



(12) **United States Patent**  
**Racz et al.**

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

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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.

(57) **ABSTRACT**

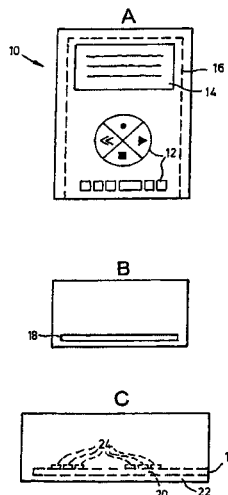
Data storage and access systems enable downloading and paying for data such as audio and video data, text, software, games and other types of data. A portable data carrier has an interface for sending and receiving data, data memory for storing received content data, and payment validation memory for 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.

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

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

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

**36 Claims, 17 Drawing Sheets**



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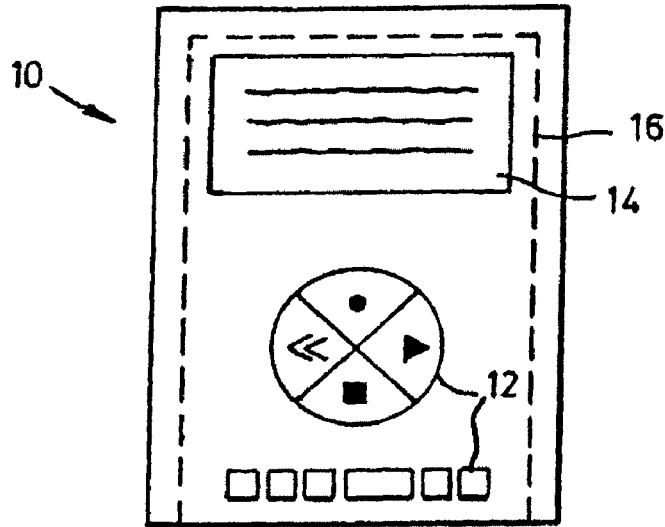
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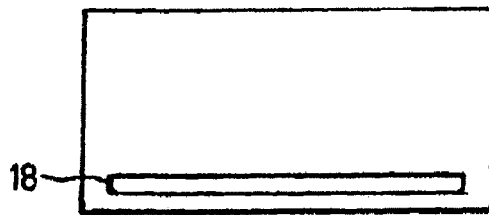
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Fig. 1  
A



