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**Racz et al.**

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(54) **DATA STORAGE AND ACCESS SYSTEMS**

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U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-  
claimer.

5,226,145 A 7/1993 Moronaga et al.  
5,367,150 A 11/1994 Kitta et al.  
5,406,619 A 4/1995 Akhteruzzaman et al.  
5,457,746 A 10/1995 Dolphin  
5,532,466 A 7/1996 Konno et al.  
5,588,146 A 12/1996 Leroux  
5,677,953 A 10/1997 Dolphin  
5,703,951 A 12/1997 Dolphin  
5,740,369 A 4/1998 Yokozawa et al.  
5,744,787 A 4/1998 Teicher

(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 0 195 098 10/1990

(Continued)

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now abandoned.

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**G06K 5/00** (2006.01)

(52) **U.S. Cl.** ..... **235/380; 235/382**

(58) **Field of Classification Search** ..... 235/380,  
235/382, 492, 451; 711/100, 101, 103  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,341,951 A 7/1982 Benton  
4,697,073 A 9/1987 Hara

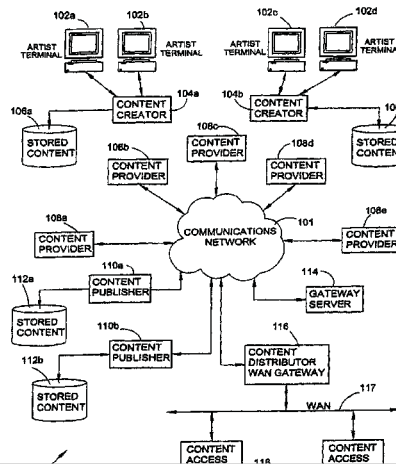
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(57) **ABSTRACT**

Data storage and access systems enable downloading and  
paying for data such as audio and video data, text, software,  
games and other types of data. A portable data carrier has an  
interface for sending and receiving data, data memory for  
storing received content data, and payment validation  
memory for providing payment validation data to an external  
device. The carrier may also store a record of access made to  
the stored content, and content use rules for controlling access  
to the stored content. Embodiments store further access con-  
trol data and supplementary data such as hot links to web sites  
and/or advertising data. A complementary data access termi-  
nal, data supply computer system, and data access device are  
also described. The combination of payment data and stored  
content data and use rule data helps reduce the risk of unau-  
thorized access to data such as compressed music and video  
data, especially over the Internet.

**33 Claims, 17 Drawing Sheets**



U.S. PATENT DOCUMENTS

5,754,654 A 5/1998 Hiroya et al.  
 5,794,202 A 8/1998 Kim  
 5,809,241 A 9/1998 Hanel et al.  
 5,845,281 A 12/1998 Benson et al.  
 5,847,372 A 12/1998 Kreft  
 5,889,860 A 3/1999 Eller et al.  
 5,901,330 A 5/1999 Sun et al.  
 5,918,213 A 6/1999 Bernard et al.  
 5,923,884 A 7/1999 Peyret et al.  
 5,933,498 A 8/1999 Schneck et al.  
 5,936,220 A 8/1999 Hoshino et al.  
 6,012,634 A 1/2000 Brogan et al.  
 6,018,720 A 1/2000 Fujimoto  
 6,078,917 A 6/2000 Paulsen et al.  
 6,119,945 A 9/2000 Muller et al.  
 6,142,369 A 11/2000 Jonstromer  
 6,202,056 B1 3/2001 Nuttall  
 6,385,731 B2 5/2002 Ananda  
 6,415,156 B1 7/2002 Stadelmann  
 6,424,975 B1 7/2002 Walter et al.  
 6,442,570 B1 8/2002 Wu  
 6,473,829 B1 10/2002 Dahman et al.  
 6,510,236 B1 1/2003 Crane et al.  
 6,553,413 B1 4/2003 Leighton et al.  
 6,554,192 B2 4/2003 Tingl  
 6,574,643 B2 6/2003 Walter et al.  
 6,658,568 B1 12/2003 Ginter et al.

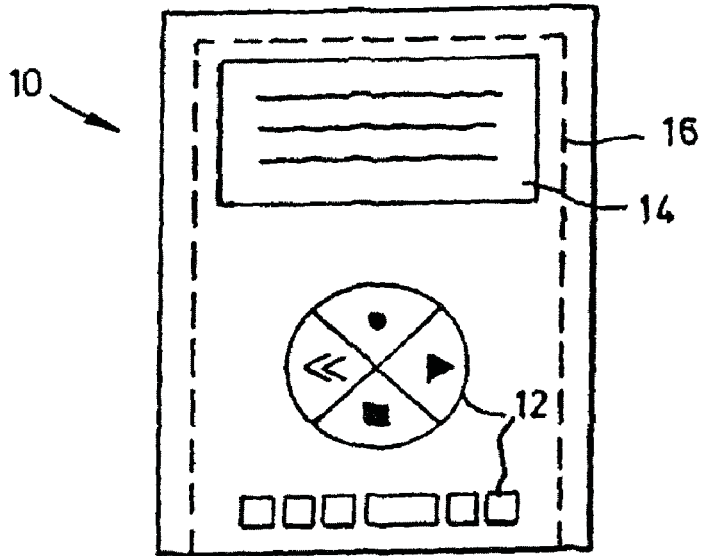
6,747,930 B1 6/2004 Weldon et al.  
 6,993,507 B2 1/2006 Meyer et al.  
 6,999,936 B2 2/2006 Sehr  
 7,000,836 B2 2/2006 Saeki  
 7,044,362 B2 5/2006 Yu  
 7,083,081 B2 8/2006 McGee et al.  
 7,334,720 B2\* 2/2008 Hulst et al. .... 235/380  
 7,677,446 B2 3/2010 Wise  
 7,942,317 B2\* 5/2011 Racz et al. .... 235/380  
 2003/0168515 A1 9/2003 Gray  
 2006/0249570 A1 11/2006 Seifert et al.  
 2008/0041938 A1 2/2008 Wise

