**# Title:**

Clarify Boot#### processing requirements

**# Status:**

Draft

**# Document:**

UEFI Specification 2.9 (Future Errata)

**# License:**

SPDX-License-Identifier: CC-BY-4.0

**# Submitter:**

* Samer El-Haj-Mahmoud, ARM
* Sunny Wang, ARM
* Felix Polyudov, AMI
* TianoCore Community (<https://www.tianocore.org>)

**# Summary of the change**

Clarify the specification requirements around processing Boot#### variables, and how that relates to the different required events.

**# Benefits of the change**

Resolve some conflict in language between sections 3.1.7 and 7.1, around the order in which Boot#### are processed and the ReadyToBoot event is signaled.

For in-depth details of the issue and discussion, see:

* Code issue: <https://bugzilla.tianocore.org/show_bug.cgi?id=2831>
* EDK2 RPi patch and discussion thread: <https://edk2.groups.io/g/devel/topic/74912987#61328>

**Update 6/30**

Per the discussion in the BZ (comments 10 – 15), the ECR is updated to change the proposal to preserve backwards compatibility with the existing EDK2 BDS implementation, which signals ReadyToBoot earlier during the boot options processing, as suggested in UEFI section 7.1.

* Update section 3.1.7 follow what is suggested in 7.1.
* Add new requirement to signal ReadyToBoot before launching platform recovery options, to resolve the current issue, and make the recovery boot path consistent with the normal boot path.
* Clarify that “BootCurrent” variable is set before signaling ReadyToBoot to match the current EDK2 behavior, and remove that ambiguity from the spec. Also clarify that this does not happen when launching recovery boot options.

**# Impact of the change**

Minor change to TianoCore EDK2 BDS is needed to signal ReadyToBoot on launching the platform recovery options, as highlighted in the BZ and above.

**# Detailed description of the change [normative updates]**

* Insertions in **green**
* Removals in ~~red~~

**3.1.7 - Required System Preparation Applications**

…

After all SysPrep#### variables have been launched and exited, the platform shall notify EFI\_EVENT\_GROUP\_READY\_TO\_BOOT and EFI\_EVENT\_GROUP\_AFTER\_READY\_TO\_BOOT event groups. ~~and. begin to evaluate~~ This should happen when the Boot Manager is about to load and execute Boot#### variables with Attributes set to LOAD\_OPTION\_CATEGORY\_BOOT according to the order defined by BootOrder. ~~The FilePathList of variables marked LOAD\_OPTION\_CATEGORY\_BOOT shall not be evaluated prior to the completion of EFI\_EVENT\_GROUP\_AFTER\_READY\_TO\_BOOT event group processing.~~

**3.3 Globally Defined Variables**

**….**

The *BootCurrent* variable is a single **UINT16** that defines the *Boot####* option that was selected on the current boot. The platform sets this variable before signaling **EFI\_EVENT\_GROUP\_READY\_TO\_BOOT**. This variable is not set when attempting to launch a *PlatformRecovery###* option.

**7.1 Event, Timer, and Task Priority Services**

…

**EFI\_BOOT\_SERVICES.CreateEventEx()**

…

**EFI\_EVENT\_GROUP\_READY\_TO\_BOOT**

This event group is notified by the system right before notifying **EFI\_EVENT\_GROUP\_AFTER\_READY\_TO\_BOOT** event group when the Boot Manager is about to load and execute a boot option **or a platform recovery option**. The event group presents the last chance to modify device or system configuration prior to passing control to a boot option.

**EFI\_EVENT\_GROUP\_AFTER\_READY\_TO\_BOOT**

This event group is notified by the system immediately after notifying **EFI\_EVENT\_GROUP\_READY\_TO\_BOOT** event group when the Boot Manager is about to load and execute a boot option **or a platform recovery option**. The event group presents the last chance to survey device or system configuration prior to passing control to a boot option.