

*presented by*



# Enabling Next Generation Configuration and Power Management on ARM

Presented by Dong Wei, HP Fellow

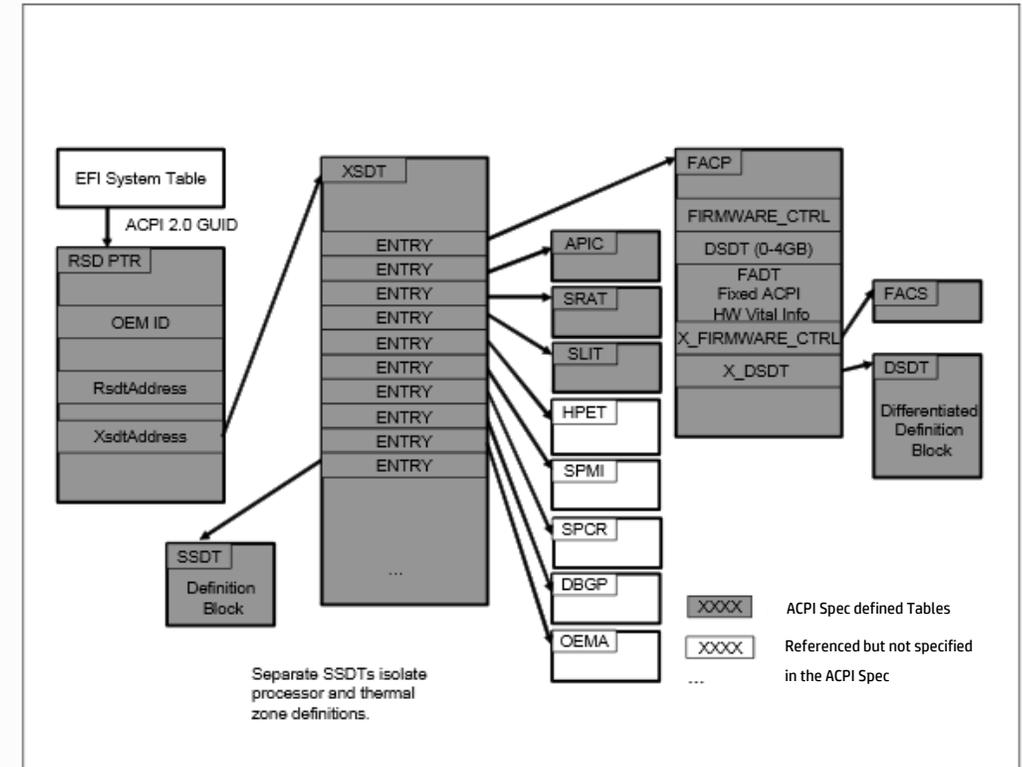
UEFI Forum Vice President (Chief Executive), ACPI SIG Secretary

Oct 28, 2013

# ACPI Technology



- Static tables and primary runtime interpreted control methods provided by system firmware to the OS for system configuration, power management and error handling
- Processor architecture agnostic



# ACPI Governance



- ACPI SIG
  - HP, Intel, Microsoft, Phoenix and Toshiba are Promoters
  - 10 additional Contributing Adopters
  - 5 additional Adopters

