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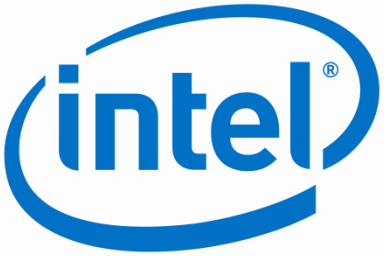

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UEFI Development Update

UEFI Summer Summit – July 16-20, 2012

Presented by Mark Doran (Intel Corporation)

Agenda

- State of the Industry
- What's New?
  - UEFI 2.3.1c
  - UDK2010.SR1.UP1
- Useful Development Tools
  - Intel UEFI Community
  - Driver Writer's Guide
  - UEFI Driver Wizard
- Summary / Q&A

State of the Industry

- UEFI is at a tipping point …
  - Logo requirement for Microsoft Windows 8
  - Supported by major Linux distributions
- Still room for improvement in UEFI
  - Developer education, improving the number of peripherals with UEFI Drivers
  - User education, based on common mistakes in coverage on topics like UEFI Secure Boot

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What's New?

- UEFI 2.3.1c
  - Update to the UEFI 2.3.1 Specification
  - Adds important firmware considerations
  - Addresses numerous ECRs
- UEFI Self Certification Test (SCT)
  - Updates for the UEFI 2.3.1c Specification
- UDK2010.SR1.UP1
  - Incorporates items deferred from UDK2010.SR1
  - Posted to tianocore.org on June 25th

What's New in UEFI 2.3.1c?

- Add: OS Indications Variable
  - OS/FW feature & capability communication
  - End-users can request to enter BIOS setup menu after next reboot from the OS
- Add: Retain factory default keys in Setup Mode
  - Related to UEFI Secure Boot for Open Source OS or "OS agnostic" end-user configurations
- Remove: Runtime driver requirement for UNDI
  - Allows Network UNDI drivers in EFI Byte Code (EBC)

What's New in UEFI 2.3.1c?

- Address Engineering Change Requests (ECR) in MANTIS
  - 831 PXE Boot CSA Type definition cleanup
  - 874 Provide a mechanism for providing keys in setup mode
  - 882 Indications Variable - OS/FW feature & capability communication
  - 907 iSCSI Device Path error
  - 909 Update to return codes for AllocatePool / AllocatePages
  - 912 UEFI 2.3.1 Type
  - 913 Enum definition does not match what our current compilers implement
  - 914 Error Descriptor Reset Flag clarification
  - 915 For x64, Change Floating Point Default Configuration to Double-Extended Precision
  - 917 UNDI drive does not need to be initialized as runtime driver
  - 921 Length of IPv6 Device Path is incorrect

See the spec for details!

What's New?

- UEFI Self Certification Test (SCT)
  - Updated on July 9th for UEFI 2.3.1c
  - Available for use at this UEFI Summit
- UDK2010.SR1.UP1 released June 25th
  - Updates to EDK II specs (v1.22 Errata B)

