INSYDE UEFI FAQ

February 2006

Q: What is Insyde's role in the UEFI Forum and related Working Groups?

A: Insyde Software is a "Promoter" and founding member of the Unified EFI Forum, Inc. Insyde maintains a position on the Board of Directors and is an active member of the UEFI Working Groups including the Platform Initialization Working Group. Details on the organization can be found at http://www.uefi.org

Q: What is the relationship between EFI and UEFI?

A: The UEFI specification is based on the EFI 1.10 specification published by Intel with corrections and changes managed by the Unified EFI Forum. Intel still holds the copyright on the EFI 1.10 specification, but has contributed it to the Forum so that the Forum can evolve it. There will not be any future versions of the EFI specification. The license to the Unified EFI Specification will come from the Forum, not from Intel.

Q: What is the relationship between the Intel Platform Innovation Framework for EFI and this new UEFI 2.0 Specification?

A: Intel's Platform Innovation Framework for EFI, more commonly known as "the Framework" is a set of robust architectural interfaces, implemented in C, that has been designed to enable the BIOS industry and our customers to accelerate the evolution of innovative, differentiated, platform designs. Unlike the current EFI 1.1 and now UEFI 2.0 specifications, which focus on programmatic interfaces for the interactions between the operating system and system firmware, the Framework is a complete firmware implementation that has been designed to perform the full range of operations that are required to initialize the platform from power on through transfer of control to the operating system.

Q: What are the key differences between the EFI 1.1 and UEFI 2.0 specifications?

A: It's important to remember that the UEFI 2.0 specification is an evolution of the 1.1 specification. It's safe to say that much of the functionality of the EFI 1.1 spec has been carried forward to the UEFI 2.0 version. There are four (4) primary functions that have evolved more significantly than others in the new 2.0 specification including:

1) Support for x64 CPUs
2) A new Graphics Output Protocol (GOP) replaces UGA I/O & UGA Draw protocols
3) Support for USB 2.0
4) A new Extended SCSI Pass Thru Protocol replaces the 1.1 SCSI protocol

Q: Aside from the key differences, what new functionality has been added to the UEFI 2.0 specification?

A: There are many new updates in the UEFI 2.0 spec. The following list provides an "at a glance view" of these enhancements and additions above and beyond the four (4) areas mentioned above:

- Creation of GUID Partition table
- New function to Boot Services for group event
- Two new runtime services
- Change in EFI Loaded Image
- Additions to Device Path Protocol
- Updates to UEFI Driver Model
- Addition of Tape Boot Support
- New iSCSI protocol for boot over TCP/IP
- New EFI Managed Network Protocol
- New protocols for supporting ARP & EFI DHCPv4
- New Protocols for supporting TCPv4 & IPv4
- New Protocols for supporting UDPv4 & EFIMTFPv4
- New Driver Signing and Hashing

Q: How can I get a copy of the UEFI 2.0 specification?
A: The new specification and more information for prospective participants of the UEFI Forum are available at http://www.uefi.org

Q: How will Insyde implement the UEFI 2.0 specification?
A: Insyde will implement UEFI 2.0 within its InsydeH2O product line. InsydeH2O, which is currently shipping on Server, Desktop, Mobile and Embedded platforms, is a complete implementation of the Intel Platform Innovation Framework for EFI. By implementing this in the InsydeH2O product line as opposed to a legacy BIOS product, Insyde will leverage the current EFI support as well as the driver model architecture of the Framework, which facilitates a more modular re-useable software component approach to the firmware.

Q: Are there significant fundamental changes required in InsydeH2O to support the UEFI 2.0 specification?
A: No. There are no significant structural changes required in InsydeH2O to support UEFI. The majority of changes will occur in the Boot Services and Runtime Services. There are no changes required to the PEI Framework component and minimal modifications in the DXE driver component. As such, InsydeH2O will be "UEFI-ready" well before its customers demand its support. InsydeH2O's initial support of the key components of the UEFI 2.0 spec are expected in O2'06.

Q: As a current licensee of InsydeH2O, how will I get UEFI 2.0 support when needed?
A: Later this year when UEFI 2.0 support is available, InsydeH2O customers will get it delivered as a standard feature.

Q: How will Insyde leverage UEFI to help differentiate its InsydeH2O firmware?
A: Insyde's product plans include leveraging this robust UEFI capability to offer competitive differentiation in the area of Pre-Boot Applications. Insyde's current Pre-Boot technology and applications will be updated to take advantage of the new functionality. Insyde's customers leverage this updated specification for enhancements and additions in the areas of Secure ROM Sizing, Remote Application Loading, Disk Image Recovery and Update, Secure Booting, EFI Internet Access and others.

Q: What current shipping Operating Systems support UEFI 2.0?
A: Given that the UEFI board ratified the specification in February 2006, there are currently no operating systems shipping that take advantage of it. InsydeH2O supports all currently available operating systems and will continue to work closely with OS vendors including Microsoft on support for next generation "Longhorn" operating systems including Vista.

Q: Are there testing tools available to check for UEFI 2.0 compliancy?
A: Not currently. The UEFI Testing Working Group is actively working on a set of standardized testing measures and tools to ensure UEFI compatibility in the industry. Insyde will continue to play and active role in the UEFI Forum and the associated working groups developing compatibility tests and specifications for the UEFI APIs, as well as for firmware support for new silicon.