

Method and apparatus for electronic data console embedded in chair module

FIELD OF THE INVENTION

The present invention relates to a method and apparatus for an electronic data console unit to be integrated into a chair device for the purposes of allowing a user to obtain electronic content via the said console in real-time while at the chair device. The said chair device is adapted to be connected to a central processor allowing the console to be controlled by the said processor, thereby allowing the said content to be purchased in real-time.

The present invention may be applied to operators of cinemas where patrons of a motion picture may watch a motion picture performance while at the same time, have the option to purchase additional content such as computer games, mobile ringtones and other types of electronic data that is relevant to the said motion picture.

The present invention has significant value to consumers as downloading of the said content is implemented simultaneously while the consumer is watching the said motion picture performance, providing convenience and ease of use.

The present invention will also allow for consumers (patrons) to pay for the motion picture separately from any additional electronic content to be downloaded or choose to pay a bundle price that includes the motion picture performance and its offered electronic content.

The payment method may be controlled and administered by a central processor that is linked and connected to at least 1 chair equipped with the present invention.

SUMMARY OF THE INVENTION

It is object of the present invention to provide for a method and apparatus for an electronic data console unit to be integrated into a chair device for the purposes of allowing a user to obtain electronic content via the said console in real-time while at the chair device. The said chair device is adapted to be connected to a central processor allowing the console to be controlled by the said processor, thereby allowing the said content to be purchased in real-time.

The present invention is of particular use to the application of electronic content management and distribution, where either a single or plurality of electronic content providers can distribute

electronic content of different type and format to any consumer with great ease and simplicity.

In the first preferred embodiment of the present invention, the said invention shall comprise of a user console panel that is built and integrated into a seating unit within a cinema or entertainment outlet.

The said user console panel will be constructed to house a variety of electronic data exchange ports that facilitates the process of allowing a user to plug a compatible mobile device such as a cellular phone, personal digital assistant (PDA) or portable computer unit into the said panel that is subsequently connected to a central processor unit.

Depending on the type of payment that is secured between the user and content operator, the user's device and/or the said console unit may begin to initiate an attempt to transfer electronic data between the console unit and the user's connected mobile device.

A specific application scenario of the present invention according to the said first preferred embodiment will therefore allow patrons of a motion picture performance to be seated at a chair device that is equipped with the present invention, allowing the patron to plug a compatible mobile device into the data console embedded into the said chair, allowing the said console and/or mobile device to facilitate the transfer of electronic data between the said console and/or mobile device, depending on the payment and purchasing arrangement between the patron and the operator of the motion picture performance and/or its affiliated electronic data distributor.

The patron may, at the end of the motion picture performance, terminate the connection between the said mobile device and the data console, thereby allowing the said patron to purchase and download a selected electronic content item from the said operator/distributor into the patron's compatible mobile device.

The operator/distributor can therefore market and distribute additional content that is related to the said motion picture such as computer games, electronic files and documents, graphics, multimedia content, cellular phone ringtones, electronic promotional coupons, etc.

In the second preferred embodiment of the present invention, the said electronic data console may also provide a means for the operator of the cinema to implement real-time interactive advertising and/or promotions with the patrons of the motion picture performance.

Specifically, prior, during, after, or a combination thereof, the performance of the said motion picture, the operator may choose to insert text messages, codes or passwords onto the cinema display unit, thereby allowing patrons to make use the said information to enable a download of an electronic content, electronic file or material via the said electronic console.

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In the third preferred embodiment of the present invention, the operator may also choose to allow patrons to input the said information via their own mobile devices such as a mobile phone instead of using the said electronic console, interaction between the operator and the patron using the said displayed information will still be implemented using the central processor that is connected to the said electronic data console.

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In this embodiment where the use of the electronic data console is bypassed during information input by the said patron, the patron may subsequently take up an offer that is contained within the said information displayed that will required ultimately the use of the electronic data console.

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In the fourth preferred embodiment of the present invention, the present invention may also allow airline operators to offer passengers the ability to exchange in real-time frequent flyer miles, membership points etc. via the said electronic data consoles that are installed and fitted into each airline seat for items that are offered by the airline.

20 **BRIEF DESCRIPTION OF THE DRAWINGS**

Illustrative embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

25 Figure 1 illustrates the various perspective drawings of the present invention that is incorporated into a seating unit

 Figure 2 illustrates the top view of the electronic data console that is fitted onto the armrest of the seating unit

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 Figure 3 illustrates the arrangement of the manner by which the electronic data console is connected to the central processor

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

According to a first embodiment of the present invention, an electronic data console is
5 constructed to fit into a suitable part of a seating unit such as the armrest of the unit, thereby
allowing for the user of the present invention to plug a compatible external device such as a
mobile phone, personal digital assistant (PDA) or mobile computer system into the said console.

The console shall comprise of a variety of computer data exchange ports that may include, but
10 not limited to the following:

USB (Universal Serial Bus) port
Serial port (RS-232)
Firewire (IEEE 1394)
15 Bluetooth (802.11)
IR (Infrared)

The design of the electronic data console may also comprise of a display unit (a liquid crystal
display) that can output the type, name, size of the content to be downloaded, or on offer to the
20 user

The electronic data console will comprise of a microprocessor board that is designed to manage
the operations of the console in the following manner:

25 Detection of port connections between the console and any compatible external device
Initialization of program routine to output to display adapter menu options page
Detection of user input of choice via menu options page
Initialization of program routine to output to display result of user input of choice page
Initialization of program sub-routine for execution
30 Initialization of server-client connection between electronic data console and central processor

The electronic data console may also be operated and designed in a variety of methods other
than the above mentioned outline, and may comprise of a method where the said console may be
constantly connected to the central processor and will display a menu page that is residing on the
35 central processor instead.

