Defects=0, Enhancements=0 (Version Change Only)

Change Summary (Defects=1)

SCGCQ00288681 (DFCT) - Allowing device format of a RAID physical disk through short cut key Alt+F in device properties screen.

Total Defects Resolved (1)

(SCGCQ00288681)	*Defect 1/1*
HEADLINE:	Allowing device format of a RAID physical disk through short cut key Alt+F in device properties screen.
DESC OF CHANGE:	Additional checks has been added in the DisplayDeviceProperties() function in such a way that if the device in question is a RAID Phys Disk, DeviceFormat() operation is not started.
TO REPRODUCE:	1. Create volume. 2. Go to the physical the drives of the volume. 3. Go the device properties of the drive. 4. Ideally the "format" is grayed out, but pressing Alt+F able to format the drive.
ISSUE DESC:	When the key ALT_F is pressed in the device properties screen on bare disks, the key press will initiate a DeviceFormat operation. It was observed that DeviceFormat operation is also initiated for a RAID Phys Disk which is not the correct behaviour.

Change Summary (Defects=5)

SCGCQ00282493 (DFCT) - Gen2 BIOS: Error in retrieving drive information occured after doing a page down in Manage hotspare screen with 4K volume.

SCGCQ00283294 (DFCT) - Warning message related to volume creation of 4K sector and 512b drive is not shown in BIOS CU

SCGCQ00285095 (DFCT) - Ph14 SAS2BIOS: Uninitialized variable access during multipath check

SCGCQ00280689 (CSET) - The BIOS CU asks for user confirmation to save/discard changes even after changes were discarded once.

SCGCQ00284521 (CSET) - Multiple navigation to the "Device Properties" screen causes CU crash.

Total Defects Resolved (5)

(SCGCQ00282493)	*Defect 1/5*
HEADLINE:	Gen2 BIOS: Error in retrieving drive information occured after doing a page down in Manage hotspare screen with 4K volume.
DESC OF CHANGE:	The BIOS CU code makes compatibility checks for HS in order to gray them out. While doing so the CU code reads RaidPD0 page. After caching in the required information the CU did not deallocate the page. This caused memory leak and after many execution the CU failed to read/write config pages to FW. This page deallocation is done after getting the required information.
TO REPRODUCE:	Step1: Connect couple of 4K sector drives. And connect 15 512 byte sector drives. Step2: Create a RAID1 volume with 4k sectored drives. Step3: On navigating to Manage Hotspare screen, scroll the listed drives up and down. Step4: Repeat the Step3 three times. The CU creashes after 3 to 4 such page scrolls.
ISSUE DESC:	On having 4K volumes and going into the Manage hotspare screen to select the hotspares from a set of 24 drives, scrolling down down and up, causes the physical disk information of the volume drives to disappear. On going to the root screen and trying to enter into the next screen from there, throws an error message: 'An error occured while retrieving device information'.

(SCGCQ00283294)	*Defect 2/5*
HEADLINE:	Warning message related to volume creation of 4K sector and 512b drive is not shown in BIOS CU
DESC OF CHANGE:	Added a new line "Mixing of 512 Byte and 4K Byte sector disks may not be allowed" in help text.
TO REPRODUCE:	1) Flash the bios Ph14 Alpha version: 7.26.02.00 2) Enter BIOS CU by pressing ctrl+C 3) Connect some 4K sector drives and 512b drives to the controller 4) Go to RAID Properties, Create Raid1 volume 5) Select one 4K sector drive from "RAID Disk" column 6) All other 512b disks will be shown as wrg type under "Drive status" column and the RAID disk volumn for the 512b disks will be shown as 'No'. 7) Select 'No' in the RAID disk column and press Enter.
ISSUE DESC:	While trying to create volume using 4ksector and 512b drive, Warning message like "Mixing of 512 Byte and 4K Byte sector disks may not be allowed" is not shown in the list of warning messages displayed under the RAID disk columen in BIOS CU

(SCGCQ00285095)	*Defect 3/5*
HEADLINE:	Ph14 SAS2BIOS: Uninitialized variable access during multipath check
DESC OF CHANGE:	The code is modified to fix the uninintialized variable access and the proper variable is used to fetch the right SAS address.
TO REPRODUCE:	None
ISSUE DESC:	While checking for multipath configuration the SAS2BIOS have a check for SAS address reported to be different in both the paths. While performing the check a wrong uninitialized variable is accessed.

