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(71) Applicant (for all designated States except US):
INNOPATH SOFTWARE, INC. [US/US]; 400
Caribbean Drive, Sunnyvale, California 94089 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GU, Jinsheng**
[CN/US]; 400 Caribbean Drive, Sunnyvale, California
94089 (US). **MANAPETTY, Premijth** [IN/US]; 400
Caribbean Drive, Sunnyvale, California 94089 (US).

(74) Agents: **COURTNEY, Barbara, B.** et al.; Courtney Stan-
iford & Gregory LLP, P.O. Box 9686, San Jose, California
95157 (US).

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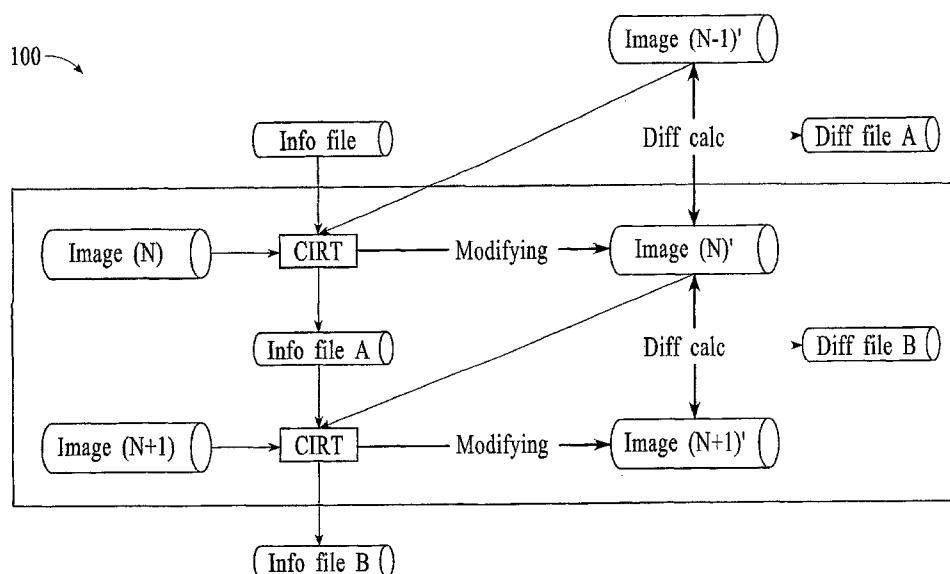
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(54) Title: REORGANIZING IMAGES IN STATIC FILE SYSTEM DIFFERENCING AND UPDATING



(57) Abstract: Systems and methods are provided for reorganizing static file system (SFS) images for efficient differencing, updating and to reduce the update time. The systems and methods are for updating compressed read-only memory file system (CRAMFS) format images as an example. The reorganizing receives an image that includes one or more SFS components such as CRAMFS components and determines any changed sections within the SFS images. Reorganized CRAMFS components are generated using information of the CRAMFS components by moving any of the changed sections from a first position to a second position in the component. The second position can follow all unchanged data sections of the image. A modified image is generated that includes the reorganized CRAMFS component. The modified image is used in SFS differencing and updating.

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USPC: 707/203

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 707/203; 707/101; 717/172; 365/203.03

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, DERWENT, WIPO, NPL, GOOGLE, GOOGLE PATENTS, GOOGLE SCHOLAR

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/0098427 A1 (Peng) 20 May 2004 (20.5.2004), the entire document.	1-16, 18, 20- 22, 25-45
Y	US 5,274,805 (Ferguson et al.) 28 December 1993 (28.12.1993), Abstract and Col. 13.	1-16, 18, 20-22, and 25-45
Y	WO/2003/025742 (Frazer et al.) 27 March 2003 (27.03.2003), the entire document	1-16, 18, 20-22, 28-36, 38-41, 43 and 45
A	US 5,832,520 (Miller) 3 November 1998 (3.11.1998), the entire document	1-45
A	US 6,018,747 (Burns et al.) 25 January 2000 (25.01.2000), the entire document	1-45
A	US 2003/0182414 A1 (O'Neill) 25 September 2003 (25.09.2003), the entire document	1-45
A	US 2004/0098420 A1 (Peng) 20 May 2004 (20.05.2004), the entire document.	1-45



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Facsimile No. (571) 273-3201

Authorized officer

James Trujillo

Telephone No. 571-272-2100

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 2003/0023964 (Rajaram et al.) 30 January 2003 (03.01.2003), the entire document.	1-45
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A	Burns, Randal In-Place Reconstruction of Delta Compressed Files, PODC 1998, 1998, the entire document	1-45
A	Rasch, David In-place Rsync: File Synchronization for Mobile and Wireless Devices, Proceedings of the Freenix Track: 2003 Annual USENIX Technical Conference, 14 June 2003 (14.6.2003), the entire document	1-45