B



C

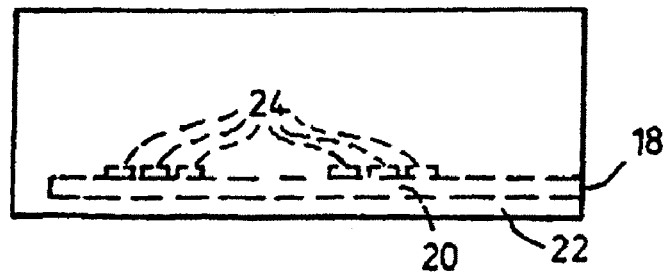


Fig. 2

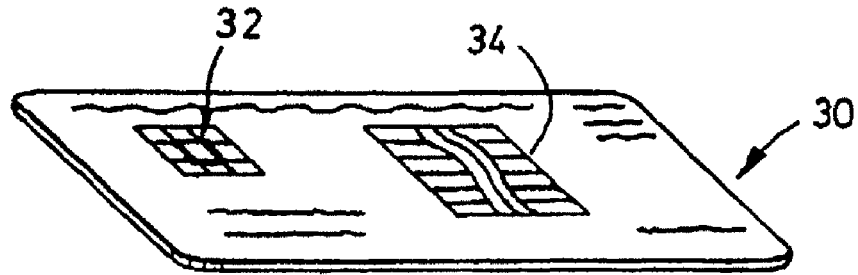


Fig. 3

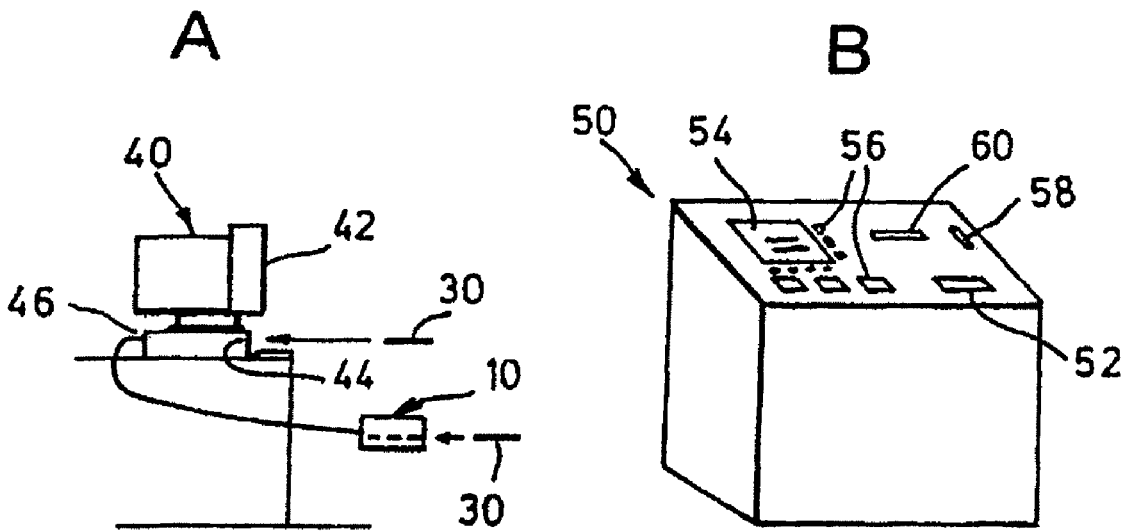
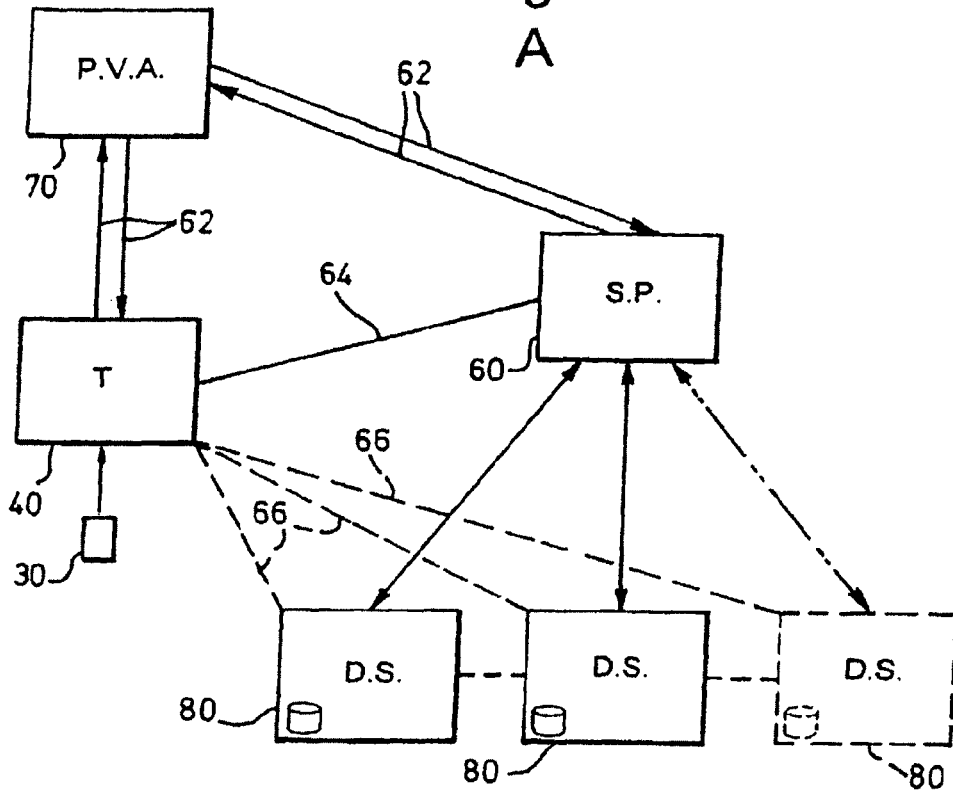
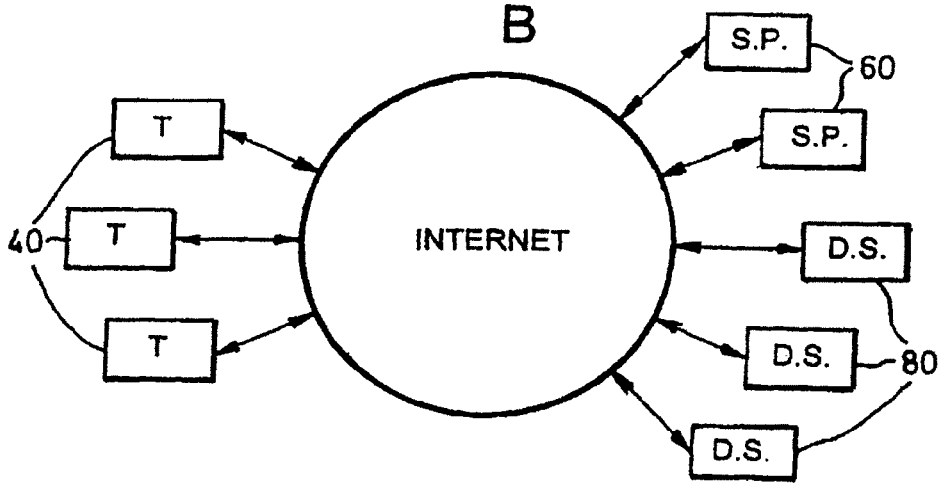


Fig. 4  
A



B



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