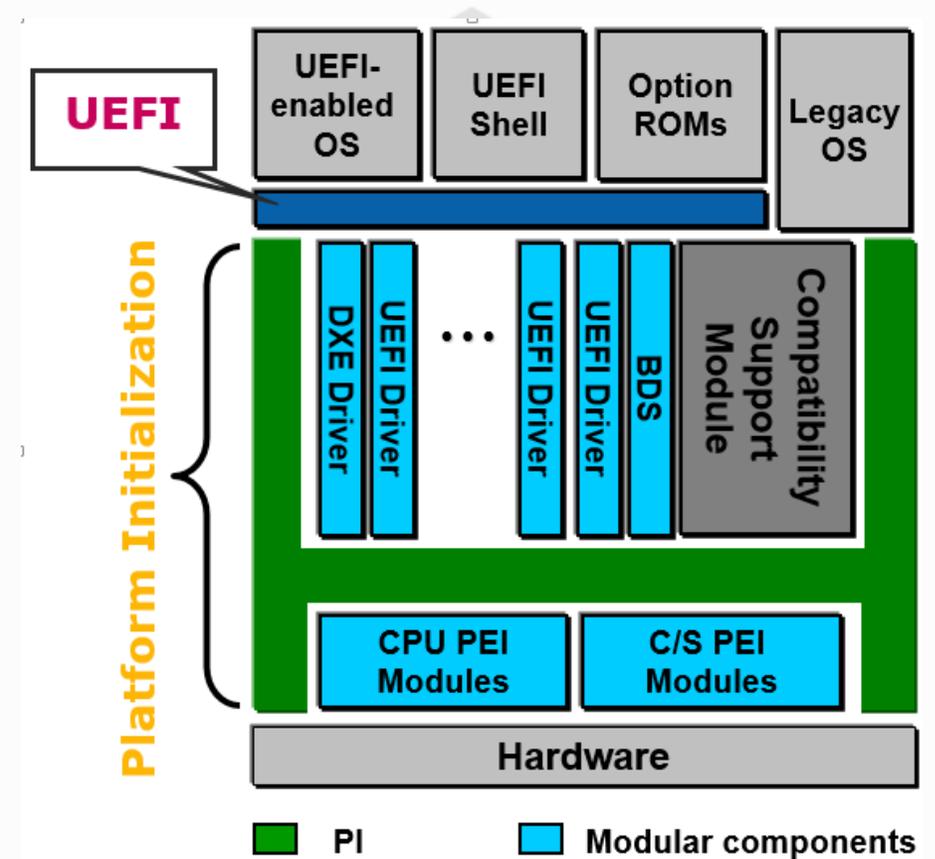


**ACPI SIG**  
**HP/Intel/Microsoft/Phoenix/Toshiba**

