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Hulst et al.

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

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

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
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.
5,845,201 A *	12/1998	Funke et al. 455/403

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(Continued)

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FOREIGN PATENT DOCUMENTS

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Stockton LLP

(51) **Int. Cl.**
G06K 5/00 (2006.01)

(57) **ABSTRACT**

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

(58) **Field of Classification Search** 235/380,
235/382, 382.5, 383, 492, 493

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.

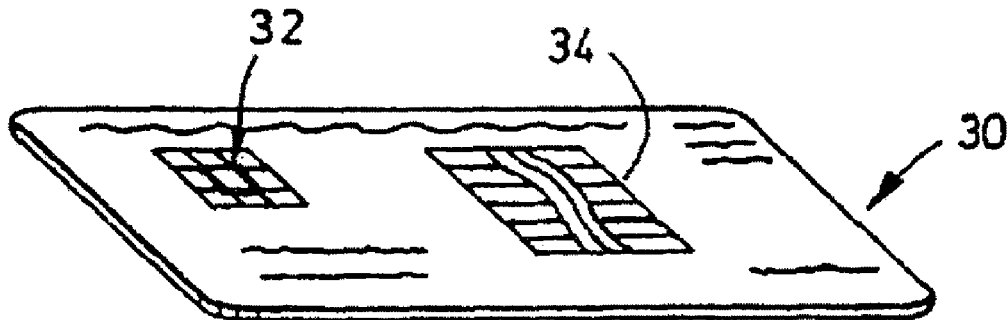
See application file for complete search history.

(56) **References Cited**

12 Claims, 17 Drawing Sheets

U.S. PATENT DOCUMENTS

4,341,951 A	7/1982	Benton	
4,697,073 A *	9/1987	Hara	235/487
5,148,432 A *	9/1992	Gordon et al.	714/6.32



U.S. PATENT DOCUMENTS

5,845,281 A 12/1998 Benson et al.
 5,847,372 A 12/1998 Kreft
 5,874,760 A * 2/1999 Burns et al. 257/315
 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.
 6,721,749 B1 * 4/2004 Najm et al. 1/1
 6,747,930 B1 * 6/2004 Weldon et al. 369/53.21

6,993,507 B2 1/2006 Meyer et al.
 6,999,936 B2 2/2006 Sehr
 7,000,836 B2 * 2/2006 Saeki 235/451
 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
 2003/0163594 A1 * 8/2003 Aasheim et al. 709/310
 2003/0168515 A1 * 9/2003 Gray 235/492
 2006/0179211 A1 * 8/2006 Aasheim et al. 711/103
 2006/0249570 A1 11/2006 Seifert et al.
 2008/0041938 A1 2/2008 Wise

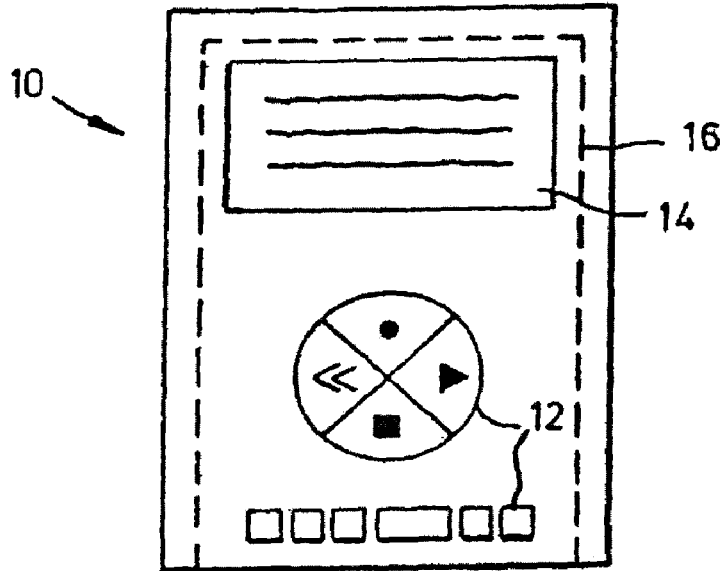
FOREIGN PATENT DOCUMENTS

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 WO 98/19237 A1 5/1998
 WO WO 98/33343 7/1998
 WO WO 98/37526 8/1998

