USB ENGINEERING CHANGE NOTICE

Title: **USB TEST_MODE selector values**
Applies to: **USB Specification Revision 2.0**

Summary of ECN:

Add new TEST_MODE selector values 0x06 and 0x07 from the reserved list in Table 9-7 of the USB Revision 2.0 Specification.

Reasons for ECN:

The use of these reserved selector values is necessary to allow automated compliance testing for On-The-Go and Embedded Host units.

Impact on Existing Peripherals and Systems:

No impact, as these values are currently reserved.

Hardware Implications:

There are no hardware implications.

Software Implications:

There are no software implications.

Compliance Testing Implications:

Compliance testing is covered in the OTG and EH Supplements. This proposal to flag the use of the TEST_MODE selector values has no additional impact.

Specification Changes:

Replace Following Part of Section 9.4.9:

Table 9-7. Test Mode Selectors

Value	Description
00H	Reserved
01H	Test_J
02H	Test_K
03H	Test_SE0_NAK
04H	Test_Packet
05H	Test_Force_Enable
06H-3FH	Reserved for standard test selectors
3FH-BFH	Reserved
C0H-FFH	Reserved for vendor-specific test modes.

If the feature selector is *TEST_MODE*, then the most significant byte of *wIndex* is used to specify the specific test mode. The recipient of a SetFeature(TEST_MODE…) must be the device; i.e., the lower byte of *wIndex* must be zero and the *bmRequestType* must be set to zero. The device must have its power cycled to exit test mode. The valid test mode selectors are listed in Table 9-7. See Section 7.1.20 for more information about the specific test modes.

If *wLength* is non-zero, then the behavior of the device is not specified.

If an endpoint or interface is specified that does not exist, then the device responds with a Request Error.

Default state: A device must be able to accept a SetFeature(TEST_MODE, TEST_SELECTOR) request when in the Default State. Device behavior for other SetFeature requests while the device is in the Default state is not specified.

Address state: If an interface or an endpoint other than endpoint zero is specified, then the device responds with a Request Error.

Configured state: This is a valid request when the device is in the Configured state.

With:

Table 9-7. Test Mode Selectors

Value	Description

00H	Reserved
01H	Test_J
02H	Test_K
03H	Test_SE0_NAK
04H	Test_Packet
05H	Test_Force_Enable
06H-07H	On-The-Go and Embedded Host Test Functions
08H-3FH	Reserved for standard test selectors
3FH-BFH	Reserved
C0H-FFH	Reserved for vendor-specific test modes.

If the feature selector is *TEST_MODE*, then the most significant byte of *wIndex* is used to specify the specific test mode. The recipient of a SetFeature(TEST_MODE…) must be the device; i.e., the lower byte of *wIndex* must be zero and the *bmRequestType* must be set to zero. The device must have its power cycled to exit test mode. The valid test mode selectors are listed in Table 9-7. See Section 7.1.20 for more information about the specific test modes.

The functionality and means of exiting the On-The-Go and Embedded Host Test Functions is specified in the 'On-The-Go and Embedded Host Supplement to the USB Revision 2.0 Specification'.

If *wLength* is non-zero, then the behavior of the device is not specified.

If an endpoint or interface is specified that does not exist, then the device responds with a Request Error.

Default state: A device must be able to accept a SetFeature(TEST_MODE, TEST_SELECTOR) request when in the Default State. Device behavior for other SetFeature requests while the device is in the Default state is not specified.

Address state: If an interface or an endpoint other than endpoint zero is specified, then the device responds with a Request Error.

Configured state: This is a valid request when the device is in the Configured state.