systems and Seagate Technology are elected to the board by the membership of some 140 member companies.

TNC adds specifications to the architecture. A more robust demonstration incorporating integrity measurement and verification and other key TNC functions is shown. The first deployment, a telemedicine application, is announced. The Internet Protocol Equipment Certification organization of Japan endorses TNC for network security. Ten more industry companies, including those in remediation and other areas, join TCG to support TNC. Products for wireless LANs, integrity measurement and verification, network access, server communication and other functions are announced. Independent demonstrations by the Interop iLabs team include open source Radius server and 802.1x supplicant elements, combined with other products and software.

TCG's Mobile Phone Work Group announces its Mobile Trusted Module (MTM) specification for enabling trust and security in mobile phones. Industry analysts, as well as the mobile standards organizations creating complementary specifications, praise the TCG's efforts to provide non-proprietary solutions to the issues of mobile data, transactions and content.

## **2007**

In first quarter, TCG announces revised specifications for TNC that add support for Java and VoIP endpoints.

TCG announces a number of new members and hosts its first hands-on workshop at RSA 2007.

In May 2007, at Interop Las Vegas 2007, TCG announces interoperability of the TNC architecture with Microsoft's Network Access Protection (NAP) architecture, enabling products based on TNC specifications to work with Windows clients and servers and vice versa. This interoperability, previously promised by Microsoft and TCG, opens up a number of NAC deployment options for customers, preserves investments and reduces confusion in the NAC market for both customers and vendors.

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