Title (en)

Interface between a mobile radio device and its accessory device based on capacitive coupling for sharing ground planes to rise antenna gain of accessory device

Title (de)

Schnittstelle zwischen Mobilfunkgerät und Zubehörgerät basierend auf kapazitiver Kopplung zur gemeinsamen Nutzung der Masseflächen um den Antennengewinn des Zubehörgeräts zu erhöhen

Title (fr)

Interface entre un dispositif radio mobil et dispositif accessoire basé sur un couplage capacitif afin de partager les plans de masse augmentant le gain de l'antenne du dispositif accessoire

Publication

EP 1257001 A1 20021113 (EN)

Application

EP 01111601 A 20010512

Priority

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Abstract (en)

The present invention provides an arrangement or interface (131) for capacitively coupling the ground plane (230) of a mobile device (200) with the ground plane (130,131) of its accessory device (100). Thus, the ground planes of both devices are shared. This results in an extended ground plane (130,131,230) of the accessory device (100) for rising the antenna gain of a patch antenna (120) incorporated in its housing (110). Hence, the accessory device can be further miniaturized without the drawback of lower antenna gain. The mobile device (200) can be a mobile telephone terminal, its accessory device can be a mobile positioning terminal. <IMAGE>

IPC 1-7

H01Q 9/04; H01Q 1/24

IPC 8 full level

H01Q 1/24 (2006.01); **H01Q 1/48** (2006.01); **H01Q 9/04** (2006.01)

CPC (source: EP)

H01Q 1/243 (2013.01); **H01Q 1/48** (2013.01); **H01Q 9/0407** (2013.01)

Citation (search report)

- [XY] US 6215447 B1 20010410 - JOHNSON GREG [US]
- [Y] US 5949369 A 19990907 - BRADLEY JAMES FREDERICK [US], et al
- [A] WO 9954956 A2 19991028 - ALLGON AB [SE], et al
- [A] WO 9952175 A1 19991014 - ALLGON AB [SE], et al
- [A] US 6160515 A 20001212 - MCCOY DANNY O [US], et al

Cited by

EP1447879A1; US7751856B2

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