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国际局



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2012年10月11日 (11.10.2012)

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- (30) 优先权:
201110186696.8 2011年7月5日 (05.07.2011) CN
- (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)。

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。

[见续页]

(54) Title: LOCAL NETWORK AND METHOD FOR ESTABLISHING CONNECTION BETWEEN LOCAL GATEWAY AND HOME NODEB

(54) 发明名称: 一种本地网络和实现本地网关和家庭基站建立连接的方法

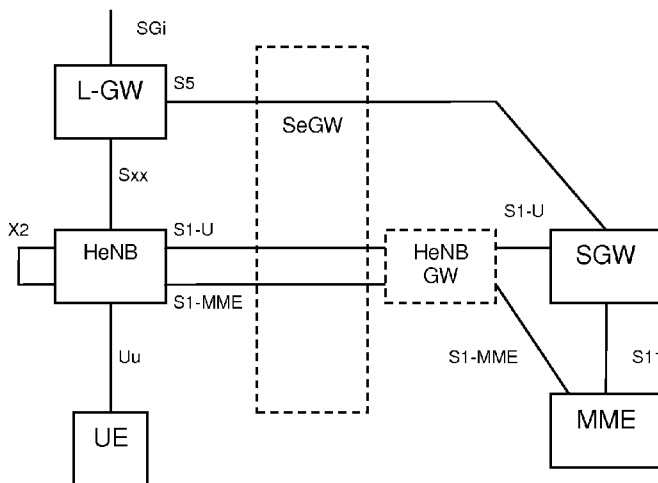


图 5 / FIG. 5

(57) Abstract: Disclosed are a local network and a method for establishing a connection between a local gateway and a home nodeB therein. The embodiments of the present invention aim at a newly proposed home nodeB network architecture I, wherein a mobility management network element, by receiving L-GW information about a home nodeB, selects an L-GW in the same local network as the home nodeB at least according to the received L-GW information, then notifies the L-GW to establish a PDN connection and bearer tunnel as the home nodeB via an S-GW, so as to provide local IP access to UE. As to a newly proposed home nodeB network architecture II, there is no direct interface connection between the L-GW and the S-GW, and the mobility management network element directly selects the corresponding L-GW to establish a PDN connection for the UE, so as to provide local IP access to the UE. The embodiments of the present invention can establish a connection between the home nodeB and the L-GW for the UE, so that the data is routed from the L-GW to the home nodeB instead of being circuitously transmitted via the core network of the operator.

(57) 摘要:

[见续页]

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(88) 国际检索报告公布日期: 2012年11月29日

本发明公开了一种本地网络以在其中实现本地网关与家庭基站建立连接的方法。本发明实施例针对新提出的家庭基站网络架构一，移动性管理网元通过接收家庭基站的 L-GW 信息，至少根据接收的所述 L-GW 信息，选择与家庭基站在同一本地网络里的 L-GW,然后通过 S-GW 通知该 L-GW 建立与家庭基站之间的 PDN 连接和承载隧道，从而为 UE 提供本地 IP 接入。针对新提出的家庭基站网络架构二，L-GW 与 S-GW 之间没有直接的接口相连，移动性管理网元直接选择对应的 L-GW 为该 UE 建立 PDN 连接，为该 UE 提供本地 IP 接入。本发明实施例可以实现为 UE 建立家庭基站和 L-GW 之间的隧道连接，从而使数据从 L-GW 路由到家庭基站，而不是从运营商核心网进行迂回传输。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/077120

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: H04L, H04W, H04Q

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)

CNPAT, CNKI, WPI, EPODOC, IEEE, TXTWO1, TXTEP1: mobility management, packet date, link, address; MME, PDN, APN, EPS, Qos, TEID, RRC, local gateway, local, access+ gateway, local serv+ gateway, home w NodeB, HeNB, HNB, create, response, request

