

EXHIBIT 2

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

(10) **Patent No.:** **US 6,607,136 B1**  
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(54) **PHYSICAL PRESENCE DIGITAL AUTHENTICATION SYSTEM**

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(22) Filed: **May 12, 2000**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. PCT/IL99/02110, filed on Nov. 16, 1999, and a continuation-in-part of application No. PCT/IL99/00525, filed on Oct. 4, 1999, and a continuation-in-part of application No. PCT/IL99/00521, filed on Oct. 1, 1999, and a continuation-in-part of application No. PCT/IL99/00506, filed on Sep. 16, 1999, and a continuation-in-part of application No. PCT/IL98/00450, filed on Sep. 16, 1998, and a continuation-in-part of application No. PCT/IL98/00470, filed on Aug. 27, 1999.  
 (60) Provisional application No. 60/180,530, filed on Feb. 7, 2000, provisional application No. 60/115,231, filed on Jan. 8, 1999, provisional application No. 60/122,687, filed on Mar. 3, 1999, provisional application No. 60/143,220, filed on Jul. 9, 1999, provisional application No. 60/145,342, filed on Jul. 23, 1999, and provisional application No. 60/153,858, filed on Sep. 14, 1999.

(30) **Foreign Application Priority Data**

Nov. 5, 1999 (TW) ..... 88107601

(51) **Int. Cl.**<sup>7</sup> ..... **G06K 19/06**

(52) **U.S. Cl.** ..... **235/492; 235/487**

(58) **Field of Search** ..... **235/492, 487**

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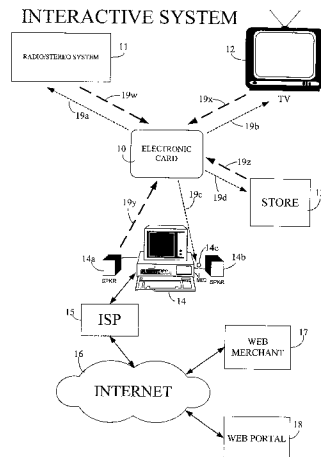
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(57) **ABSTRACT**

The interactive authentication system allows a consumer to interact with a base station, such as broadcast media (e.g., television and radio) or PC, to receive coupons, special sales offers, and other information with an electronic card. The electronic card can also be used to transmit a signal that can be received by the base station to perform a wide variety of tasks. These tasks can include launching an application, authenticating a user at a website, and completing a sales transaction at a website (e.g., by filling out a form automatically). The interaction between the base station and the electronic card is accomplished by using the conventional sound system in the base station so that a special reader hardware need not be installed to interact with the electronic card. The user is equipped with an electronic card that can receive and transmit data via sound waves. In the various embodiments, the sound waves can be audible or ultrasonic (which can be slightly audible to some groups of people).