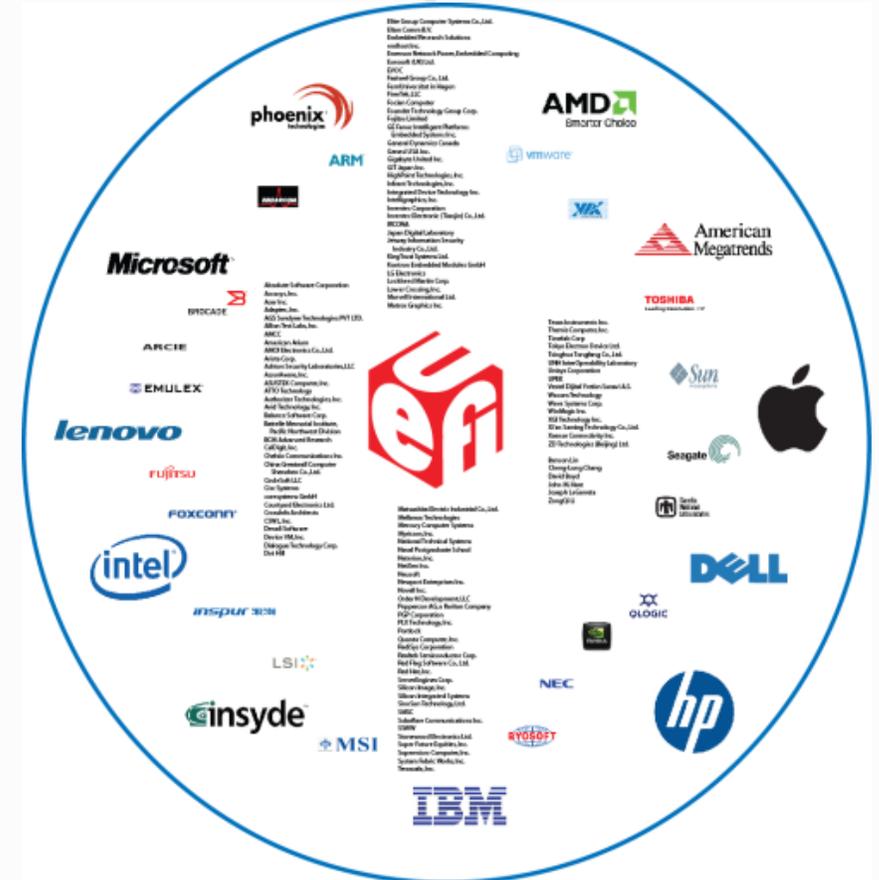
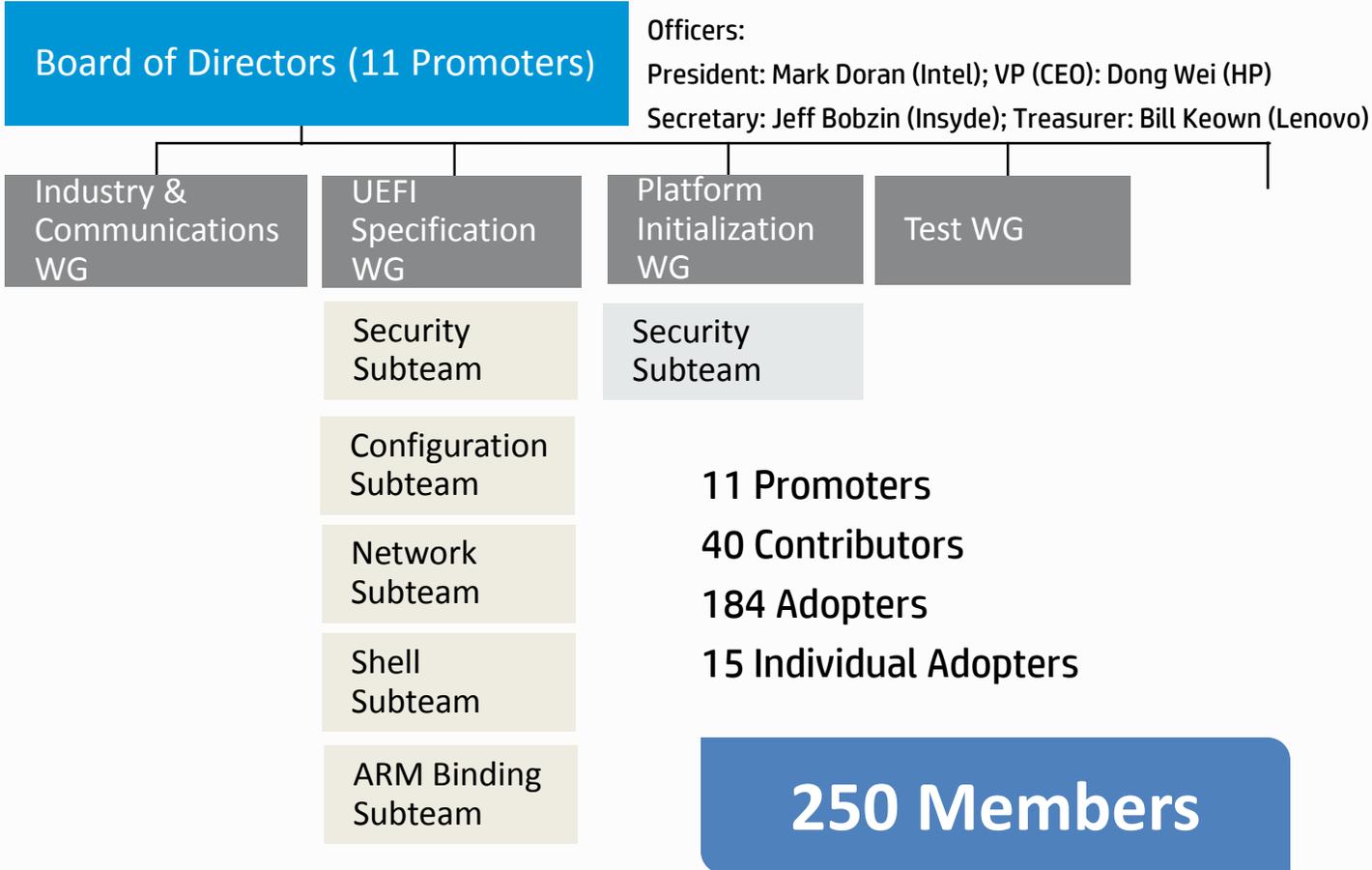
# UEFI Technology