FOREIGN PATENT DOCUMENTS

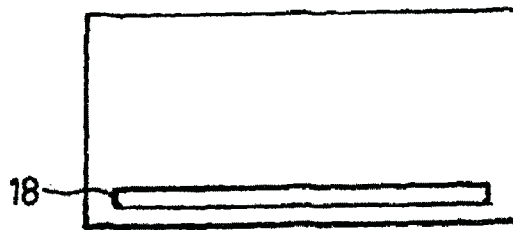
EP 0 713 198 A2 5/1996  
 EP 0 823 694 A1 2/1998  
 EP 0 542 298 4/1998  
 EP 0 843 449 A2 5/1998  
 EP 0 914 001 A1 5/1999  
 JP 10-269291 A 10/1998  
 JP 11-53184 A 2/1999  
 JP 11-212785 A 8/1999  
 JP 11-213010 A 8/1999  
 JP 11-272762 A 10/1999  
 WO 98/19237 A1 5/1998  
 WO 98/33343 7/1998  
 WO 98/37526 8/1998

\* cited by examiner

Fig. 1  
A



B



C

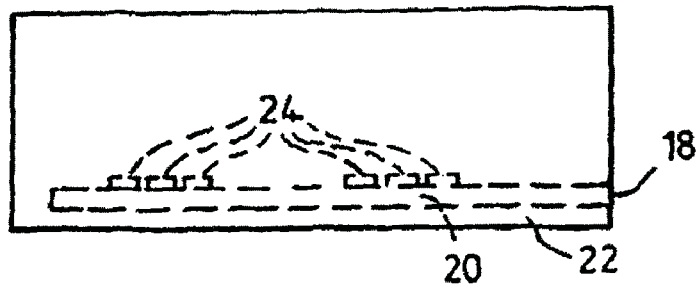


Fig. 2

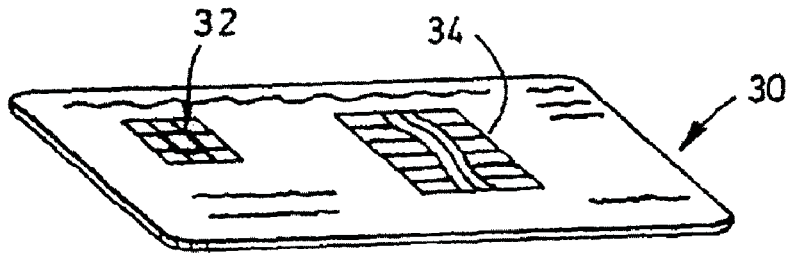


Fig. 3

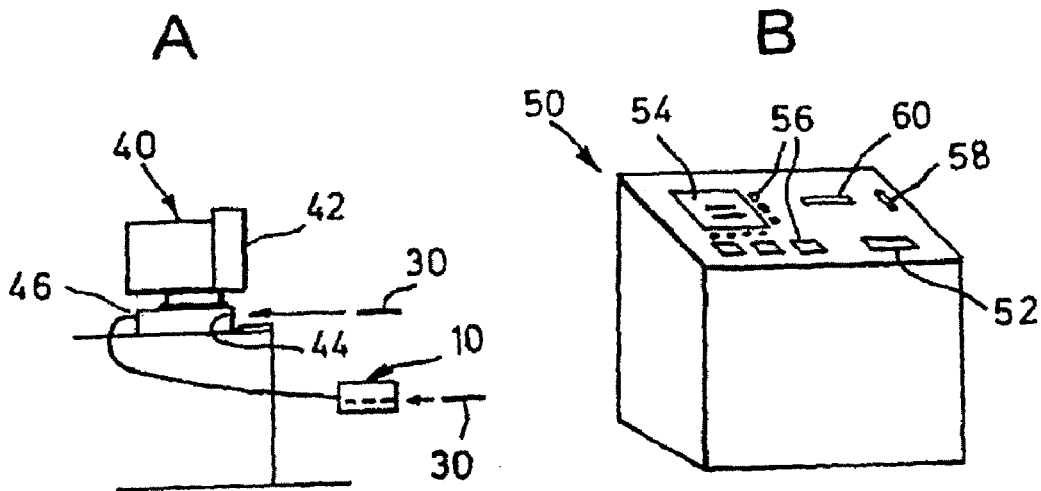
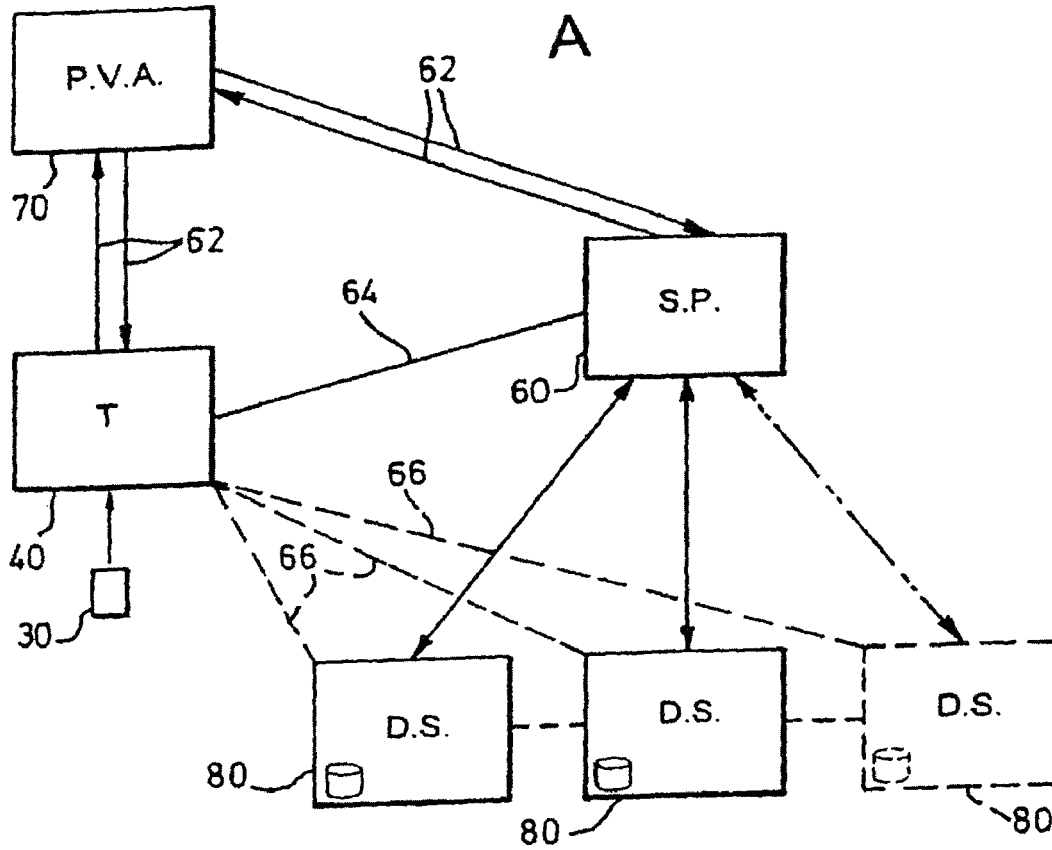
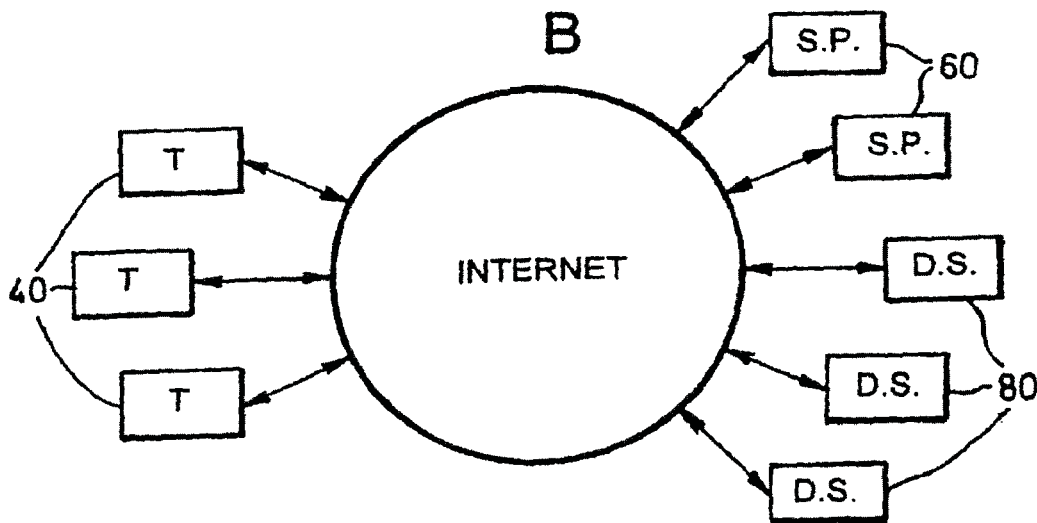


Fig. 4  
A



B



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