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Racz et al.

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

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

(63) Continuation of application No. 12/943,872, filed on Nov. 10, 2010, now Pat. No. 8,118,221, which is a continuation of application No. 12/014,558, filed on Jan. 15, 2008, now Pat. No. 7,942,317, which is a continuation of application No. 11/336,758, filed on Jan. 19, 2006, now Pat. No. 7,334,720, which is a continuation of application No. 10/111,716, filed on Sep. 17, 2002, now abandoned.

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

(52) **U.S. Cl.** **235/380**; 235/492

(58) **Field of Classification Search** 235/380, 235/382, 492, 451, 486, 487
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,341,951	A		7/1982	Benton
4,590,365	A	*	5/1986	Okada 235/379
4,697,073	A		9/1987	Hara
5,148,432	A		9/1992	Gordon et al.
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
5,682,027	A	*	10/1997	Bertina et al. 235/380

(Continued)

FOREIGN PATENT DOCUMENTS

EP 0 195 098 10/1990

(Continued)

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(74) *Attorney, Agent, or Firm* — Kilpatrick Townsend & Stockton LLP

(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 control data and supplementary data such as hot links to web sites and/or advertising data. A complementary data access terminal, 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 unauthorized access to data such as compressed music and video data, especially over the Internet.
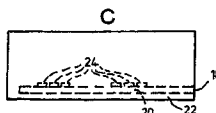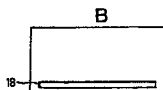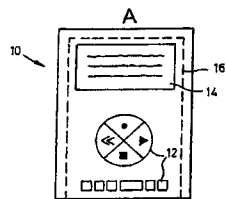
36 Claims, 17 Drawing Sheets

U.S. PATENT DOCUMENTS

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.
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.
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
6,025,973	A *	2/2000	Mizoshita et al. 360/98.08
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	Lewin 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.
6,747,930	B1	6/2004	Weldon et al.
6,981,179	B1 *	12/2005	Shigemasa et al. 714/36
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.
7,677,446	B2	3/2010	Wise
7,942,317	B2	5/2011	Racz et al.
2003/0163594	A1	8/2003	Aasheim et al.
2003/0168515	A1	9/2003	Gray
2006/0179211	A1	8/2006	Aasheim et al.
2006/0249570	A1	11/2006	Seifert et al.
2007/0162300	A1	7/2007	Roever et al.
2008/0041938	A1	2/2008	Wise
2008/0314974	A1	12/2008	Hulst et al.

FOREIGN PATENT DOCUMENTS

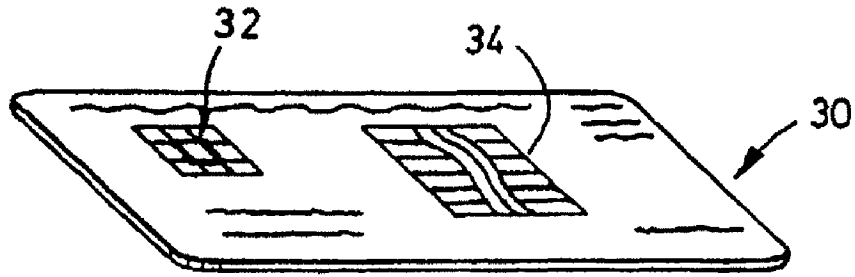|		
EP	0 713 198 A2	5/1996
EP	0 823 694 A1	2/1998
EP	0 542 298	4/1998
EP	0 843 449 A2	5/1998
EP	0 914 001 A1	5/1999
JP	10-269291 A	10/1998
JP	11-53184 A	2/1999
JP	11-212785 A	8/1999
JP	11-213010 A	8/1999
JP	11-272762 A	10/1999
WO	WO 98/19237 A1	5/1998
WO	WO 98/33343	7/1998
WO	WO 98/37526	8/1998

