COMPACT DISC SHAPED LIKE A CALLING CARD

This invention relates to the field of data storage and processing and deals more particularly with a new compact disk concept that is adapted to computer usage of the CD-ROM type.

Designed in the 1980s, the compact disk uses a process of digital engraving of a coded signal under binary form, the traditional groove of the analog signals being replaced by a multitude of micro-bowls called pits intended to be read by the laser beam of the reading head of a reader. This circular-shaped disk having a diameter of about twelve centimeters is constituted by a resin support that was processed on one side in order to receive a coating storing data organized in the shape of a circular crown of digital data.

Being set aside in the 1980s for a digital audio or digital photo usage, the compact disk was adapted in 1985 for the computer use under the name of CD-ROM and, little by little, it has replaced the diskettes as it is capable of containing thousand times more data. Having been standardized, the compact disk CD-ROM started to be widely known from the general public in 1993 and is now used on almost any personal computer provided for that matter with a compact disk reader incorporated into a system of processing logically data contained on said disks.

This compact disk reader is of the typed comprising an extractable drawer that contains in its bottom:

- a circular excavation having a depth and a diameter sensibly superior to those of said disk in order to receive, to position and to lock said selected disk lodged inside when the drawer is in its open position,
- and a central opening allowing, when said drawer is closed with the disk lodged inside, the passage of guiding and driving means of the compact disk pierced in its center in order to receive said means and in order to be rotated for reading purposes.

In order to optimize the use of compact disks, especially for a computer use where the requirement for data processing would not impose the use of a disk having a 12 cm diameter, the applicants imagined a new compact disk concept likely to have a smaller format than that of a standardized compact disk. This new concept is founded, in particular, on the support of the aforementioned compact disk, which takes the shape of a rectangular business card, comprising on one side both a coating storing data under the shape of a crown, the external circle of which is inscribed into said rectangle, and means for positioning and locking said rectangular support into the drawer of said reader.

This concept of a business card format is new, original and attractive, especially on the commercial level where it offers possibilities for storing data, allowing a company to make itself known in a more convivial manner (for instance with animated pictures) and without any limitation as far as data amounts are concerned. The fact that the digital data storage as well as the means for positioning and locking are found on the same side of the support, allows the back side to be available for receiving the mention of a commercial visual message. Moreover, this layout allows the use of a space placed between the data storage crown and the edges of the rectangle in order to incorporate into the support other functions, such as for example integrated circuits that will eventually be linked or connected to the data stored in the central crown, in order to give to the disk-card another functioning than the reading of data. For instance, this card could constitute an access through Internet in the database of the provider of said disks. Since the messages can be read on both sides of the disk around the crown storing data, the applicants imagined an original marking technique that ensures a printing on one side of the support only, but with a readability of a

different message on both sides of said support made in a transparent material, by applying on one side of said support one or several opaque coats of paint or medium.

According to a first embodiment of the invention, the aforementioned means of positioning and locking said disk are constituted by male or female elements that, arranged on the side of said support around and outside the circular crown of digital data in a concentric manner with respect to said crown, cooperate with the corresponding male or female elements that are placed in the bottom of the drawer inside the aforementioned circular excavation and in a concentric manner with respect to said excavation. These aforementioned means for positioning and locking said disk, which will be constituted preferably by male elements formed by a built-on collar, are intended to cooperate with a second corresponding circular excavation placed in the bottom of the drawer inside the first circular excavation and placed in a concentric manner with respect to the latter. This second excavation is constituted by the second circular excavation that, being fitted on most of the reader drawers, is intended to receive, to position and to lock the compact disks having a smaller size, such as mini-disks.

According to a second embodiment of the invention, the aforementioned means for positioning and locking said disk are constituted by a support-master, the outside shape of which is circular and configured so as to lodge itself into the circular excavation of the bottom of the drawer of said reader, and the center of which is provided with a rectangular window having a size sensibly superior to that of the rectangular compact disk in order to position and lock said disk in the aforementioned reader drawer. This support-master will be preferably used when the reader will not be prefitted with the male or female elements for the positioning and locking of said disk of the first embodiment.

According to another particularly advantageous feature of the invention, the aforementioned support is pre-cut in a concentric manner with respect to the circular crown of digital data in order to allow the piercing through pressure of the aforementioned central opening allowing, when said drawer is closed with the disk lodged inside, the passage of the guiding and driving means of the compact disk. Thus, the back side of the support can be entirely exploited to receive a commercial message.

The fundamental concepts of the invention having just been described hereabove in their most elementary form, other details and features will stand out more clearly when reading the following description giving as a non limiting example and with reference to the annexed drawings an embodiment of a compact disk according to the invention. This description refers to the annexed drawings on which:

Figure 1 represents a perspective view of a drawer of a compact disk reader of a classical type.

Figure 2 represents a global schematic view of a compact disk according to the invention.

Such as shown on the drawing of Figure 1, the compact disk reader referenced 100 in its whole is of the type that is fitted on a personal computer in order to be incorporated in a system that logically processes the data contained on the compact disks called CD-ROMs, said disks being standardized through the adoption of a diameter of about 12 cm. This reader 100 is classically constituted by an extractable drawer that comprises in its bottom

- a first circular excavation 120 having a depth and a diameter sensibly superior to those of the compact disk CD-ROM in order to receive, to position and to lock said selected disk lodged inside when the drawer is in its open position, such as shown on the drawing of Figure 1,
- a second circular excavation 130 that, placed inside the first circular excavation 120 in a concentric manner with respect to said excavation, is intended to receive, to

position and to lock the compact disks having a smaller size, such as the mini-disks,

- and a central opening 110a allowing, when said drawer 100 is closed with a disk lodged inside, the passage of guiding and driving means (not shown) of the compact disk pierced in its center in order to receive said means.