**3 Claims, 50 Drawing Sheets**



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# INTERACTIVE SYSTEM

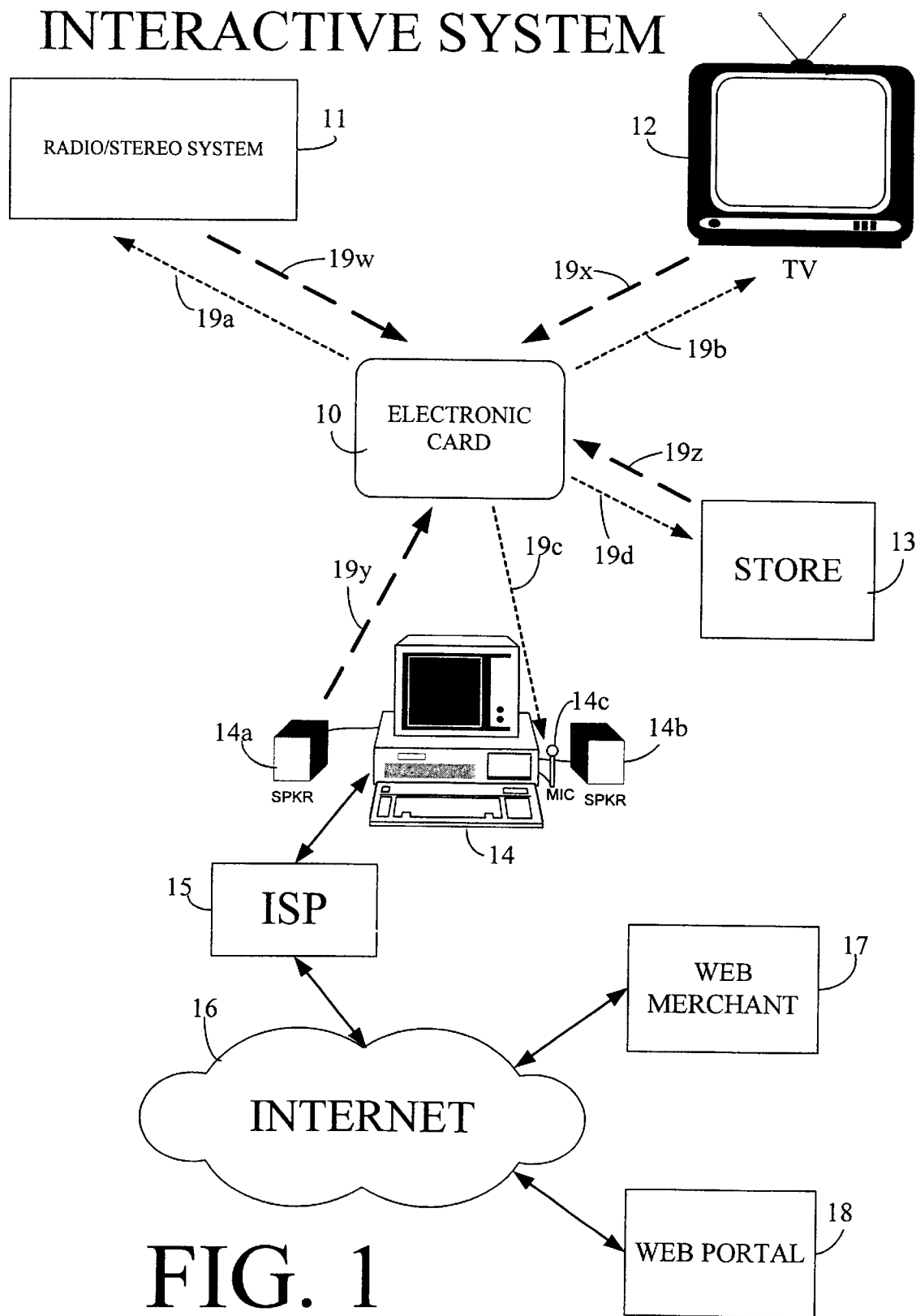
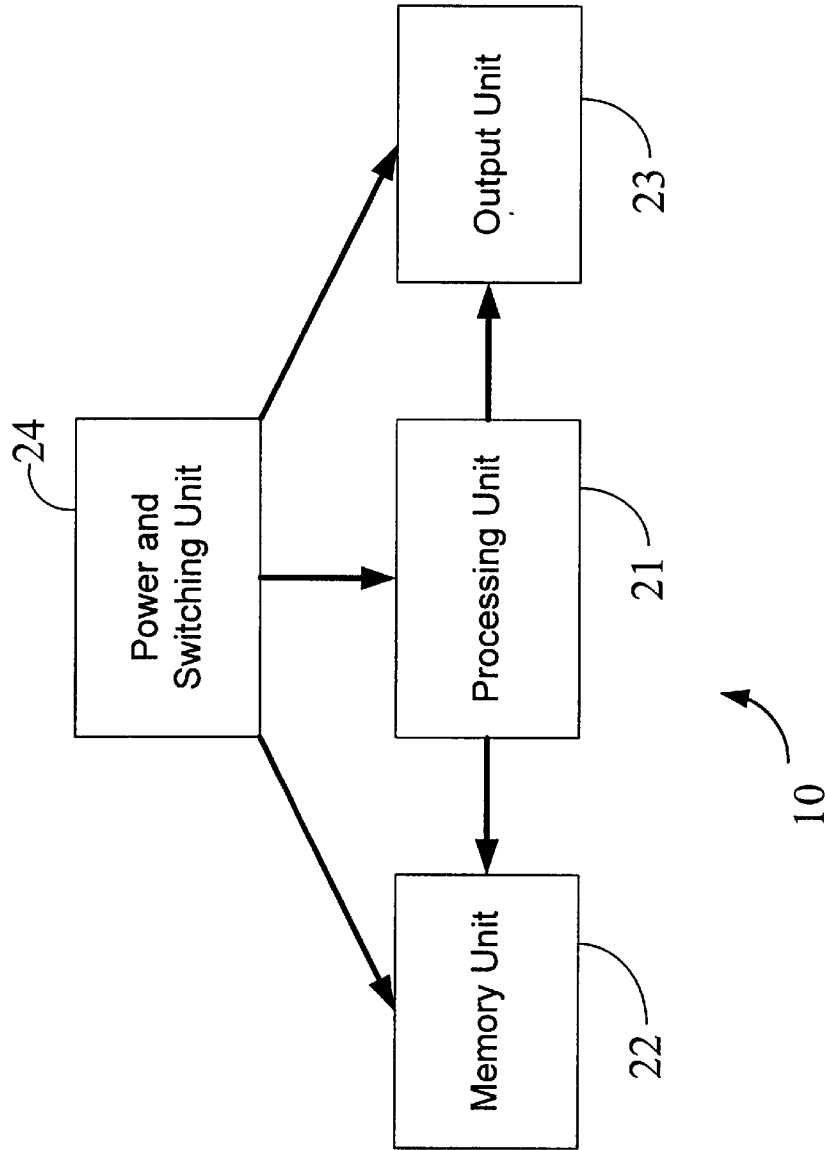


FIG. 1

# ONE-WAY TX CARD



## FIG. 2

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