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**(54) Title:** SYSTEMS, METHODS, AND COMPUTER-USABLE MEDIUM FOR DEFRAGMENTING A WINDOWS NT FILE SYSTEM VOLUME

(57) Abstract: A method of defragmenting a Windows NT file system volume includes the step of selecting a file record which is stored in a master file table associated with the Windows NT file system volume, in which one or more non-resident attributes are associated with the file record, and data associated with one or more non-resident attributes is stored outside the file record in one or more data extents. The method also includes the step of querying the one or more data extents without opening the one or more non-resident attributes. For example, the one or more data extents may be queried using a FSCTL\_ GET\_ NTFS\_ FILE\_ RECORD command. Moreover, the method includes the step of determining whether to defragement the one or more non-resident attributes based on information obtained from querying the one or more data extents. For example, the information may include a location of the one or more non-resident attributes.



## INTERNATIONAL SEARCH REPORT

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| Х  | US 2004/0148476 A1 (Altare) 29 July 2004 (29.07.2004) (abstract, and para [0002]-[0009], [0072]-[0099], [0132]-[0147])  |   |   |  | 1-15                  |
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