* cited by examiner

Fig. 1

A

B

C

Fig. 2
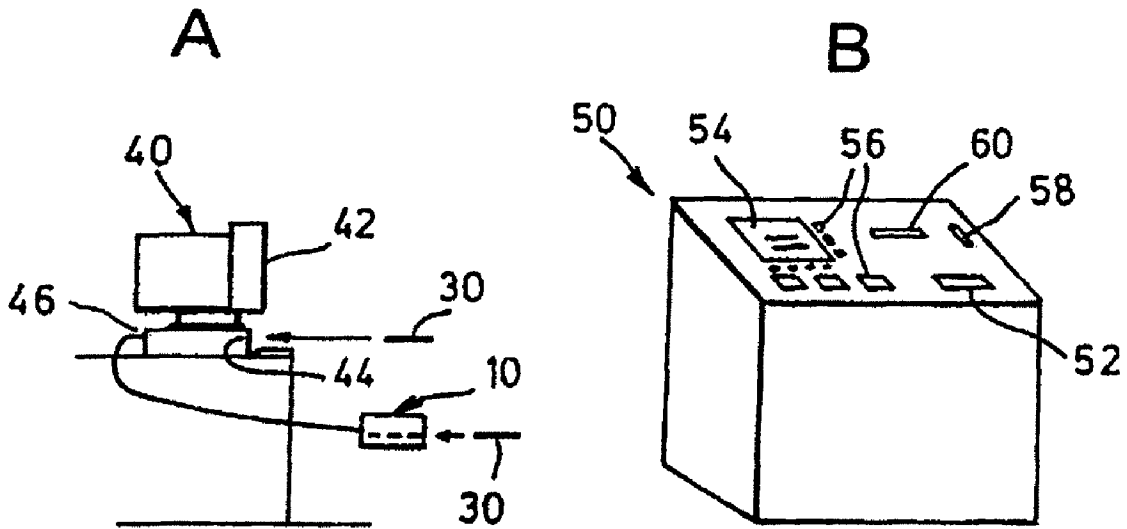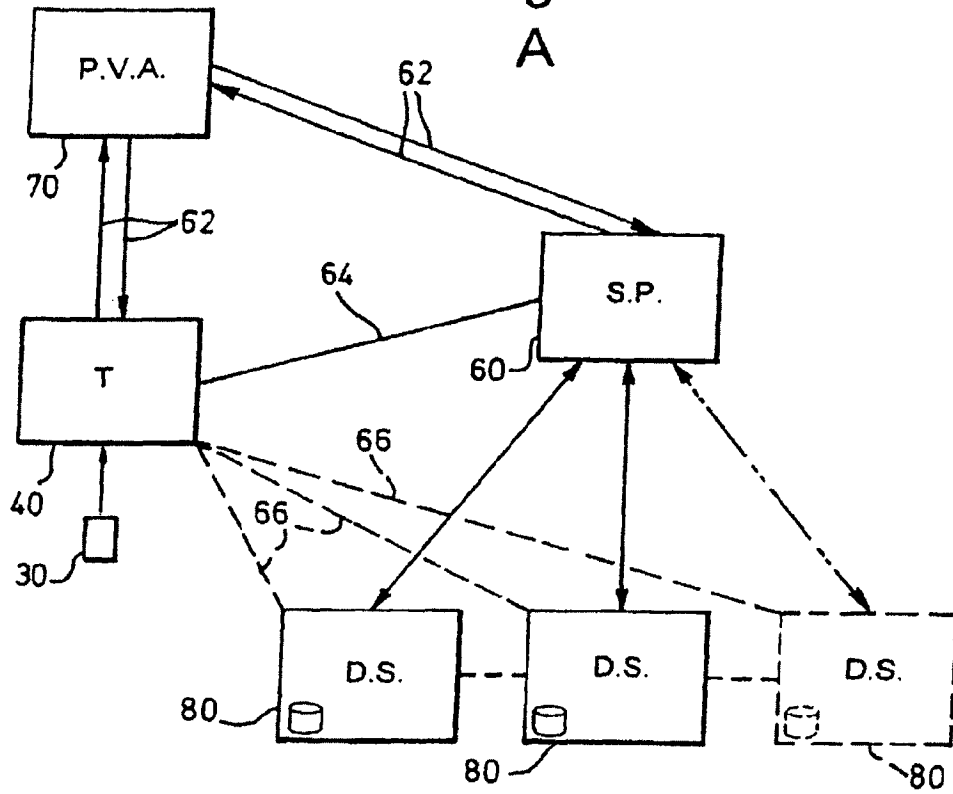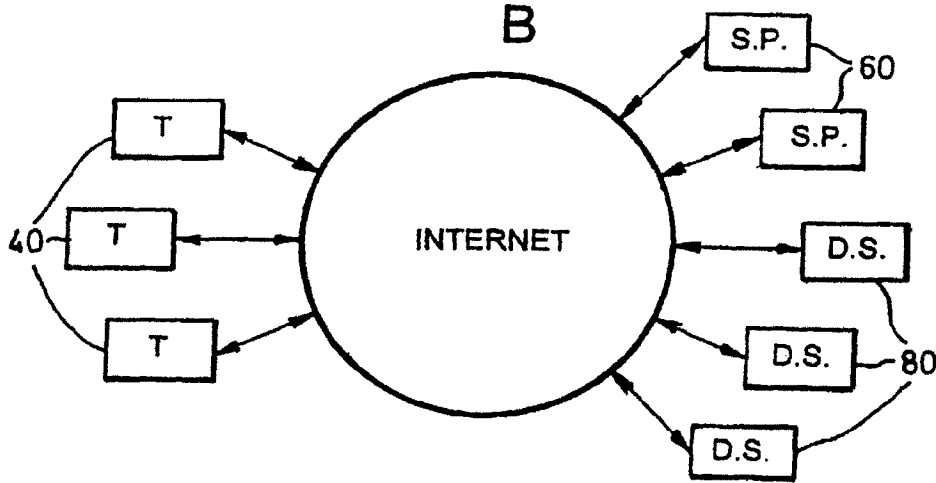