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Useful Development Tools

Intel UEFI Community Resource Center

Consolidates resources found across multiple sites

Driver Writer's Guide for UEFI 2.3.1

Updated in 2012 for UEFI 2.3.1 development

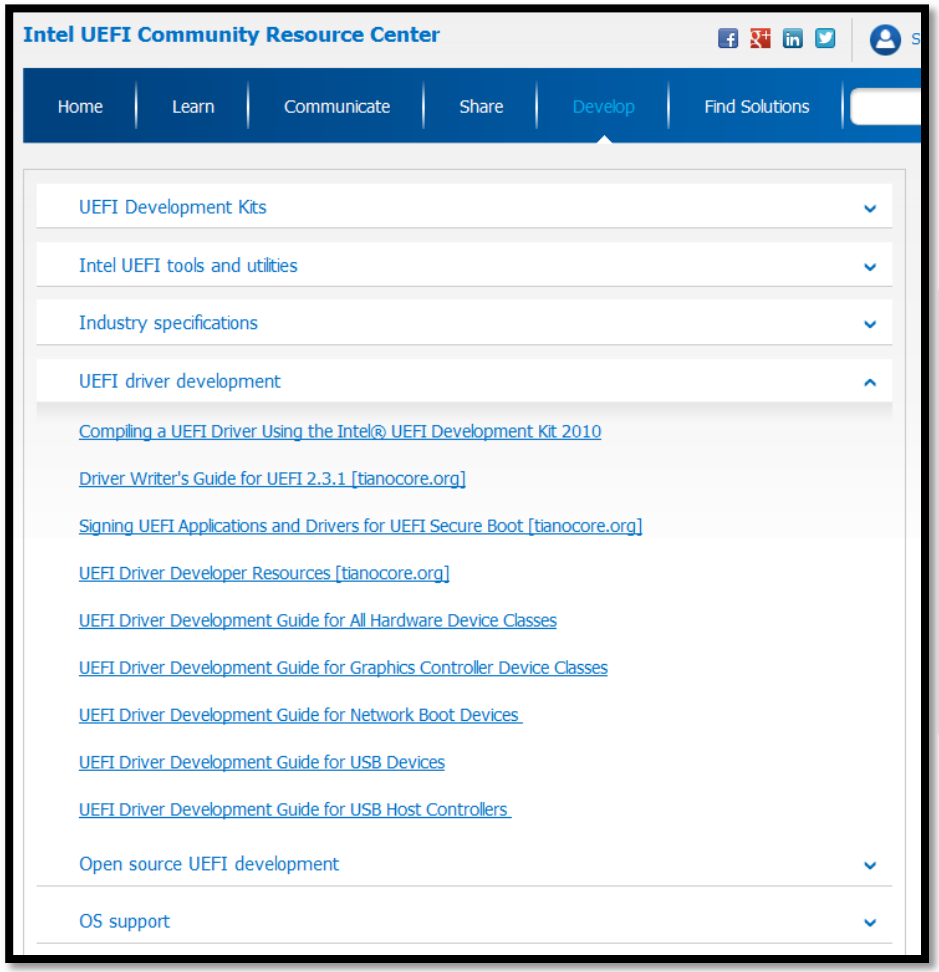
UEFI Driver Wizard

Generate templates based on the *Driver Writer's Guide for UEFI 2.3.1*

Intel UEFI Community

Launched June 2012

Intel UEFI Community



http://intel.com/udk

Example content from the 'Develop' page …

Pointers to content from Intel, TianoCore.org, uefi.org, OS vendor websites and more.

Driver Writer's Guide for UEFI 2.3.1

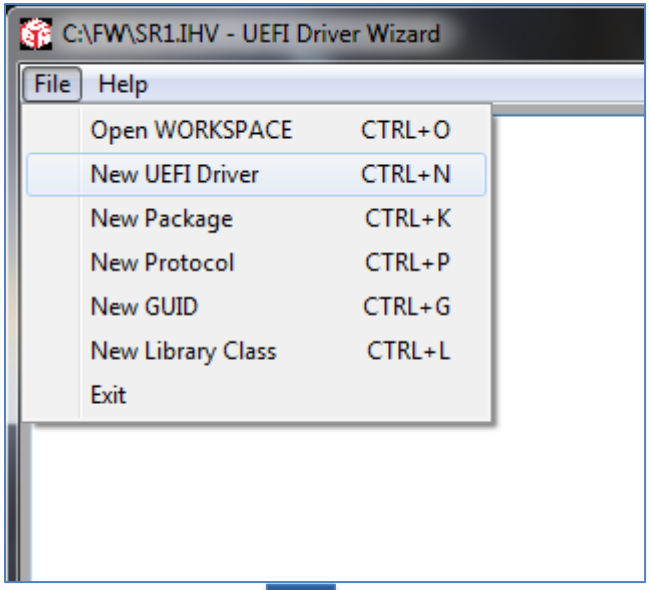
- Expanded to cover UEFI 2.3.1 topics
- Designed as a developer reference
  - Organized & indexed by driver function
  - Not a "cover to cover read"
- See 'Enabling Resources for UEFI Driver Developers Using EDK II' at tianocore.org