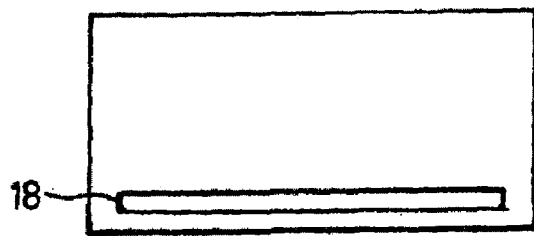
* cited by examiner

Fig. 1

A



B



C

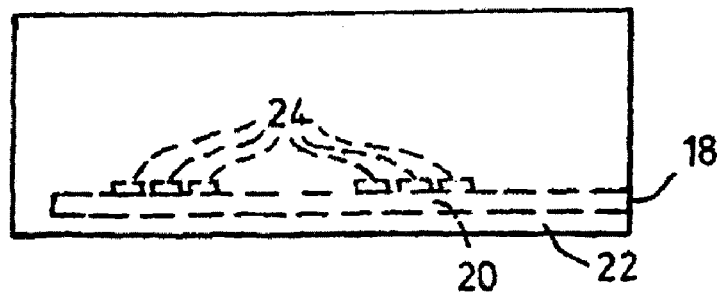


Fig. 2

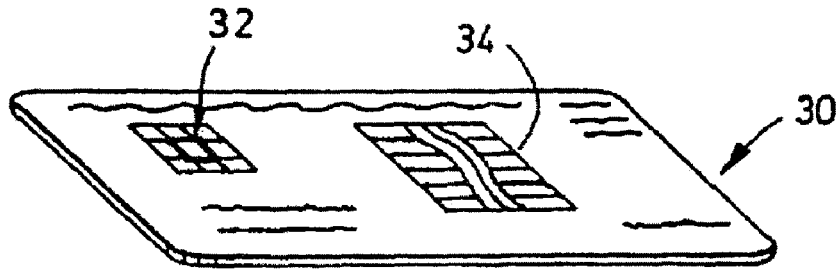


Fig. 3

