

(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
2023 年 11 月 2 日 (02.11.2023)



(10) 国际公布号
WO 2023/207946 A1

- (51) 国际专利分类号:
H04W 4/02 (2018.01) *H04W 56/00* (2009.01)
H04W 40/02 (2009.01) *H04W 88/08* (2009.01)
- (21) 国际申请号: PCT/CN2023/090494
- (22) 国际申请日: 2023 年 4 月 25 日 (25.04.2023)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
202210436190.6 2022 年 4 月 25 日 (25.04.2022) CN
- (71) 申请人: 汉朔科技股份有限公司 (HANSHOW TECHNOLOGY CO., LTD.) [CN/CN]; 中国浙江省嘉兴市秀洲区康和路 1288 号嘉兴光伏科技园 1 号楼 1 层裙楼和 4 层、5 号楼 7 层, Zhejiang 314031 (CN)。

- (72) 发明人: 吉亚平 (JI, Yaping); 中国浙江省嘉兴市秀洲区康和路 1288 号嘉兴光伏科技园 1 号楼 1 层裙楼和 4 层、5 号楼 7 层, Zhejiang 314031 (CN)。姜起 (JIANG, Qi); 中国浙江省嘉兴市秀洲区康和路 1288 号嘉兴光伏科技园 1 号楼 1 层裙楼和 4 层、5 号楼 7 层, Zhejiang 314031 (CN)。梁敏 (LIANG, Min); 中国浙江省嘉兴市秀洲区康和路 1288 号嘉兴光伏科技园 1 号楼 1 层裙楼和 4 层、5 号楼 7 层, Zhejiang 314031 (CN)。
- (74) 代理人: 北京三友知识产权代理有限公司 (BEIJING SANYOU INTELLECTUAL PROPERTY AGENCY LTD.); 中国北京市西城区金融街 35 号国际企业大厦 A 座 16 层, Beijing 100033 (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,

(54) Title: SYNCHRONIZATION NETWORK CONSTRUCTION METHOD, PRICE TAG SYSTEM, COMPUTER DEVICE, AND STORAGE MEDIUM

(54) 发明名称: 同步网络构建方法、价签系统、计算机设备及存储介质

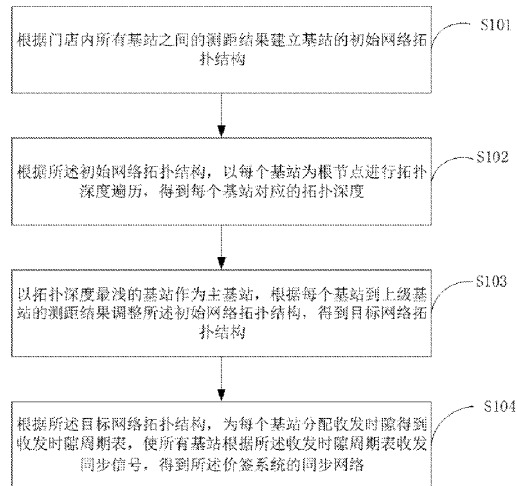


图 1

- S101 According to ranging results among all base stations of a shop, establish an initial network topological structure of base stations
- S102 According to the initial network topological structure, perform topological depth traversal by using each base station as a root node, so as to obtain a topological depth corresponding to each base station
- S103 Taking the base station with the smallest topology depth as the main base station and according to a ranging result from each base station to a superior base station, adjust the initial network topological structure to obtain a target network topological structure
- S104 According to the target network topological structure, allocate a transceiving time slot to each base station to obtain a transceiving time periodic table, such that all base stations send and receive synchronous signals according to the transceiving time periodic table, so as to obtain a synchronization network of the price tag system

(57) Abstract: The application provides a synchronization network construction method, a price tag system, a computer device and a storage medium. The method comprises: establishing an initial network topological structure of base stations; according to the initial network topological structure, performing topological depth traversal by using each base station as a root node, so as to obtain a topological depth corresponding to each base station; according to a ranging result from each base station to a superior base station, adjusting the initial network topological structure to obtain a target network topological structure; and according to the target network topological structure, allocating a transceiving time slot to each base station to obtain a transceiving time periodic table, so as to obtain a synchronization network of the price tag system. The present application solves the problem in the prior art of mutual interference between a plurality of base stations in an electronic price tag system when transmitting and receiving signals. By establishing a syn-

[见续页]

BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, 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)。

本国际公布:

— 包括国际检索报告(条约第21条(3))。

chronization network, time synchronization among a plurality of base stations is achieved, signal interference is prevented on the basis of time slot transceiving data of the synchronization network, and the stability and data throughput capability of the electronic price tag system are improved.

(57) 摘要: 本申请提供一种同步网络构建方法、价签系统、计算机设备及存储介质, 所述方法包括: 建立基站的初始网络拓扑结构; 根据所述初始网络拓扑结构, 以每个基站为根节点进行拓扑深度遍历, 得到每个基站对应的拓扑深度; 根据每个基站到上级基站的测距结果调整所述初始网络拓扑结构, 得到目标网络拓扑结构; 根据所述目标网络拓扑结构, 为每个基站分配收发时隙得到收发时隙周期表得到所述价签系统的同步网络。本申请解决了现有技术中电子价签系统中的多个基站之间在收发信号时存在相互干扰的问题, 通过建立同步网络使多个基站之间保持时间同步, 并且基于同步网络的分时隙收发数据防止信号干扰, 提高了电子价签系统的稳定性和数据吞吐能力。