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201210498781.2 2012年11月29日 (29.11.2012) CN
- (71) 申请人: 中兴通讯股份有限公司 (ZTE CORPORATION) [CN/CN]; 中国广东省深圳市南山区高新技术产业园科技南路中兴通讯大厦, Guangdong 518057 (CN)。
- (72) 发明人: 司美玲 (SI, Meiling); 中国广东省深圳市南山区高新技术产业园科技南路中兴通讯大厦, Guangdong 518057 (CN)。 李建勇 (LI, Jianyong); 中国广东省深圳市南山区高新技术产业园科技南路中兴通讯大厦, Guangdong 518057 (CN)。 周煜申 (ZHOU, Yushen); 中国广东省深圳市南山区高新技术产业园科技南路中兴通讯大厦, Guangdong 518057 (CN)。
- (74) 代理人: 北京派特恩知识产权代理事务所 (普通合伙) (CHINA PAT INTELLECTUAL PROPERTY OFFICE); 中国北京市海淀区海淀南路21号中关村知识产权大厦B座2层, Beijing 100080 (CN)。
- (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, BN, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

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(54) Title: COMMUNICATION TERMINAL, COMMUNICATION SYSTEM, AND COMMUNICATION CONNECTION METHOD

(54) 发明名称: 通信终端、通信系统及通信连接方法



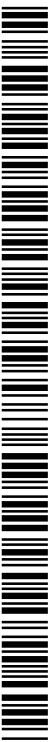
图 1 / Fig.1

- 101 Identifier information acquisition unit
- 102 WIFI hotspot cell list acquisition unit
- 103 Processing unit
- 104 Communication connection unit

(57) Abstract: Disclosed are a communication terminal, communication system, and communication connection method. When a new cell is entered, acquire cell identifier information of a cell where a communication terminal is currently located. Next, find directly whether cell identifier information matching the cell identifier information exists in a WIFI hotspot cell list acquired by the communication terminal. If yes, it indicates that a WIFI hotspot exists in the cell, and the communication terminal performs a WIFI communication connection inside the cell. Compared with the prior art, by presetting a WIFI hotspot cell list in a communication terminal, it can be learned in advance which cells have a WIFI hotspot instead of periodically scanning a WLAN signal to find a WLAN network, thereby effectively solving problems of ineffective WLAN network searches of a communication terminal beyond a radiation range of a WLAN signal and power consumption caused by automatic WLAN searches, so that the utilization of resources is increased and user experience is further enhanced.

(57) 摘要:

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本国际公布:

- 包括国际检索报告(条约第 21 条(3))。
- 在修改权利要求的期限届满之前进行, 在收到该修改后将重新公布(细则 48.2(h))。

— 根据申请人的请求, 在条约第 21 条(2)(a)所规定的期限届满之前进行。

(88) 国际检索报告公布日期: 2014 年 2 月 13 日

本发明公开了一种通信终端、通信系统及通信连接方法, 当进入新小区时, 获取通信终端当前所在小区的小区标识信息; 然后直接在通信终端获取的 WIFI 热点小区列表中查找是否存在与该小区标识信息相匹配的小区标识信息; 如存在, 则表明该小区中存在 WIFI 热点, 通信终端在该小区内进行 WIFI 通信连接; 与现有技术相比, 通过在通信终端中预置 WIFI 热点小区列表, 因此可预先知道在哪些小区存在 WIFI 热点, 而无需周期扫描 WLAN 信号来发现 WLAN 网络, 有效的解决了通信终端在 WLAN 信号辐射范围外而进行的无效的 WLAN 网络搜索的同时, 可降低 WLAN 自动搜索带来的耗电问题, 提高资源的利用率, 更利于提高用户体验的满意度。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2013/081964

A. CLASSIFICATION OF SUBJECT MATTER

H04W 48/16 (2009.01) i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: H04W, H04Q, H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC, CNPAT: wireless local area networks, WLAN, WIFI, area, cell, base station?, BS, +quir+, quer+, acquir+, obtain+, list?, table?, position, location, correspon+, map+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 1969529 A (TOSHIBA CORP. et al.), 23 May 2007 (23.05.2007), description, page 7, paragraph 6, page 9, paragraphs 2-5, and page 12, paragraphs 2-3	1-13
A	CN 102740366 A (HUAWEI TECHNOLOGIES CO., LTD.), 17 October 2012 (17.10.2012), the whole document	1-13
A	CN 101015221 A (MOTOROLA INC.), 08 August 2007 (08.08.2007), the whole document	1-13

Further documents are listed in the continuation of Box C.