(SCGCQ00280689 - Port of SCGCQ00280360)	*Defect 4/5*
HEADLINE:	The BIOS CU asks for user confirmation to save/discard changes even after changes were discarded once.
DESC OF CHANGE:	The "GlobalPropertyChanges" flag which will be set when user makes changes in "Adapter Timing Properties" is cleared after user discards the changes and exits the "Adapter Properties Screen". This lets the CU know that the no pending changes are there.
TO REPRODUCE:	1. Make any changes in "Adapter Timing Properties". 2. Discard those changes when prompted while exiting "Adapter Properties Screen". 3. Come back to "Adapter Timing Properties" screen and exit the screen. 4. CU again asks for user confirmation to save/discard changes even when the changes were discarded last time.
ISSUE DESC:	The BIOS CU asks for user confirmation to save/discard changes even after changes were discarded (in "Adapter Timing Properties") once.

(SCGCQ00284521 - Port of SCGCQ00282948)	*Defect 5/5*
HEADLINE:	Multiple navigation to the "Device Properties" screen causes CU crash.
DESC OF CHANGE:	Deallocating the memory allocated for IO_REQUEST before returning from the routine "DoSepMessage" when enclosure handle is zero.
TO REPRODUCE:	1. Flash the controller with latest FW and BIOS. 2. Connect few disks (Direct attached). 3. Navigate to "Device properties" screen. 4. Keep pressing ALT+N or ALT+P to navigate to next device or previous device respectively. 5. After multiple navigations (160 times when 3 devices are connected), the CU crashes. User will not be able to go to "SAS Topology screen" and "Raid Volume screen".
ISSUE DESC:	Multiple navigation to the "Device Properties" screen causes CU crash.

Change Summary (Defects=1)

SCGCQ00265422 (CSET) - Option ROM hangs during boot if one adapter is unprogrammed (FW is erased) and others contain a valid option ROM BIOS.

Total Defects Resolved (1)

(SCGCQ00265422 - Port of SCGCQ00253481)	*Defect 1/1*
HEADLINE:	Option ROM hangs during boot if one adapter is unprogrammed (FW is erased) and others contain a valid option ROM BIOS.
DESC OF CHANGE:	Reordered and added a check for unprogrammed adapters, skipping those that are unprogrammed.
TO REPRODUCE:	Program one adapter completely (FW and BIOS), another without FW (or complete erase), then boot.
ISSUE DESC:	Discovered on a OEM specific platform, this change affects all option ROM BIOS'. During boot, the option ROM hangs waiting for a FW response to a request to make the adapter ready, but fails because no FW exists on the card that triggers the error.

Change Summary (Defects=2 Enhancements=4)

SCGCQ00261629 (CSET) - When having 4 or more controllers, system hangs while scanning through the properties & changing the boot

SCGCQ00261926 (DFCT) - Re-Order entries in the Big-OR found in InitializeRom() to put IocResetToReadyState() before, instead of after, QualifyAnAdapter().

SCGCQ00245263 (CSET) - Enhance BIOSCU to get SMART data from phys disk on which LogSense command is not supported.

SCGCQ00255883 (CSET) - Enhance Legacy x86 SAS2 BIOS to be able to remove persistent driver mapping page entries for IR volumes that are not present

SCGCQ00255884 (CSET) - Add support to handle a misbehaving hard disk which never finishes spin up.