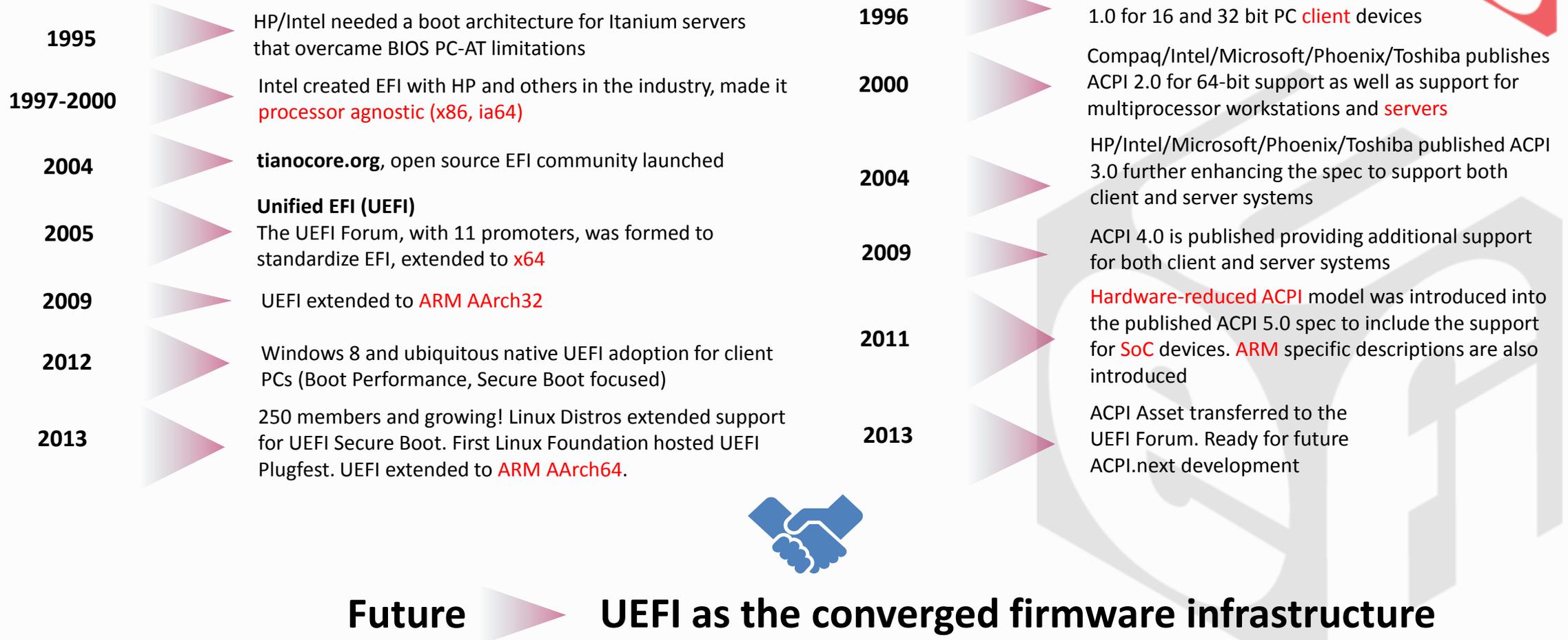
- Platform Initialization (PI):
  - Interfaces produced & consumed by firmware only; promote interoperability between firmware components
- UEFI:
  - Pre-OS (and limited runtime program interfaces) between UEFI Applications (incl. OSes)/UEFI Drivers and system firmware