See patent family annex.

<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p>	<p>“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>“&” document member of the same patent family</p>
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Date of the actual completion of the international search
06 November 2013 (06.11.2013)

Date of mailing of the international search report
28 November 2013 (28.11.2013)

Name and mailing address of the ISA/CN:
State Intellectual Property Office of the P. R. China
No. 6, Xitucheng Road, Jimenqiao
Haidian District, Beijing 100088, China
Facsimile No.: (86-10) 62019451

Authorized officer
XU, Hongyan
Telephone No.: (86-10) **62413251**

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2013/081964

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 1969529 A	23.05.2007	US 2009219833 A1	03.09.2009
		WO 2006107104 A1	12.10.2006
		JP 2008503109 A	31.01.2008
		EP 1882347 A1	30.01.2008
		CA 2597355 A1	12.10.2006
		US 2006221901 A1	05.10.2006
CN 102740366 A	17.10.2012	None	
CN 101015221 A	08.08.2007	KR 20060123427 A	01.12.2006
		WO 2005067494 A2	28.07.2005
		EP 1707025 A2	04.10.2006
		US 2005153736 A1	14.07.2005
		TW 200623 917 A	01.07.2006

A. 主题的分类		
H04W 48/16 (2009.01) i		
按照国际专利分类(IPC)或者同时按照国家分类和 IPC 两种分类		
B. 检索领域		
检索的最低限度文献(标明分类系统和分类号)		
IPC: H04W, H04Q, H04L		
包含在检索领域中的除最低限度文献以外的检索文献		
在国际检索时查阅的电子数据库(数据库的名称, 和使用的检索词(如使用))		
WPI,EPODOC,CNPAT: 无线局路网, WLAN, WIFI, 小区, 基站, 查, 获, 列表, 位置, 区域, 对应 cell, base station?, BS, +quir+, quer+, acquir+, obtain+, list?, table?, position, location, correspon+, map+		
C. 相关文件		
类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求
X	CN1969529 A(株式会社东芝等)23.5 月 2007(23.05.2007) 说明书第 7 页第 6 段, 第 9 页第 2-5 段, 第 12 页第 2-3 段	1-13
A	CN102740366 A(华为技术有限公司)17.10 月 2012(17.10.2012)全文	1-13
A	CN101015221 A(摩托罗拉公司)08.8 月 2007(08.08.2007)全文	1-13
<input type="checkbox"/> 其余文件在 C 栏的续页中列出。 <input checked="" type="checkbox"/> 见同族专利附件。		
* 引用文件的具体类型: “A” 认为不特别相关的表示了现有技术一般状态的文件 “E” 在国际申请日的当天或之后公布的在先申请或专利 “L” 可能对优先权要求构成怀疑的文件, 或为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件(如具体说明的) “O” 涉及口头公开、使用、展览或其他方式公开的文件 “P” 公布日先于国际申请日但迟于所要求的优先权日的文件		“T” 在申请日或优先权日之后公布, 与申请不相抵触, 但为了理解发明之理论或原理的在后文件 “X” 特别相关的文件, 单独考虑该文件, 认定要求保护的发明不是新颖的或不具有创造性 “Y” 特别相关的文件, 当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时, 要求保护的发明不具有创造性 “&” 同族专利的文件
国际检索实际完成的日期 06.11 月 2013(06.11.2013)	国际检索报告邮寄日期 28.11 月 2013 (28.11.2013)	
ISA/CN 的名称和邮寄地址: 中华人民共和国国家知识产权局 中国北京市海淀区蓟门桥西土城路 6 号 100088 传真号: (86-10)62019451	授权官员 许洪岩 电话号码: (86-10) 62413251	

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2013/081964

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
CN1969529 A	23.05.2007	US2009219833 A1	03.09.2009
		WO2006107104 A1	12.10.2006
		JP2008503109 A	31.01.2008
		EP1882347 A1	30.01.2008
		CA2597355 A1	12.10.2006
		US2006221901 A1	05.10.2006
CN102740366 A	17.10.2012	无	
CN101015221 A	08.08.2007	KR20060123427 A	01.12.2006
		WO2005067494 A2	28.07.2005
		EP1707025 A2	04.10.2006
		US2005153736 A1	14.07.2005
		TW200623917 A	01.07.2006