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010/123643 A1 (QUALCOMM INCORPORATED), 28 October 2010 (28.10.2010), description, paragraphs [0049]-[0077], and figures 1, 2, 4, 6, and 8	9-13, 19-22
Y		1-8, 14-18
Y	WO 2010/127441 A1 (NORTEL NETWORKS LIMITED), 11 November 2010 (11.11.2010), description, page 15, lines 5-30, and figure 7	1-8, 14-18
A	CN 101959175 A (ZTE CORP.), 26 January 2011 (26.01.2011), the whole document	1-22
A	CN 102088771 A (DATANG MOBILE COMMUNICATIONS EQUIPMENT CO., LTD.), 08 June 2011 (08.06.2011), the whole document	1-22

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 05 September 2012 (05.09.2012)	Date of mailing of the international search report 04 October 2012 (04.10.2012)
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<p>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</p>	<p>Authorized officer LI, Kai Telephone No.: (86-10) 62413305</p>
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/CN2012/077120

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
WO 2010/123643 A1	28.10.2010	CA 2758341 A1	28.10.2010
		KR 20120023012 A	12.03.2012
		CN 102405659 A	04.04.2012
		EP 2422534 A1	29.02.2012
		AU 2010239580 A1	28.10.2010
		US 2010272013 A1	28.10.2010
		TW 201129209 A	16.08.2011
WO 2010/127441 A1	11.11.2010	KR 20120040134 A	26.04.2012
		CN 102498750 A	13.06.2012
		EP 2428095 A1	14.03.2012
		CA 2779231 A	11.11.2010
		US 2012184294 A	19.07.2012
CN 101959175 A	26.01.2011	WO 2011006404 A1	20.01.2011
CN 102088771 A	08.06.2011	WO 2011110106 A1	15.09.2011

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/077120

CLASSIFICATION OF SUBJECT MATTER:

H04L 29/12 (2006.01) i

H04W 76/02 (2009.01) i

国际检索报告

国际申请号
PCT/CN2012/077120

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: H04L,H04W,H04Q

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))
CNPAT,CNKI,WPI,EPODOC,IEEE,TXTWO1,TXTEP1: 家庭基站,家用基站,本地网关,本地接入网关,本地服务网关,移动性管理,分组数据,创建,建立,连接,响应,地址; MME, PDN, APN, EPS, Qos, TEID, RRC, local gateway, local access+ gateway, local serv+ gateway, home w NodeB, HeNB, HNB, create, response, request

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	WO2010/123643A1(QUALCOMM INCORPORATED)28.10 月 2010(28.10.2010) 说明书第[0049]-[0077]段、附图 1,2,4,6,8	9-13,19-22
Y		1-8,14-18
Y	WO2010/127441A1(NORTEL NETWORKS LIMITED)11.11 月 2010(11.11.2010) 说明书第 15 页第 5-30 行、附图 7	1-8,14-18
A	CN101959175A(中兴通讯股份有限公司) 26.1 月 2011(26.01.2011) 全文	1-22
A	CN102088771A(大唐移动通信设备有限公司) 08.6 月 2011(08.06.2011) 全文	1-22

其余文件在 C 栏的续页中列出。 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
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国际检索实际完成的日期 05.9 月 2012 (05.09.2012)	国际检索报告邮寄日期 04.10 月 2012 (04.10.2012)
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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 李凯 电话号码: (86-10) 62413305
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国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2012/077120

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
WO2010/123643A1	28.10.2010	CA2758341A1	28.10.2010
		KR20120023012A	12.03.2012
		CN102405659A	04.04.2012
		EP2422534A1	29.02.2012
		AU2010239580A1	28.10.2010
		US2010272013A1	28.10.2010
		TW201129209A	16.08.2011
WO2010/127441A1	11.11.2010	KR20120040134A	26.04.2012
		CN102498750A	13.06.2012
		EP2428095A1	14.03.2012
		CA2779231A	11.11.2010
CN101959175A	26.01.2011	US2012184294A	19.07.2012
		WO2011006404A1	20.01.2011
CN102088771A	08.06.2011	WO2011110106A1	15.09.2011

主题的分类:

H04L 29/12 (2006.01)i

H04W 76/02(2009.01)i