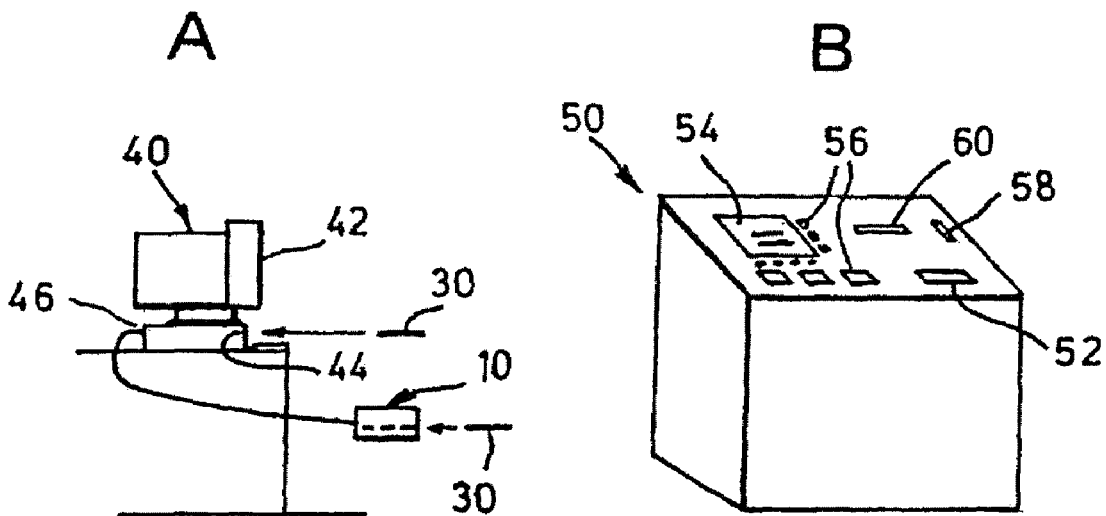
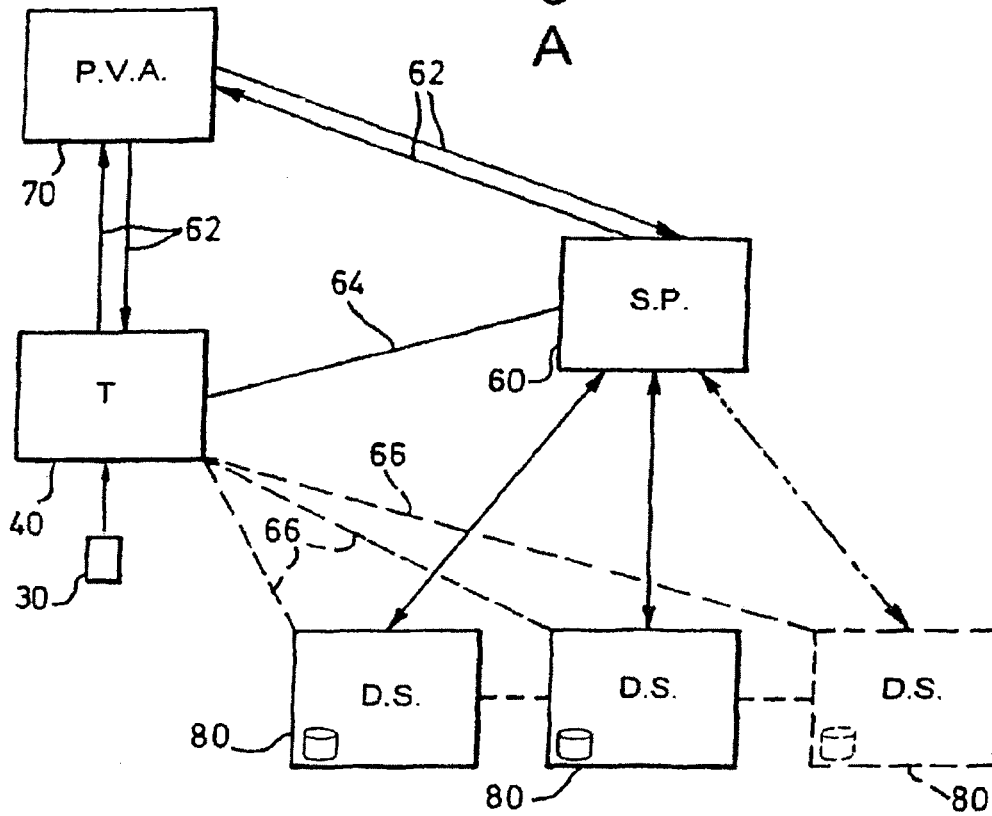
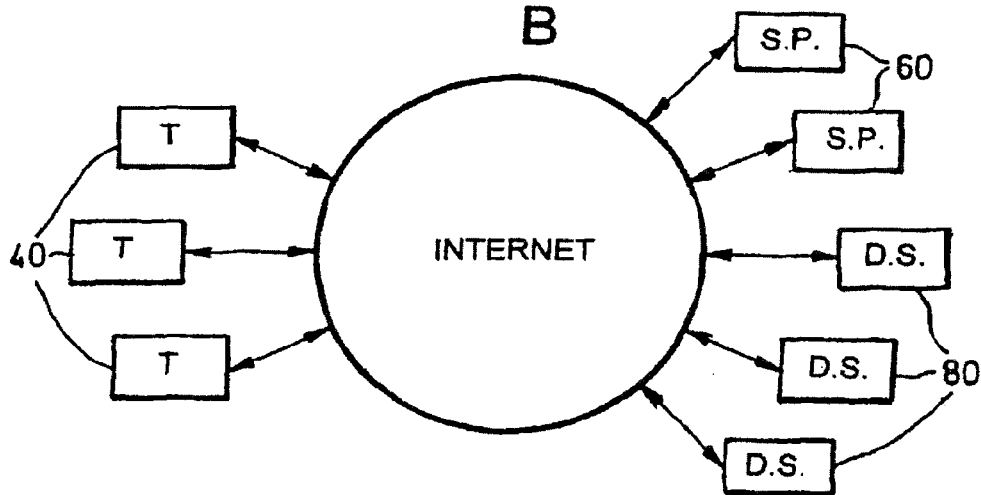


Fig. 4
A



B



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