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(54) Title: APPARATUS, SYSTEM, AND METHOD FOR MANAGING DATA USING A DATA PIPELINE

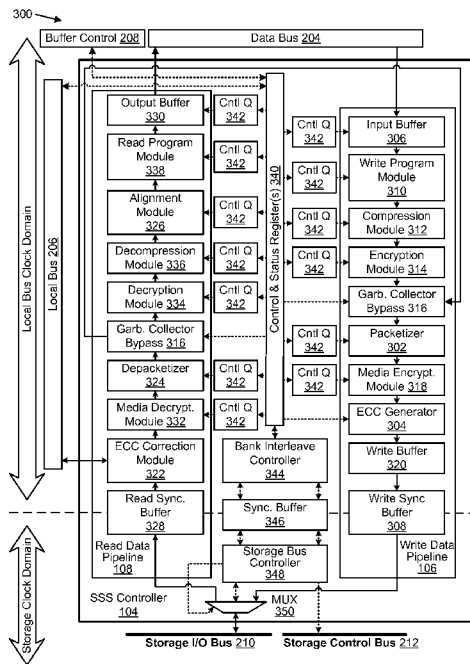


FIG. 3

(57) Abstract: An apparatus, system, and method are disclosed for managing data in a solid-state storage device (102). A solid-state (storage) (110) and solid-state controller (104) are included. The solid-state storage controller (104) includes a write data pipeline (106) and a read data pipeline (108). The write data pipeline (106) includes a packetizer (302) and an ECC generator (304). The packetizer (302) receives a data segment and creates one or more data packets sized for the solid-state storage (110). The ECC generator (304) generates one or more error-correcting codes ("ECC") for the data packets received from the packetizer (302). The read data pipeline (108) includes an ECC correction module (322), a depacketizer (324), and an alignment module (326). The ECC correction module (322) reads a data packet from solid-state storage (110), determines if a data error exists using corresponding ECC and corrects errors. The depacketizer (324) checks and removes one or more packet headers. The alignment module (326) removes unwanted data, and re-formats the data as data segments of an object.

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INTERNATIONAL SEARCH REPORT

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<p>A. CLASSIFICATION OF SUBJECT MATTER INV. G06F3/06</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>											
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) G06F</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, IBM-TDB, INSPEC</p>											
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 5 603 001 A (SUKEGAWA HIROSHI [JP] ET AL) 11 February 1997 (1997-02-11) abstract figures 2,3 column 3, line 34 - column 11, line 16 column 14, line 16 - column 20, line 14 column 25, line 56 - column 28, line 65</td> <td>1-24</td> </tr> <tr> <td>X A</td> <td>US 2006/152981 A1 (RYU DONG-RYUL [KR]) 13 July 2006 (2006-07-13) abstract figures 1,2,6,7,12 paragraph [0003] - paragraph [0010] paragraph [0048] - paragraph [0058] paragraph [0069] - paragraph [0070]</td> <td>17 1-16, 18-24</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 5 603 001 A (SUKEGAWA HIROSHI [JP] ET AL) 11 February 1997 (1997-02-11) abstract figures 2,3 column 3, line 34 - column 11, line 16 column 14, line 16 - column 20, line 14 column 25, line 56 - column 28, line 65	1-24	X A	US 2006/152981 A1 (RYU DONG-RYUL [KR]) 13 July 2006 (2006-07-13) abstract figures 1,2,6,7,12 paragraph [0003] - paragraph [0010] paragraph [0048] - paragraph [0058] paragraph [0069] - paragraph [0070]	17 1-16, 18-24
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<p>Date of the actual completion of the international search</p> <p>19 October 2009</p>		<p>Date of mailing of the international search report</p> <p>26/10/2009</p>									
<p>Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016</p>		<p>Authorized officer</p> <p>Knapczyk, Frédéric</p>									

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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