Fig. 3

A

B
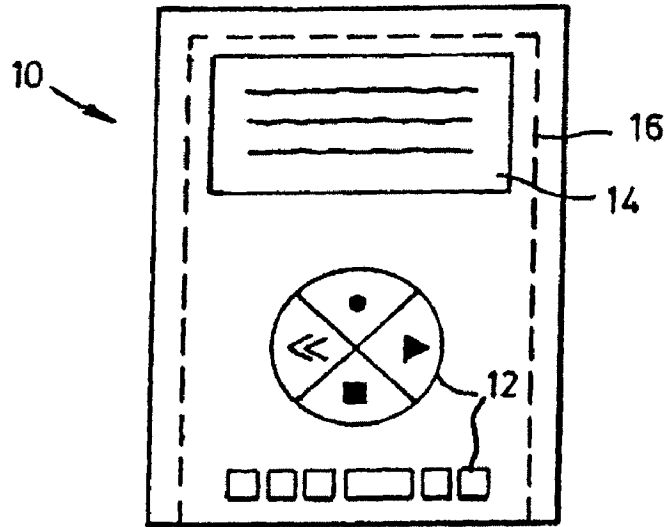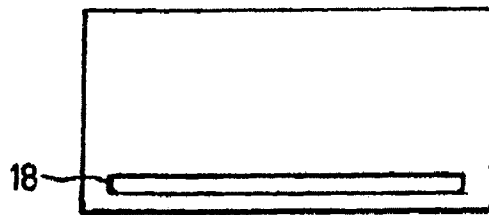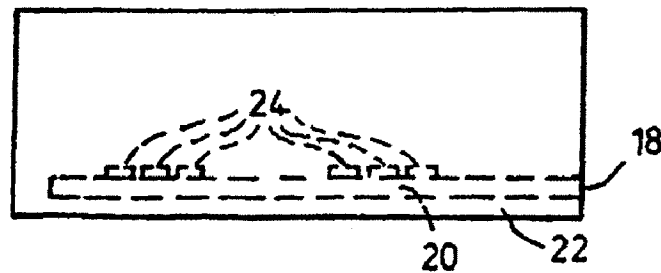
Fig. 4

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