

**FOLDER-TYPE PORTABLE
COMMUNICATION DEVICE HAVING
FLEXIBLE DISPLAY UNIT**

CROSS REFERENCE TO RELATED
APPLICATION

[0001] This application claims priority from and the benefit of Korean Patent Application No. 10-2007-0001331, filed on Jan. 5, 2007, which is hereby incorporated by reference for all purposes as if fully set forth herein.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention generally relates to a portable communication terminal such as a cellular phone, a Personal Communication Service (PCS) terminal, a Personal Digital Assistant (PDA), or a Hand Held Phone (HHP), and in particular, to a folder-type portable communication terminal having a flexible display unit.

[0004] 2. Discussion of the Background

[0005] In terms of portability, portable communication devices have emphasized not only compactness, slimness, excellent gripping properties, and lightness, but also multimedia availability, thus providing a wider variety of functions, e.g., entertainment functions including games or moving picture viewing services.

[0006] In particular, future portable communication devices are expected to incorporate greater multi-functionality and multi-purpose utilization including video communication, games, Internet, and camera functions, as well as voice communication functions.

[0007] Conventional portable communication devices may be classified according to their appearance in terms of portability and convenience, for example, into bar-type communication devices and folder-type communication devices. The bar-type portable communication device has a single housing shaped like a bar in which data input/output devices and transmission/reception devices are mounted. The folder-type portable communication device has a folder coupled to a single bar-shaped housing by a hinge device in such a manner that the folder can be folded toward and unfolded away from the housing.

[0008] For example, in a folder-type portable communication device, a folder may be rotatably coupled to a main body by a hinge unit, keys may be disposed in the main body, and a display unit may be disposed in the folder, which may contribute to miniaturization and portability.

[0009] A folder-type portable communication device is disclosed in U.S. Pat. No. 6,865,406, commonly assigned to the assignee of the present application.

[0010] However, a display unit that is mounted in a conventional portable communication device may be fixed in a main body housing and various data may be displayed within a fixed area of the display unit, causing visual inconvenience when viewing moving pictures in a Digital Multimedia Broadcasting (DMB) mode, a TV mode, or a Video On Demand (VOD) mode. In other words, due to the small screen displayed in the display unit, users may be inconvenienced when viewing displayed data.

[0011] Of course, the foregoing problems may be solved by increasing the size of the portable communication device, mounting a wide display unit, and disposing more keys. How-

ever, each of these solutions goes against the miniaturization trend and therefore, may cause inconvenience to users.

SUMMARY OF THE INVENTION

[0012] The present invention provides a folder-type portable communication device having a flexible display unit that can be mounted in a small space.

[0013] The present invention also provides a folder-type portable communication device that may be capable of providing a wide display screen that is larger than the small main body housing.

[0014] The present invention also provides a folder-type portable communication device that may improve a visual interfacing environment in a multimedia environment.

[0015] The present invention also provides a folder-type portable communication device that may be more convenient by providing a wide display screen in modes associated with moving picture watching.

[0016] Additional features of the present invention will be set forth in the description which follows, and in part will be apparent from the description, or may be learned by practice of the invention.

[0017] The present invention discloses a portable communication device including a main housing, a folding housing coupled to the main body housing by a hinge unit to rotate about a hinge axis, and a flexible display unit that is drawn out from the main housing to open its display screen when the folding housing unfolds.

[0018] The present invention also discloses a portable communication device including a main housing, a protrusion unit extending along a side end of the main housing, a folding housing coupled to the main housing by a hinge unit to rotate about a hinge axis, and a flexible display unit that is drawn out from the protrusion unit to open its display screen, when the folding housing unfolds.

[0019] The present invention also discloses a portable communication device including a main housing including a plurality of first keys that are always exposed, a folding housing coupled to the main housing by a hinge unit to rotate about a hinge axis, and a flexible display unit that is drawn out from the main housing to open its display screen when the folding housing unfolds.

[0020] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention, and together with the description serve to explain the principles of the invention.

[0022] FIG. 1 is a perspective view of a folder-type portable communication device according to an exemplary embodiment of the present invention.

[0023] FIG. 2 and FIG. 3 are perspective views showing that a flexible display unit is drawn by rotation of a folding housing of a folder-type portable communication device according to an exemplary embodiment of the present invention.