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WO 2012/126438 A3

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H04W 92/10 (2009.01) H04W 88/02 (2009.01)
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中文

(26) 公布语言:

中文

(71) 申请人 (对除美国外的所有指定国): **华为终端有限公司 (HUAWEI DEVICE CO., LTD.)** [CN/CN]; 中国广东省深圳市龙岗区坂田华为基地 B 区 2 号楼, Guangdong 518129 (CN)。

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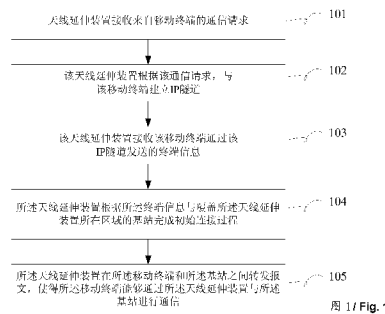
(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, ML, MR, NE, SN, TD, TG)。

[见续页]

(54) Title: COMMUNICATION METHOD AND DEVICE

(54) 发明名称: 通信方法和装置



101 THE ANTENNA EXTENSION DEVICE RECEIVES A COMMUNICATION REQUEST FROM THE MOBILE TERMINAL
102 THE ANTENNA EXTENSION DEVICE ESTABLISHES AN IP CHANNEL WITH THE MOBILE TERMINAL ACCORDING TO THE COMMUNICATION REQUEST
103 THE ANTENNA EXTENSION DEVICE RECEIVES TERMINAL INFORMATION SENT BY THE MOBILE TERMINAL VIA THE IP CHANNEL
104 THE ANTENNA EXTENSION DEVICE COMPLETES AN INITIAL CONNECTION PROCESS WITH THE BASE STATION COVERING THE AREA IN WHICH THE ANTENNA EXTENSION DEVICE IS LOCATED ACCORDING TO THE TERMINAL INFORMATION
105 THE ANTENNA EXTENSION DEVICE FORWARDS A MESSAGE BETWEEN THE MOBILE TERMINAL AND THE BASE STATION, SO THAT THE MOBILE TERMINAL CAN COMMUNICATE WITH THE BASE STATION BY WAY OF THE ANTENNA EXTENSION DEVICE

(57) Abstract: Disclosed are a communication method and device, belonging to the field of network communications. The method includes: an antenna extension device receives a communication request from a mobile terminal; the antenna extension device establishes an IP channel with the mobile terminal according to the communication request; the antenna extension device receives terminal information sent by the mobile terminal via the IP channel; the antenna extension device completes an initial connection process with a base station covering the area in which the antenna extension device is located according to the terminal information; and the antenna extension device forwards a message between the mobile terminal and the base station, so that the mobile terminal can communicate with the base station by way of the antenna extension device. In the present invention, no complex heterogeneous network interaction technology is needed, the quality of communication is improved, and the problem that the mobile terminal is unable to interact with the domestic base station once it is abroad is solved.

(57) 摘要:



WO 2012/126438 A3



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: 2013 年 4 月 25 日

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/076276

A. CLASSIFICATION OF SUBJECT MATTER

See the extra sheet

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, 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)

CNABS, CNTXT, CNKI: IP+, tunnel, channel, overseas, abroad, other, country, roaming, offsite, region, different, international, call, conversation, communication, base station, establish, transmit, transfer, agent

VEN: IP+, tunnel?, channel?, chunnel, aboard, overseas, outbound, foreign, other, countr???, international, global, roam+, air time, air time, call+, communicat+, base station?, establish+, transmit+, transfer+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 102413583 A (HUAWEI DEVICE CO., LTD.), 11 April 2012 (11.04.2012), claims 1-5, and description, paragraphs 34-85 and 105-130	1-16
A	CN 102014358 A (SOUTHWEST JIAOTONG UNIVERSITY), 13 April 2011 (13.04.2011), the whole document	1-16
A	CN 101218814 A (CISCO TECHNOLOGY, INC.), 09 July 2008 (09.07.2008), the whole document	1-16
A	US 2009268725 A1 (EMBARQ HOLDINGS COMPANY, LLC), 29 October 2009 (29.10.2009), the whole document	1-16

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
31 January 2013 (31.01.2013)

Date of mailing of the international search report
07 March 2013 (07.03.2013)

Name and mailing address of the ISA/CN:
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Haidian District, Beijing 100088, China
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2012/076276

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 102413583 A	11.04.2012	WO 2012037869 A1	29.03.2012
CN 102014358 A	13.04.2011	None	
CN 101218814 A	09.07.2008	EP 1900186 A2	19.03.2008
		US 2007008980 A1	11.01.2007
		US 7602786 B2	13.10.2009
		WO 2007008849 A2	18.01.2007
		IN 200705085 P2	09.05.2008
		CN 101218814 B	25.05.2011
		WO 2007008849 A3	12.04.2007
US 2009268725 A1	29.10.2009	US 8218745 B2	10.07.2012

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/076276

CONTINUATION: A. CLASSIFICATION OF SUBJECT MATTER

H04W 76/02 (2009.01) i

H04W 92/10 (2009.01) i

H04W 76/04 (2009.01) n

H04W 80/04 (2009.01) n

H04W 88/02 (2009.01) n

国际检索报告

国际申请号
PCT/CN2012/076276

A. 主题的分类		
参见附加页		
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, 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))		
CNABS, CNTXT, CNKI: IP+, 隧道, 通道, 境外, 国外, 其他, 其它, 国家, 漫游, 外地, 地区, 不同, 国际, 打电话, 通话, 通电话, 通信, 基站, 建, 转发, 中转, 代理		
VEN: IP+, tunnel?, channel?, chunnel, aboard, overseas, outbound, foreign, other, countr???, international, global, roam+, air time, airtime, call+, communicat+, base station?, establish+, transmit+, transfer+		
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	CN102413583A (华为终端有限公司) 11.4 月 2012 (11.04.2012) 权利要求 1-5, 说明书第 34-85, 105-130 段	1-16
A	CN102014358A (西南交通大学) 13.4 月 2011 (13.04.2011) 全文	1-16
A	CN101218814A (思科技术公司) 09.7 月 2008 (09.07.2008) 全文	1-16
A	US2009268725A1 (EMBARQ HOLDINGS COMPANY, LLC) 29.10 月 2009 (29.10.2009) 全文	1-16
<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 31.1 月 2013 (31.01.2013)		国际检索报告邮寄日期 07.3 月 2013 (07.03.2013)
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		受权官员 俞燕浓 电话号码: (86-10) 62411432

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2012/076276

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
CN102413583A	11.04.2012	WO2012037869A1	29.03.2012
CN102014358A	13.04.2011	无	
CN101218814A	09.07.2008	EP1900186A2	19.03.2008
		US2007008980A1	11.01.2007
		US7602786B2	13.10.2009
		WO2007008849A2	18.01.2007
		IN200705085P2	09.05.2008
		CN101218814B	25.05.2011
		WO2007008849A3	12.04.2007
US2009268725A1	29.10.2009	US8218745B2	10.07.2012

续：A. 主题的分类

H04W 76/02 (2009.01) i

H04W 92/10 (2009.01) i

H04W 76/04 (2009.01) n

H04W 80/04 (2009.01) n

H04W 88/02 (2009.01) n