Such as shown on the drawing of Figure 2, the compact disk referenced 200 in its whole is comprised of a transparent support 210 made of a rigid or flexible material processed on at least one side in order to receive a coating for storing data organized under the shaped of a circular crown of digital data 220 intended to be read by the aforementioned reader 100. According to the invention, the support 210 of the aforementioned compact disk has the shape of a rectangular-shaped business card with its coating for storing data having the shape of a circular crown 220 being inscribed into said rectangle. In order to receive, to position and to lock said selected disk 200, a collar 230 is built on the side of said support 210 outside the circular crown of digital data 220 in a concentric manner with respect to the latter and according to two circular sectors 230a and 230b drawn on the two lateral edges of the rectangle and delimited by the two other longitudinal edges of the same rectangle. As it could be seen on the drawing of Figure 1, this collar 230 defines the means for positioning and locking the disk 200 by cooperating with the second corresponding circular excavation 130 placed in the bottom of the drawer 110.

It should be noted that the aforementioned support 210 is pre-cut in a concentric manner with respect to the circular crown of digital data in order to allow the piercing through pressure of a central opening 210a allowing, when said drawer 110 is closed with the disk 200 lodged inside, the passage in the opening 210a of the aforementioned guiding and driving means of the compact disk through the opening 110a.

It is understood that the compact disk that was just described and represented hereabove, was so described and represented in view of publication rather than limitation. Indeed, various arrangements, modifications or improvements can be brought to the above example, without for that matter going beyond the scope of the invention taken in its widest aspects and spirit.

Thus, for instance, the compact disk of the invention can be adapted to the market by presenting a self-adhesive side, for instance.

CLAIMS

1. Compact disk comprised of a support (210) processed on one side to receive a coating for storing data organized under the shape of a circular crown (220) of digital data intended to be read by a compact disk reader (100) of the type that comprises an extractable drawer (110) that contains in its bottom:

- a first circular excavation (120) having a depth and a diameter sensibly superior to those of said compact disk in order to receive, to position and to lock said selected disk lodged inside when the drawer (110) is in its open position,

- and a central opening (110a) allowing, when said drawer is closed with the disk lodged inside, the passage of the guiding and driving means of the compact disk pierced in its center in order to receive said means, wherein the support (210) of the aforementioned compact disk (200) has the shape of a rectangular-shaped business card comprising on one hand a coating for storing data having the shape of a circular crown (220), the outside circle of which is inscribed into said rectangle, and on the other hand means for positioning and locking (230) said rectangular support in the drawer (110) of the aforementioned reader (100).

2. Compact disk according to claim 1, wherein the aforementioned means for positioning and locking (230) said disk (200) are arranged on the side of said support (210) around and outside the circular crown of digital data (230).

3. Compact disk according to claim 1, wherein the aforementioned means for positioning and locking (230) said disk (200) are constituted by a support-master, the outside of which is circular and configured so as to lodge itself into the circular excavation in the bottom of the drawer of said reader, and the center of which is provided with a rectangular window having a size sensibly superior to that of the rectangular compact disk (200) in order to position

and lock said disk in the aforementioned reader drawer (110) of the reader (100).

4. Compact disk according to claims 1 and 2, wherein the aforementioned means for positioning and locking (230) said disk (200) are constituted by male or female elements that, arranged on the side of said support around and outside the circular crown of digital data (220) in a concentric manner with respect to said crown, cooperate with the corresponding male or female elements (130) that are placed in the bottom of the drawer (110) inside the aforementioned circular excavation (120) and in a concentric manner with respect to said excavation.

5. Compact disk according to claims 1, 2 and 4, wherein the aforementioned means for positioning and locking (230) said disk (200) are constituted by male elements arranged on the side of said support (210) around and outside the circular crown of digital data (220) of said disk (200) in a concentric manner with respect to said crown, and cooperate with a second corresponding circular excavation (130) placed in the bottom of the drawer (110) inside the first circular excavation (120) and in a concentric manner with respect to the latter.

6. Compact disk according to claim 5, wherein the aforementioned second circular excavation (130) placed in the bottom of the drawer (110) inside the first circular excavation (120) and placed in a concentric manner with respect to the latter, in order to receive the male elements for positioning and locking (230) said disk (200), is constituted by the second circular excavation of the drawer (110) of the reader (100) intended to receive, to position and to lock the compact disks having a smaller size.

7. Compact disk according to claim 5, wherein the aforementioned male elements for positioning and locking (230) said disk (200) are constituted by a built-on collar placed on the side of said support outside the circular

crown (220) of digital data (200) in a concentric manner with respect to the latter, according to two circular sectors (230a and 230b) drawn on the two lateral edges of the rectangle and delimited by the two other longitudinal edges of the same rectangle.

8. Compact disk according to any one of claims 1 to 7, wherein the aforementioned support (210) is pre-cut in a concentric manner with respect to the circular crown of digital data (220) in order to allow the piercing through pressure of the aforementioned central opening (210a), the latter allowing, as soon as said drawer (110) is closed with the disk (200) lodged inside, the passage of the guiding and driving means of the compact disk.

9. Compact disk according to any one of claims 1 to 8, wherein the aforementioned support (210) comprises integrated circuits arranged outside the circular crown of digital data (220) and linked to the digital data of the aforementioned circular crown.

10. Compact disk according to all of claims 1 to 9, wherein the aforementioned support (210) is made of a transparent material and one or several coatings of opaque paint or medium are applied on one side of said support in order to ensure a printing on one side of the support only, but with a readability of a different message on both sides.