A comprehensive resource for UEFI Driver Developers …

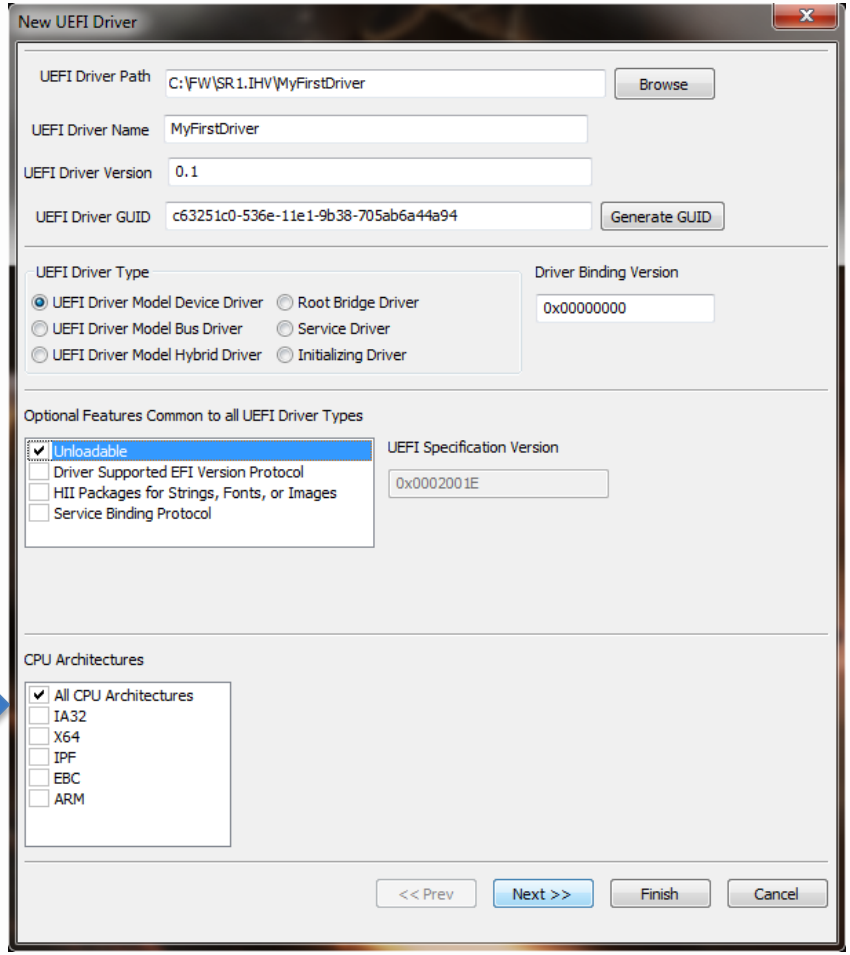
UEFI Driver Wizard

- Menu-based GUI designed to simplify UEFI Driver Development
  - Uses EDK II or “IHV” subset of UDK2010
  - Wizard-based template generation
- Open source project contributed to tianocore.org by Intel SSG
  - Python interface, designed for extensibility
  - Intel encourages contribution by developers

UEFI Driver Wizard



Free training at this event!



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Get More Information

- UEFI Forum Learning Center
  - http://www.uefi.org/learning_center/
- Intel UEFI Community
  - http://intel.com/udk
- Use the TianoCore *edk2-devel* mailing list for support from other UEFI developers

Thanks for attending the
UEFI Summer Summit 2012

For more information on
the Unified EFI Forum and
UEFI Specifications, visit
http://www.uefi.org

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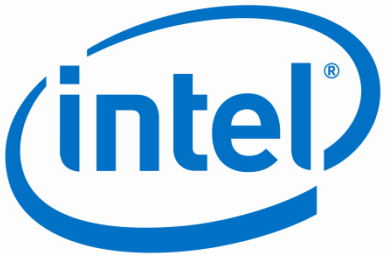

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