

CLAIMS

1. A computer program product for performing an input/output (I/O) operation initiated by an I/O operation instruction at a host computer system configured for communication with a control unit, the control unit in communication with one or more devices, the computer program product comprising:

a tangible non-transitory computer storage medium readable by a processing circuit and storing instructions for execution by the processing circuit for performing a method comprising:

generating at least one command message specifying an I/O operation by a channel subsystem of the host computer system, the at least one command message including one or more device command words (DCWs), each DCW associated with an I/O command, wherein at least one DCW of the one or more DCWs includes a data count and a suppress-length indication (SLI), the SLI configured to instruct a control unit whether to continue to perform the I/O operation in response to the control unit detecting an incorrect length condition, the incorrect length condition detected in response to the data count not matching an amount of data required to perform the I/O operation command, wherein the data required is one of data available at the control unit for a read operation command and data required by the control unit for a write operation command;

forwarding the at least one command message to the control unit;

receiving an incorrect length (IL) value from the control unit, the IL value being a first IL value in response to the SLI being a first SLI value and the data count not matching the amount of data required, the IL value being a second IL value in response to the SLI being a second SLI value and the data count not matching the amount of data required; and

responsive to receiving the IL value from the control unit, storing an IL indicator in a subchannel-status word, the IL indicator representing the IL value.

2. The computer program product of claim 1, wherein the at least one command message includes a TCCB that holds the plurality of DCWs therein, and generating the at least one command message includes gathering the TCCB from one or more locations specified in a TCCB address field of a transport command word (TCW) stored in a host system memory.

the PRLI request message including a header having a value that indicates whether the channel subsystem supports use of the SLI; and

receiving a (PRLI) response message from the control unit, the PRLI response message including a header having a value that indicates whether the control unit supports use of the SLI.

20. ~~A method of performing an input/output (I/O) operation initiated by an I/O operation instruction at a host computer system configured for communication with a control unit, the control unit in communication with one or more devices, the method comprising:~~
generating at least one command message specifying an I/O operation by a channel subsystem of the host computer system, the at least one command message including one or more device command words (DCWs), each DCW associated with an I/O command, wherein at least one DCW of the one or more DCWs includes a data count and a suppress-length indication (SLI), the SLI configured to instruct a control unit whether to continue to perform the I/O operation in response to the control unit detecting an incorrect length condition, the incorrect length condition detected in response to the data count not matching an amount of data required to perform the I/O operation command, wherein the data required is one of data available at the control unit for a read operation command and data required by the control unit for a write operation command;

forwarding the at least one command message to the control unit;
receiving an incorrect length (IL) value from the control unit, the IL value being a first IL value in response to the SLI being a first SLI value and the data count not matching the amount of data required, the IL value being a second IL value in response to the SLI being a second SLI value and the data count not matching the amount of data required; and
responsive to receiving the IL value from the control unit, storing an IL indicator in a subchannel-status word, the IL indicator representing the IL value.

21. The method of claim 20, wherein the at least one DCW includes a command chaining flag indicating that a subsequent DCW is logically connected to the at least one DCW and is to be performed by the control unit after the control unit executes the at least one DCW, and the SLI instructs the control unit to continue command chaining and execute the subsequent DCW in response to the control unit detecting the incorrect length condition.

~~22. The method of claim 20, wherein the SLI is a value in an SLI field in the at least one DCW, the value being one instructing the control unit to continue the I/O operation when the incorrect length condition is detected, and the value being zero instructing the control unit to terminate the I/O operation when the incorrect length condition is detected.~~

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23. The method of claim 20, wherein the at least one DCW includes the SLI including an SLI field having a value of one in response to the SLI being the second SLI value and a value of zero in response to the SLI being the first SLI value, and the channel subsystem is configured receive a transport response message returned from the control unit in response to
10 executing or terminating the I/O operation, the transport response message including the IL value in an incorrect length (IL) field that indicates whether the I/O operation was terminated due to the incorrect length condition, the IL field having a value of one in response to the SLI being the first SLI value and the data count not matching the amount of data required, the IL field having a value of zero in response to at least one of the SLI being
15 the second SLI value and the data count matching the amount of data required.

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24. The method of claim 23, wherein the transport response message includes a DCW Offset field that indicates which of the plurality of DCWs caused the incorrect length condition to be detected.

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25. The method of claim 20, further comprising:

 sending a process login (PRLI) request message to the control unit, the PRLI request message configured to initialize a link between the channel subsystem and the control unit, the PRLI request message including a header having a value that indicates whether the
25 channel subsystem supports use of the SLI; and

 receiving a (PRLI) response message from the control unit, the PRLI response message including a header having a value that indicates whether the control unit supports
~~use of the SLI indication.~~