

about 12 bytes long and consists of a maker code for identifying the maker of the mobile information terminal and an identification code unique to each mobile information terminal of each maker.

[0039] The client service provider **18** is also mainly composed of a router **411**, a LAN **412**, the Web server **413** and a customer DB **414**. The customer DB **414** stores various kinds of personal information about each user of the mobile information terminal **10**. This personal information includes the flash ID, which is the unique identification information of the mobile information terminal concerned, name, age, birthday, gender, home and office addresses, telephone and facsimile numbers, the login ID and password for Internet connection, mail address, My Menu (side ID and monthly fee for example), and charging ID of each user. My Menu denotes a menu listing the site IDs selected and registered by the user from among the official sites stored in the client service provider **18**, which is a portal site. The charging ID is a user identifier associated with the charging processing of the user concerned registered with the charging surrogate service provider **19**. For example, the charging ID is Smash ID in Smash (trademark) service of provider So-net (trademark). It should be noted that the charging surrogate in the present invention is not limited to above-mentioned one; any other existing charging surrogate services may be available.

[0040] The charging surrogate service provider **19** is mainly composed of a router **421**, a LAN **422**, the charging server **423**, and a customer DB **424**. The charging server **423** performs charging surrogate processing with other servers and clients and includes a mail server capability. The customer DB **424** stores the name, age, birthday, gender, home and office addresses, telephone and facsimile numbers, credit card number (or account number for charging), and charging ID of each user registered for charging surrogate service.

[0041] In the example shown, the Internet connection provider **16**, the client service provider **18**, and the charging surrogate service provider **19** are arranged separately. Two or all of them may be provided by a single provider. The client service provider **18** and the charging surrogate service provider **19** may be separately interconnected with a leased line.

[0042] Referring to FIG. 2, there is shown an external configuration of the mobile information terminal (PDA) **10** in the present embodiment. The main body of the PDA **10** is generally rectangular in shape which allows its user to grasp it by the single hand, a display section **21** mostly occupying the front side. A touch pad (invisible) is arranged on the display section **21**. Beneath the display section **21**, hardware keys **22** are arranged. The main body is adapted to accommodate a stylus **12**. With the stylus **12**, the user can indicate positions on the touch pad or enter hand-written characters and graphics for example. A Memory Stick **11** (trademark of Sony Corporation) to be described later is detachably loaded in the top portion of the main body. Although not shown, a jog dial (to be described later) is partially projecting in a recess arranged in the top portion of the main body. The jog dial is arranged such that it can be operated with the thumb of the hand holding the PDA **10**.

[0043] Referring to FIG. 3, there is shown a general hardware configuration of the PDA **10** in the present embodiment. A CPU (Central Processing Unit) **31**, in syn-

chronization with a clock signal supplied from an oscillator **32**, executes such various programs stored in a flash ROM (Read Only Memory) **33** or an EDO DRAM (Extended Data Out Dynamic Random Access Memory) **34** as an operating system and application programs.

[0044] The flash ROM **33** is constituted by a flash memory, a kind of EEPROM (Electrically Erasable Programmable Read Only Memory), generally storing data which is basically fixed among the programs and parameters for use by the CPU **31**. The flash ID used in the present embodiment is stored in the flash memory **33**.

[0045] A Memory Stick interface (I/F) **35** reads data from the Memory Stick **11** loaded in the PDA **10** and writes data supplied from the CPU **31** to the Memory Stick **11** under the control of the CPU **31**. A specific configuration of the Memory Stick **11** will be described later.

[0046] A USB (Universal Serial Bus) interface **36** inputs data or programs from a cradle (not shown), a connected USB device, in synchronization with a clock signal supplied from an oscillator **37** and supplies the data from the CPU **31** to the cradle under the control of the CPU **31**. Although not shown, a drive for connecting a magnetic disk or an optical disk for example may be additionally connected to the USB interface **36**.

[0047] The flash ROM **33**, the EDO DRAM **34**, the Memory Stick interface **35**, and the USB interface **36** are connected to the CPU **31** via an address bus and a data bus.

[0048] The display section **21** is a liquid crystal display device in the present embodiment which receives data from the CPU **31** via an LCD bus to display the received data in image or text. A touch pad controller **38**, when the touch pad arranged on the display section **21** is operated, receives data corresponding to the touch operation (indicative of the coordinates of a touch position for example) and supplies a signal corresponding to the received data to the CPU **31** via a serial bus.

[0049] An EL (Electro-luminescence) driver **39** operates an electro-luminescence element arranged on the backside of the display section **21** to control the brightness of the display section **21**.

[0050] An Infrared communicator **40** transmits, by use of infrared light, data received from the CPU **31** to other devices, not shown, via a UART (Universal Asynchronous Receiver Transmitter) and transmits data supplied, by use of infrared light, from other devices to the CPU **31**. The PDA **10** can communicate with other devices via the UART.

[0051] An audio reproducing section **42**, composed of a speaker and an audio data decoder for example, decodes audio data for example received via the Internet **4**, reproduces the received data, and sounds the reproduced data. For example, the audio reproducing section **42** reproduces the audio data supplied from the CPU **31** via a buffer **41** to sound the reproduced audio data.

[0052] The key section **22**, composed of hardware input keys for example, is operated by the user when inputting various commands into the CPU **31**. The job dial **23** is rotated or pressed by the user to supply corresponding data to the CPU **31**.

[0053] A power supply circuit **43** converts the voltage of power supplied from a battery **52** or an AC (Alternating