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(19) 世界知识产权组织
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2013年12月27日 (27.12.2013)



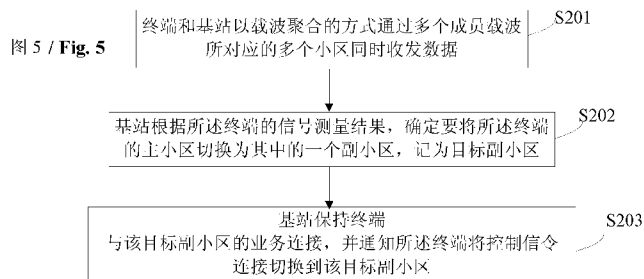
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WO 2013/189340 A3

- (51) 国际专利分类号:
H04W 36/18 (2009.01)
- (21) 国际申请号: PCT/CN2013/081604
- (22) 国际申请日: 2013年8月16日 (16.08.2013)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
201310212884.2 2013年5月30日 (30.05.2013) 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).
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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, 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,

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(54) Title: METHOD FOR IMPLEMENTING SOFT HANDOVER BASED ON CARRIER AGGREGATION TECHNOLOGY, BASE STATION, AND TERMINAL

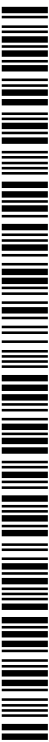
(54) 发明名称: 一种基于载波聚合技术实现软切换的方法及基站、终端



S201 A TERMINAL AND A BASE STATION RECEIVE AND TRANSMIT DATA SIMULTANEOUSLY THROUGH MULTIPLE CELLS CORRESPONDING TO MULTIPLE COMPONENT CARRIERS IN A CARRIER AGGREGATION MANNER
S202 THE BASE STATION DETERMINES, ACCORDING TO A SIGNAL MEASUREMENT RESULT OF THE TERMINAL, TO HAND OVER A PRIMARY CELL OF THE TERMINAL TO ONE OF SECONDARY CELLS, AND MARKS THE SECONDARY CELL AS A TARGET SECONDARY CELL
S203 THE BASE STATION MAINTAINS A SERVICE CONNECTION BETWEEN THE TERMINAL AND THE TARGET SECONDARY CELL, AND NOTIFIES THE TERMINAL OF HANDING OVER A CONTROL SIGNALING CONNECTION TO THE TARGET SECONDARY CELL

(57) Abstract: A method for implementing soft handover based on a carrier aggregation technology, a base station, and a terminal. The method is applied in a scenario of complementary carrier coverage, and comprises: a terminal and a base station receiving and transmitting data simultaneously through multiple cells corresponding to multiple component carriers in a carrier aggregation manner, wherein one cell is a primary cell and the rest cells are secondary cells; the base station determining, according to a measurement result of the terminal, to hand over the primary cell of the terminal to one of the secondary cells, and marking the secondary cell as a target secondary cell; and the base station maintaining a service connection between the terminal and the target secondary cell, and notifying the terminal of handing over a control signaling connection to the target secondary cell.

(57) 摘要: 一种基于载波聚合技术实现软切换的方法、基站及终端。所述方法应用于载波互补覆盖的场景, 包括: 终端和基站以载波聚合的方式通过多个成员载波所对应的多个小区同时收发数据, 其中一个小区是主小区, 其余小区是副小区; 所述基站根据所述终端的测量结果, 确定要将所述终端的主小区切换为所述副小区中的一个副小区, 记为目标副小区; 以及所述基站保持所述终端与所述目标副小区的业务连接, 并通知所述终端将控制信令连接切换到所述目标副小区。



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RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

根据细则 4.17 的声明:

- 关于申请人有权申请并被授予专利(细则 4.17(ii))
- 发明人资格(细则 4.17(iv))

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 5 月 1 日

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2013/081604

A. CLASSIFICATION OF SUBJECT MATTER

H04W 36/18 (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)

CNPAT, WPI, EPODOC: signaling, carrier, aggregation, switch, handover, cell, main, associate, supplementary, detect, measure, control, signal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 102869066 A (ZTE CORP.), 09 January 2013 (09.01.2013), description, paragraphs [0050]-[0064], claims 1-20, and figures 4-5	1-11
A	CN 101938774 A (ZTE CORP.), 05 January 2011 (05.01.2011), the whole document	1-11
A	CN 102118843 A (HUAWEI TECHNOLOGIES CO., LTD.), 06 July 2011 (06.07.2011), the whole document	1-11
A	WO 2011082988 A1 (TELEFONAKTIEBOLAGET L M ERICSSON (PUBL) et al.), 14 July 2011 (14.07.2011), the whole document	1-11
A	US 2012207089 A1 (KONE, M.), 16 August 2012 (16.08.2012), the whole document	1-11

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
14 January 2014 (14.01.2014)

Date of mailing of the international search report
13 March 2014 (13.03.2014)

Name and mailing address of the ISA/CN:
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2013/081604

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 102869066 A	09.01.2013	WO 2013004085 A1	10.01.2013
CN 101938774 A	05.01.2011	WO 2011000268 A1	06.01.2011
CN 102118843 A	06.07.2011	None	
WO 2011082988 A1	14.07.2011	US 2011212693 A1	01.09.2011
		EP 2524538 A1	21.11.2012
US 2012207089 A1	16.08.2012	None	

A. 主题的分类		
H04W 36/18 (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))		
CNPAT, WPI, EPODOC: 载波, 聚合, 小区, 主, 副, 辅, 切换, 测量, 检测, 控制, 信令, carrier, aggregation, switch, handover, cell, main, associate, supplementary, detect, measure, control, signal		
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
A	CN 102869066 A (中兴通讯股份有限公司) 09.1 月 2013 (09.01.2013) 说明书第[0050]-[0064]段, 权利要求 1-20, 附图 4-5	1-11
A	CN 101938774 A (中兴通讯股份有限公司) 05.1 月 2011 (05.01.2011) 全文	1-11
A	CN 102118843 A (华为技术有限公司) 06.7 月 2011 (06.07.2011) 全文	1-11
A	WO 2011082988 A1 (TELEFONAKTIEBOLAGET L M ERICSSON (PUBL)等) 14.7 月 2011 (14.07.2011) 全文	1-11
A	US 2012207089 A1 (KONE, Mamadou) 16.8 月 2012 (16.08.2012) 全文	1-11
<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 14.1 月 2014 (14.01.2014)		国际检索报告邮寄日期 13.3 月 2014 (13.03.2014)
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 王伦杰 电话号码: (86-10) 62413491

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2013/081604

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
CN 102869066 A	09.01.2013	WO 2013004085 A1	10.01.2013
CN 101938774 A	05.01.2011	WO 2011000268 A1	06.01.2011
CN 102118843 A	06.07.2011	无	
WO 2011082988 A1	14.07.2011	US 2011212693 A1	01.09.2011
		EP 2524538 A1	21.11.2012
US 2012207089 A1	16.08.2012	无	