

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局

(43) 国际公布日
2013 年 6 月 27 日 (27.06.2013)



(10) 国际公布号
WO 2013/091494 A1

- (51) 国际专利分类号:
H04W 76/02 (2009.01)
- (21) 国际申请号: PCT/CN2012/086406
- (22) 国际申请日: 2012 年 12 月 12 日 (12.12.2012)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
201110437651.3 2011 年 12 月 23 日 (23.12.2011) CN
- (71) 申请人: 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)。
- (72) 发明人: 朱冲 (ZHU, Chong); 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)。 杜维 (DU, Wei); 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)。
- (74) 代理人: 广州三环专利代理有限公司 (GUANGZHOU SCIHEAD PATENT AGENT CO., LTD); 中国

广东省广州市越秀区先烈中路 80 号汇华商贸大厦 1508 室, Guangdong 510070 (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, 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, PA, 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: RELAY METHOD OF WIRELESS RELAY APPARATUS AND WIRELESS RELAY APPARATUS THEREOF

(54) 发明名称: 一种无线中继设备的中继方法及无线中继设备

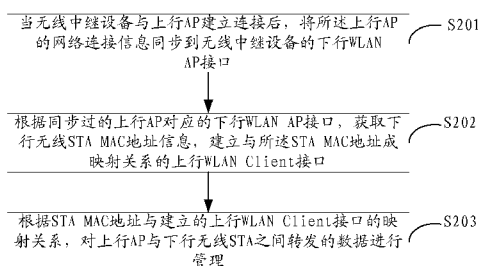


图 2 /Fig. 2

S201 ONCE WIRELESS RELAY APPARATUS ESTABLISHES CONNECTION WITH UPLINK AP, SYNCHRONIZING NETWORK CONNECTION INFORMATION OF THE UPLINK AP WITH THE DOWNLINK WLAN AP INTERFACE OF THE WIRELESS RELAY APPARATUS

S202 ACCORDING TO DOWNLINK WLAN AP INTERFACE CORRESPONDING TO SYNCHRONIZED UPLINK AP, OBTAINING DOWNLINK WIRELESS STA MAC ADDRESS INFORMATION, AND ESTABLISHING THE UPLINK WLAN CLIENT INTERFACE MAPPING TO THE STA MAC ADDRESS

S203 ACCORDING TO THE MAPPING RELATIONSHIP BETWEEN THE STA MAC AND THE ESTABLISHED UPLINK WLAN CLIENT INTERFACE, MANAGING DATA FORWARDED BETWEEN THE UPLINK AP AND THE DOWNLINK WIRELESS STA.

(57) Abstract: The present invention applies to the communication technology, and provides a relay method and wireless relay apparatus thereof. The method comprises the following steps: synchronizing network connection information of the uplink AP (Access Point) with the downlink WLAN AP interface of the wireless relay apparatus; according to the downlink WLAN AP interface corresponding with the synchronized uplink AP, obtaining MAC address information of a downlink wireless STA, and establishing the uplink WLAN Client interface mapping to the STA MAC address; according to the mapping relationship between the STA MAC and the established uplink WLAN Client interface, managing data forwarded between the uplink AP and the downlink wireless STA. The relay technology solution provided by the present invention realizes that the AAA authentication or the billing parties could differently charge to the STA MAC of each STA which is managed by the AAA authentication or the billing parties, and meets requirements of the united authentication/billing based on the MAC address.

(57) 摘要:

[见续页]

**本国际公布:**

— 包括国际检索报告(条约第 21 条(3))。

本发明适用于通信技术领域，提供了一种无线中继设备的中继方法及无线中继设备，所述方法包括下述步骤：将所述上行 AP 的网络连接信息同步到无线中继设备的下行 WLAN AP 接口；根据同步过的上行 AP 对应的下行 WLAN AP 接口，获取下行无线 STA MAC 地址信息，建立与所述 STA MAC 地址成映射关系的上行 WLAN Client 接口；根据 STA MAC 地址与建立的上行 WLAN Client 接口的映射关系，对上行 AP 与下行无线 STA 之间转发的数据进行管理。本发明提供的中继技术方案实现了 AAA 认证或者计费方可以对下挂的每一个 STA 的 STA MAC 地址进行区别计费，满足了基于 MAC 地址的统一认证/计费的要求。