

(12) 按照专利合作条约所公布的国际申请

更正本

(19) 世界知识产权组织
国际局



(43) 国际公布日
2011 年 8 月 4 日 (04.08.2011)

PCT

(10) 国际公布号
WO 2011/091622 A8

- (51) 国际专利分类号:
H04L 9/32 (2006.01) G06K 7/00 (2006.01)
- (21) 国际申请号: PCT/CN2010/071395
- (22) 国际申请日: 2010 年 3 月 29 日 (29.03.2010)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
201010300975.8 2010 年 1 月 29 日 (29.01.2010) CN
- (71) 申请人 (对除美国外的所有指定国): 国民技术股份有限公司 (NATIONZ TECHNOLOGIES INC.) [CN/CN]; 中国广东省深圳市南山区高新技术产业园深圳软件园 3 栋 301、302, Guangdong 518057 (CN)。
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(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW。

(84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ,

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(54) Title: METHOD AND SYSTEM FOR NEAR FIELD COMMUNICATION

(54) 发明名称: 近距离通信方法及系统

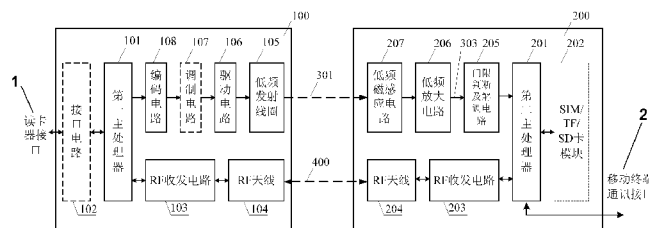


图 8 / FIG. 8

1 CARD READER INTERFACE
2 MOBILE TERMINAL COMMUNICATION INTERFACE
101 THE FIRST MAIN PROCESSOR
102 INTERFACE CIRCUIT
103 RF TRANSCIVING CIRCUIT
104 RF ANTENNA
105 LOW-FREQUENCY TRANSMITTING COIL
106 DRIVING CIRCUIT

107 MODULATING CIRCUIT
108 ENCODING CIRCUIT
201 THE SECOND MAIN PROCESSOR
202 SIM/TF/SD CARD MODULE
203 RF TRANSCIVING CIRCUIT 204 RF ANTENNA
205 THRESHOLD JUDGING AND MODULATING CIRCUIT
206 LOW-FREQUENCY MAGNIFYING CIRCUIT
207 LOW-FREQUENCY MAGNETIC INDUCTION CIRCUIT

(57) Abstract: A method and system for near field communication are provided. The method includes: a card reader transmitting a low-frequency time-varying magnetic field signal whose frequency is equal to or less than a highest frequency f_0 at which the system is non-adjusted working, and the signal carrying identifier information of the card reader; a mobile radio frequency device receiving and detecting the low-frequency signal, and magnifying it to be a voltage signal, and judging whether a terminal enters a valid distance interval or not; if the voltage signal is greater than or equal to a voltage threshold V_t , then the terminal entering the valid brushing card interval, and obtaining the identifier information of the card reader, and transmitting its own identifier information together with the identifier information of the card reader to the card reader through a radio frequency channel; the card reader receiving the transmitted information, and comparing whether the identifier information in the transmitted information is consistent with the identifier information of its own or not, if it is consistent, then performing a brushing card exchange with the mobile radio frequency device through the radio frequency channel. This solution realizes that the data communicating distance between a radio frequency communication terminal including a mobile radio frequency device and a card reader can be controlled reliably within a stated range, and an adjusting to the terminal is not needed.

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NA, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)。

本国际公布:

— 包括国际检索报告(条约第 21 条(3))。

(48) **更正本的公布日:** 2011 年 12 月 1 日

(15) **更正内容:**

见 2011 年 12 月 1 日 公布的公告

(57) 摘要:

本发明涉及近距离通信方法和系统。所述方法包括:读卡器发射低频交变磁场信号,其频率等于或小于系统无校准工作的最高频率 f_0 ,信号中携带其身份标识信息;移动射频装置接收、检测低频信号并放大为电压信号,判断终端是否进入有效距离区间;若电压信号大于或等于电压门限 V_t ,则终端进入有效刷卡区间,获取读卡器身份标识信息,连同自身的身份标识信息一起通过射频通道传送给读卡器;读卡器接收所述传送信息,比较其中身份标识信息是否同自身的身份标识信息一致,若一致则与移动射频装置通过射频通道进行刷卡交易。本发明实现了含有移动射频装置的射频通信终端与读卡器的数据通信距离可靠地控制在规定范围内,并且无需对终端进行校准。