SCGCQ00255885 (CSET) - BIOS can only show 24 HDDs in a OEM specific 25sff+2sff system

Total Defects Resolved (2)

(SCGCQ00261629 - Port of SCGCQ00220571)	*Defect 1/2*
HEADLINE:	When having 4 or more controllers, system hangs while scanning through the properties & changing the boot
DESC OF CHANGE:	The IO Unit page 1 is deallocated (Only if the page is not read yet) in adapter list screen and read again in advanced device screen.
TO REPRODUCE:	Step1: Connect the setup defined in configuration. Step2: Enter Bios CU by pressing <CTRL C>. Step3: After entering the BIOS CU, Verify all adapters list are displayed with PCI Bus,PCI Dev,PCI Slot, FW Revision and Boot Order. Step4: Scan through all adapter details to verify non selectable. Step5: After scanning two to three trials, Adapter name" EVAL BOARD" changed to PCI Device. Step6: After this when boot order is changed, BIOS CU hangs and no operation can be performed.
ISSUE DESC:	The BIOS CU reads IO Unit page 1 to display the FW type (whether IT or IR) while in adapter list screen. This page is used to display the advanced device display screen too. Hence this page is not deallocated in adapter list screeen. However if the user continously refreshes adapter list screen, the memory leak happens causing CU to crash.

(SCGCQ00261926)	*Defect 2/2*
HEADLINE:	Re-Order entries in the Big-OR found in InitializeRom() to put IocResetToReadyState() before, instead of after, QualifyAnAdapter().
DESC OF CHANGE:	Re-Order entries in the Big-OR found in InitializeRom() to put IocResetToReadyState() before, instead of after, QualifyAnAdapter().
TO REPRODUCE:	Requires the failing code to be executed on a non-production System BIOS. Otherwise, the error may never be seen in real life.
ISSUE DESC:	In the failing code path, TP_AdapterIndexGet() was being called before TP_AdapterIndexSet().

Total Enhancements Implemented (4)

(SCGCQ00245263 - Port of SCGCQ00237611)	*Enhancement 1/4*
HEADLINE:	Enhance BIOSCU to get SMART data from phys disk on which LogSense command is not supported.
NEW FUNCTIONALITY:	Some of the hard disk drives do not support specific LogSense pages related to SMART data. A routine DoRequestSense is added to which will send the Requset Sense SCSI command to determine the Additional Code (ASC). This will help BIOS CU to correctly determine the SMART status of a drive. If SMART count is exceeded then BIOS CU will set Pred Fail as "Yes" in view volume screen.

(SCGCQ00255883 - Port of SCGCQ00228634)	*Enhancement 2/4*
HEADLINE:	Enhance Legacy x86 SAS2 BIOS to be able to remove persistent driver mapping page entries for IR volumes that are not present
NEW FUNCTIONALITY:	Added functionality to remove Driver Persistent Mapping Entries (DPMP0) for IR volumes that no longer exist. The core bios will remove the Driver Persistent Mapping Entry for the IR volumes if volumes are found to be offline during core bios initialization.

(SCGCQ00255884 - Port of SCGCQ00238399)	*Enhancement 3/4*
HEADLINE:	Add support to handle a misbehaving hard disk which never finishes spin up.
NEW FUNCTIONALITY:	Handles the scenario of a drive that never finishes spinning up, by detecting "Internal Target Error" and giving up after a reset fails to recover. Shortens the time waited to 3 loops at 10 seconds instead of 5 minutes.

(SCGCQ00255885 - Port of SCGCQ00240601)	*Enhancement 4/4*
HEADLINE:	BIOS can only show 24 HDDs in a OEM specific 25sff+2sff system
NEW FUNCTIONALITY:	Changed the way devices are enumerated during discovery so that drives receive an INVALID_INT13_ID if they are not one of the devices selected for INT13 assignment on non-BBS platforms, and so that CD-ROM drives also are enumerated as INVALID_INT13_ID until such time as they are reassigned a drive number because El Torito bootable media is discovered. Also, added capacity information for all devices as they are discovered. Then, using the above information along with other preexisting information the devices are presented in the banner according to the CU selection criteria.