New Technical Notes

Macintosh

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HW 4 - Break/CTS Device Driver Event Structure
Hardware

Revised by:	March 1988
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This technical note documents the event record information that gets passed when the serial driver posts an event for a break/CTS status change.

The serial driver can be programmed to post a device driver event upon encountering a break status change or CTS change (via the `SerHShake` call). The structure of device driver events is driver-specific. This technical note documents the event record information that gets passed when the serial driver posts a device driver event for a break/CTS status change.

When the event is posted, the message field of the event record will be a long word (four bytes). The most significant byte will contain the value of SCC Read Register 0 (see below for the relevant Read Register 0 values). The next byte will contain the changed (since the last interrupt) bits of the SCC read register 0. The lower two bytes (word) will contain the `DCtlRefNum`.

The values for Read Register 0 are as follows:

- If a break occurred, bit 7 will be set.
- If CTS changed, bit 5 will reflect the state of the CTS pin (0 means the handshake line is asserted and that it is OK to transmit).

We discourage posting these events because interrupts would be disabled for a long time while the event is being posted. However, it is possible to detect a break or read the value of the CTS line in another way. A break condition will **always** terminate a serial driver input request (but not an output request), and the error breakRecd (–90) will be returned. (This constant is defined in the SysEqu file.) You could therefore detect a break by checking the returned error code.

The state of the CTS line can be checked by making a `SerStatus` call and checking the value of the `ctsHold` flag in the `SerStaRec` record. See the Serial Drivers chapter of *Inside Macintosh* for details.

Further Reference:

- The Device Manager
- Serial Drivers
- Zilog Z8030/Z8530 SCC Serial Communications Controller Technical Manual

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