

Concurrent Mode Antenna System

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BACKGROUND

With advances of radio communication technology, various radio communication services available using wireless terminals such as mobile phones, personal digital assistants, personal computers, and notebook computers are under development. For example, Global System for Mobile communication (GSM), Personal Communication Services (PCS), World Interoperability for Microwave Access (WiMAX), Wireless Local Area Network (WLAN), Wireless Broadband Internet (WiBro), and Bluetooth. The GSM uses 890~960 MHz band, the PCS uses 1.8 GHz band, and the WiMAX uses 3.6~3.8 GHz band. The WLAN uses 2.4 GHz band which is Industrial, Scientific & Medical (ISM) band in IEEE 802.11b, and 5 GHz band which is Unlicensed National Information Infrastructure (UNII) in IEEE 802.11a. The Wibro uses 2.3 GHz band and the Bluetooth uses 2.4 GHz.

To overcome this problem, a reconfigurable antenna system would be advantageous not only to receive various wireless communication services on the single antenna, but also to use the services at the same time.

TECHNOLOGY DESCRIPTION

University researchers have developed a multiband antenna system to address this challenge. The system, used in a concurrent antenna system, includes a substrate; an antenna disposed on a front side and a back side of the substrate to produce a resonance in multi-frequency bands; a plurality of feeders disposed on the front side of the substrate to output signals; and a filter disposed on the front side of the substrate and connected to one end of the antenna, to transfer signals of different frequency bands output from the antenna to different feeders of the plurality of the feeders. The antenna size can be miniaturized by printing the single antenna on the front side and the back side of the dielectric substrate. Also, it is possible to use the plurality of wireless communication services on the single antenna at the same time.

APPLICATIONS

Multi-band communication systems.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	7,605,760	10/20/2009	2007-753

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OTHER INFORMATION

CATEGORIZED AS

- » **Communications**
- » Other

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