The user's input of choices via the menu page will send an electronic signal to the central processor to trigger a series of responses from the central processor which will be updated on the display unit of the electronic data console.

- 5 An example of how the menu page can be constructed is hereby shown, however, more elaborate versions can be incorporated. The menu page in this instance is written in Java and is designed with a centrally connected web-based server architecture:

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<html>
10 <head>

    <script language="javascript" src="http://www.mydomain.com/menu/content/path.js"></script>
    <script language="javascript" src="http://www.mydomain.com/menu/menuG5Loader.js"></script>

15 <script language="javascript">
    addInstance("Demo Menu", "Demo", "");
    </script>

    </head>
20 <body>
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In the fifth preferred embodiment of the present invention, the individual seating units equipped with the electronic data console may also be connected via TCP/IP to a central server system.

- 25 In this design architecture, multiple physical locations incorporating a plurality of the seating units equipped with the electronic data console will enjoy a lower cost of set-up since all download and control operations are centralized via this approach.

- 30 In this embodiment, users of the seating unit may even be able to enjoy internet access while at the same time be able to download electronic material directly onto their connected external devices.

- 35 Payment between the operator of the present invention and the user may be done prior to the entry and use of the seat by the user, or be implemented using the electronic data console, or the user's external device, or a combination thereof.

The electronic data console may comprise of a single circuit board with all the port components and circuitry integrated with the onboard microprocessor, or be a simple TCP/IP hub that is then connected to a single, central processor system (such as a computer web server).

- 5 The electronic data console will therefore, be a low cost, "dumb" unit that is connected to a web server, which will undertake all of the required computation that is required for the operation of the electronic data console.

10 In this instance, the user is actually interacting with the centrally managed web-server to obtain electronic material to the user's external device (that is plugged to the "dumb" console).

This method will significantly reduce the cost of deployment for the present invention.

15 The present invention can be suitably adapted to provide applications that are beyond the motion picture/cinema sector, such as equipping seats of an airline with the electronic data consoles that can provide users with the option of updating their frequent flier miles, loyalty points, or even purchase and download movies onto their external electronic devices while in flight.

20 This is substantially different from present market offerings where airlines have in-flight entertainment systems that allows a limited degree of interactivity with the users of such a system (although there are in-flight computer games that provides a high level of interactivity too).

25 Payment for the downloaded offerings may be varied depending on the utility value that is desired by that of the operator – for instance, the seats and electronic data consoles, if equipped in a location such as a cinema, restaurant, or on-board a transportation unit (airplane, train, bus), payment may be collected upfront during entry, or it may be located at a public location such as a mall, of which cash payment may be required.

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Modifications within the spirit and scope of the invention may readily be effected by persons skilled in the art. It is to be understood, therefore, that this invention is not limited to the particular embodiments described by way of example hereinabove.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method and system for a chair to be fitted with an electronic data console that is capable of offering and providing electronic content to a compatible external mobile device
- 5 2. A method and system for a cinema operator to incorporate electronic data consoles into each cinema seat for the purposes of allowing users to connect a compatible device to each console to download electronic content offered by the said operator
3. A method and system for a seating unit within a specific environment or location to be fitted with an electronic data console, having the said console to be connected to a central
10 processor, for the purposes of allowing a user of the seat to exchange and download electronic data
4. A method and apparatus for an electronic data console to be constructed and connected to a central processor capable of storing, administering, monitoring and controlling the transfer of
15 electronic data from the central processor to a externally connected device via the electronic data console
5. A method and apparatus as claimed in claim 4, having the electronic data console to be fitted to a suitable part of a seating unit within a specified location
6. A method and apparatus for an electronic unit to be fitted onto a seat, capable of connected to a central processor, allowing the user of the seat to plug a compatible external device for
20 the purposes of downloading electronic material
7. A method and apparatus for an electronic unit to be fitted onto a seat, allowing the user of the seat to plug a compatible external device into the said unit, presenting to the said user a variety of electronic material for transfer onto the said external device, authenticating and completing the transactional requirements between the operator of the seating unit and the
25 user, allowing the user to download the entire contents of the permitted electronic material onto the said external device
8. A method and system as claimed in all the preceding claims (claims 1 to claims 7), whereby an electronic data console is installed into a seat, allowing the console to be connected to a central processor storing a depository of electronic material, further allowing a user of the
30 seat to plug a compatible external device into the data console, performing and completing transactional requirements for the intended transfer of electronic material from the central processor to the said external device via the said electronic data console
9. A method and system for an operator of a seating unit to display a series of messages containing specific codes or information to a said user, allowing the said user to input the said
35 information either into an external electronic device, or via an electronic data console fitted into the said seating unit, or a combination thereof, in order to obtain via a download, message retrieval (such as SMS, MMS or email) of a specific electronic material
10. A method and apparatus for individual seating units of a specified physical location to be equipped with individual electronic data consoles that are all connected to a central server system via TCP/IP, for the purposes of allowing users of the seats to obtain electronic
40 material via the said consoles to externally connected electronic devices
11. A method and apparatus for seating units of a cinema to be equipped with electronic data consoles that are connected to a central server system, for the purposes of allowing user of the seats to obtain electronic material via the said consoles to externally connected electronic
45 devices