# The UEFI Forum Organization Chart



# UEFI/ACPI Timeline



# ACPI Asset Transfer

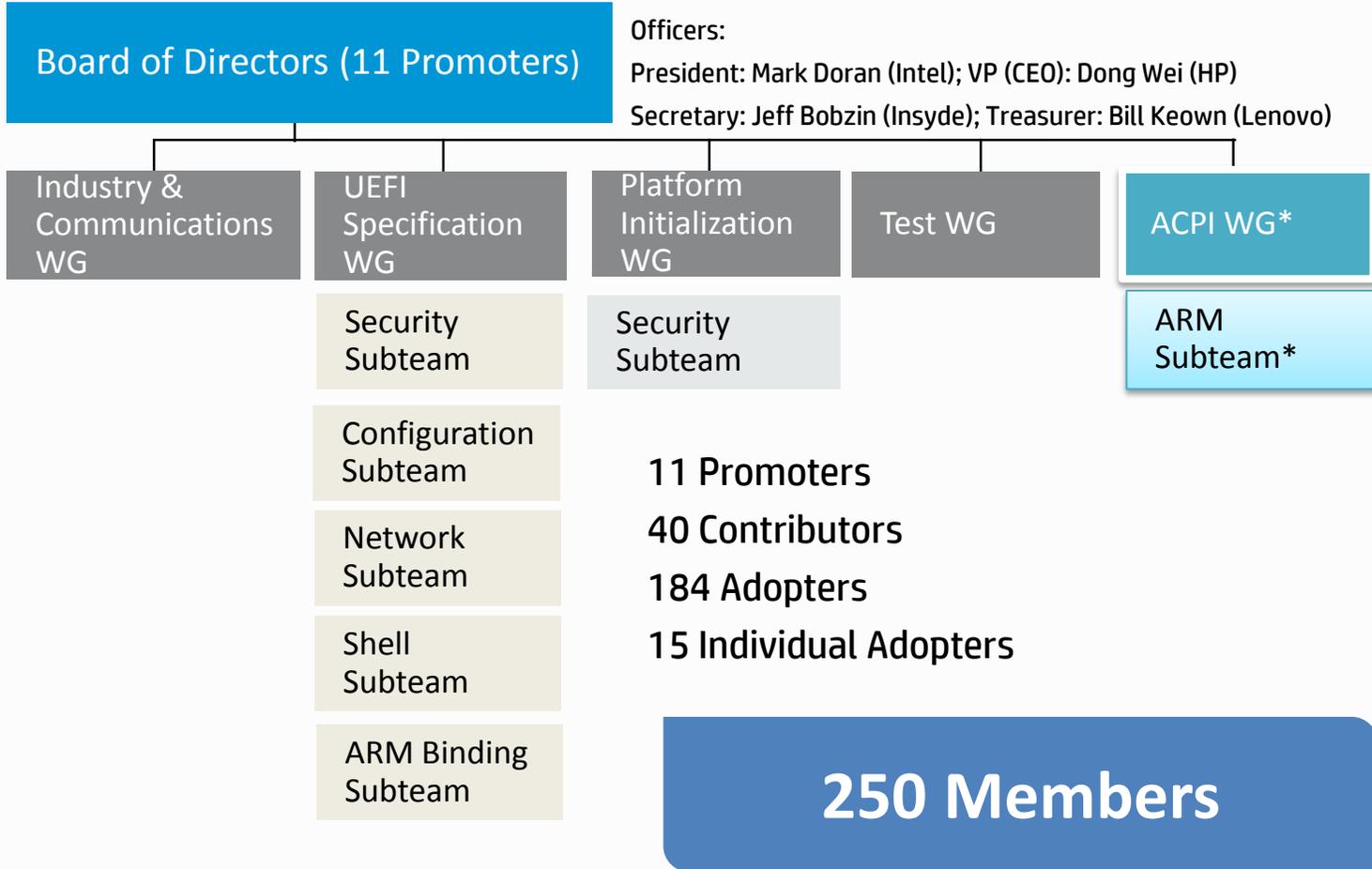


- Synchronize Interface Definitions with Diverse Ecosystem Participations
  - The UEFI Forum is by far the de facto industry standards body for platform interfaces
  - Owning ACPI, UEFI and PI, the UEFI Forum now becomes the one stop shop for all interfaces related to system firmware
  - ACPI v5.0A is the starting point

**Advanced Configuration and Power  
Interface Specification**

Hewlett-Packard Corporation  
Intel Corporation  
Microsoft Corporation  
Phoenix Technologies Ltd.  
Toshiba Corporation  
Revision 5.0 Errata A

# The UEFI Forum Organization Chart

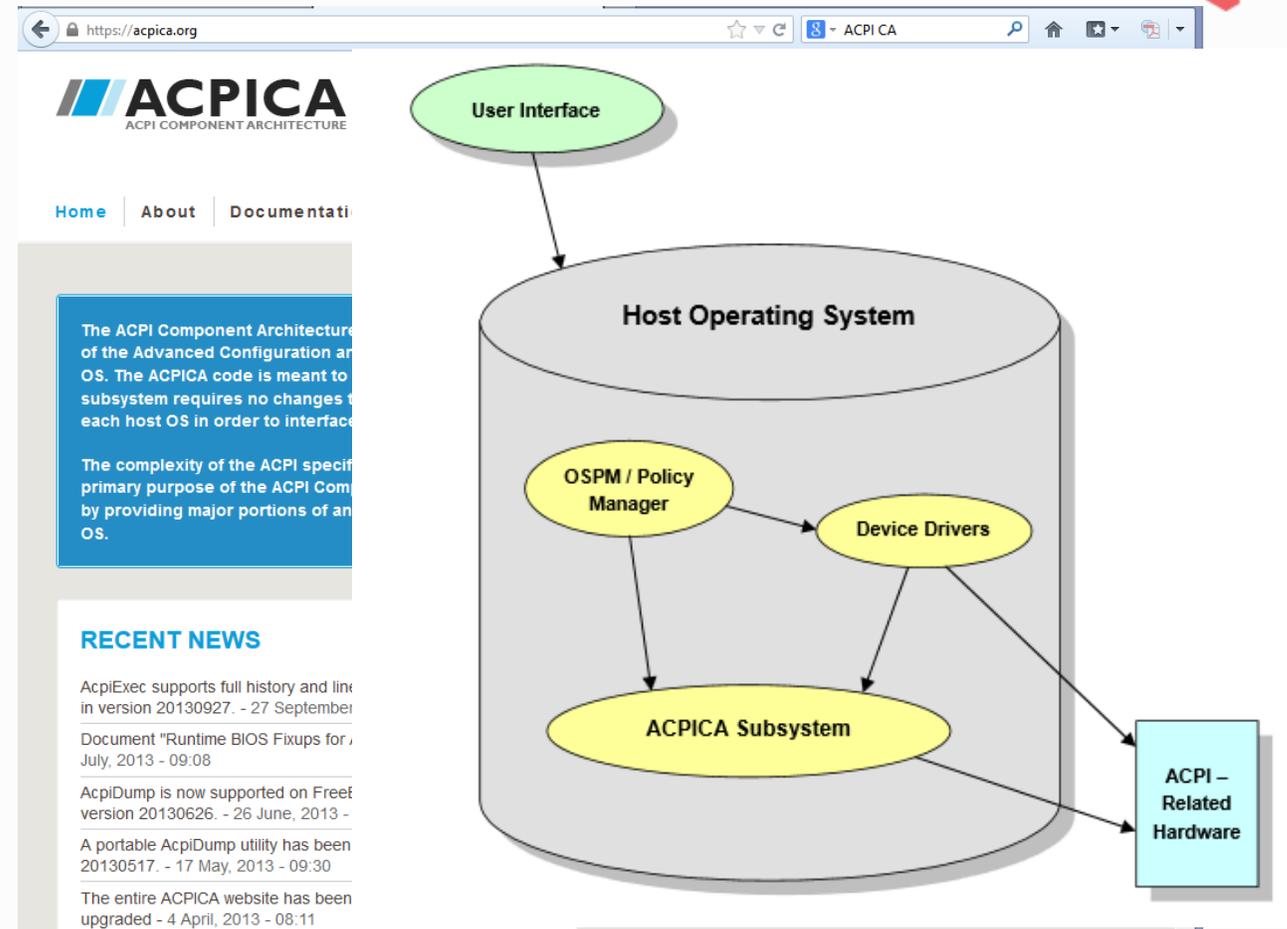


\*: To be established

# Open Source ACPI Interpreter Reference



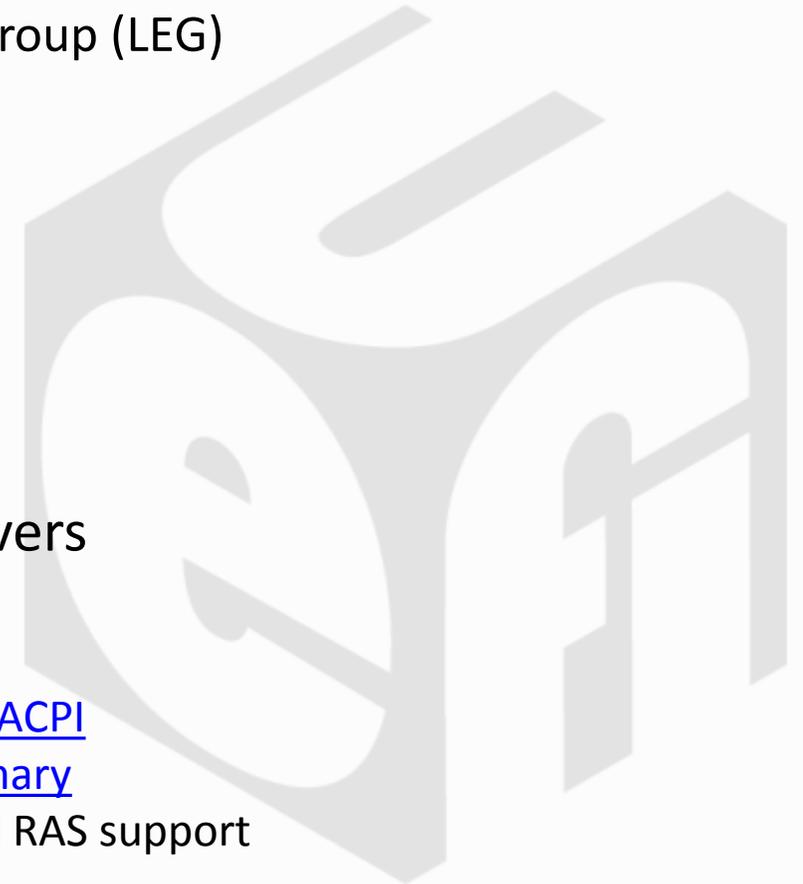
- ACPICA
  - Reference implementation for OS independent ACPI Interpreter/Assembler
  - Intel and GPL Dual License
  - Hosted at [acpica.org](https://acpica.org)



# Linaro (Linux-on-ARM)



- UEFI as the preferred boot model for ARMv8 servers
  - UEFI enablement is championed by the Linaro Enterprise Group (LEG)
    - <https://wiki.linaro.org/ARM/UEFI>
    - <https://wiki.linaro.org/LEG/Engineering/Kernel/UEFI/>
    - Experiment on more physical platforms:
      - ARM Versatile Express (A5, A9, A15)
      - Samsung Origen, Arndale
      - TI PandaBoard
    - Support KVM
    - Enable UEFI SCT to run on ARM systems
- ACPI as the preferred runtime interface for ARMv8 servers
  - ACPI enablement is also championed by the LEG
    - <https://wiki.linaro.org/LEG/Engineering/Kernel/ACPI>
    - <https://wiki.linaro.org/LEG/Engineering/Kernel/ACPI/RASandACPI>
    - <https://git.linaro.org/gitweb?p=arm/acpi/acpi-asl.git;a=summary>
    - Main focus on system configuration, power management and RAS support



# Call to Action



- Participate in the UEFI Development
  - UEFI Forum Membership
    - Specifications (UEFI, PI, ACPI), Tests
  - Open Source Contribution
    - Linaro
    - TianoCore
    - ACPI CA



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



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