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Cannon et al.

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(54) UNIFIED PASSCODE PAIRING OF PICONET DEVICES

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(52) **U.S. Cl.** **455/41.2**; 455/420; 455/466; 455/456.6; 455/90.1

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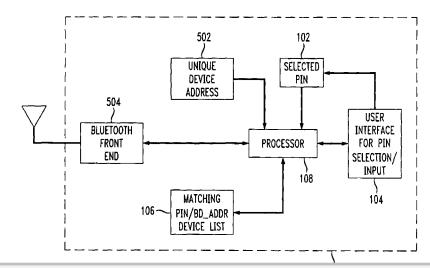
* cited by examiner

Primary Examiner—Charles R. Craver

(57) ABSTRACT

The present invention relates to an application layer function outside the BLUETOOTH protocol which associates a BLUETOOTH unique address, i.e., the 48-bit unique BD_ADDR address, with a short passcode or PIN which is associated with a particular type of BLUETOOTH device in a particular piconet. The passcode or PIN can be predetermined by the manufacturer of the BLUETOOTH device, or can be input and defined by the user. Upon installation in a piconet, in one embodiment shown and described with reference to FIGS. 1 and 2, a user can be asked to manually input a particular passcode or PIN into a relevant piconet device, and an inquiry can be broadcast to all communicating piconet devices and only those other piconet devices having a matching passcode or PIN associated therewith can automatically forward their respective 48-bit unique BD_ADDR addresses to the inquiring piconet device. Alternatively, a user can inquire and be provided with a list of available passcodes or PINs already established by other devices in the piconet, and select a particular passcode or PIN associated with one or more other piconet devices. The passcode or personal identification number (PIN) may be input upon electronic device setup (e.g., a four character code). The passcode or PIN may be numeric, text, or alphanumeric.

14 Claims, 6 Drawing Sheets



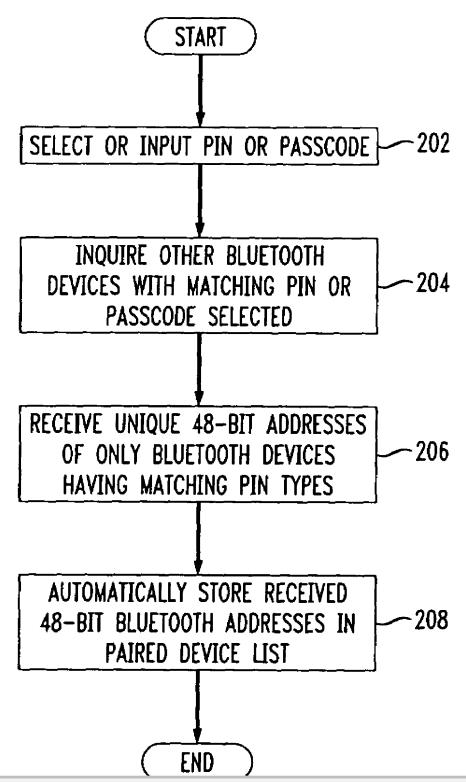


USER
INTERFACE
FOR PIN
SELECTION/
INPUT <u>\$</u> SELECTED PIN 8 **PROCESSOR** UNIQUE DEVICE ADDRESS 502 BLUETOOTH FRONT END



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FIG. 2

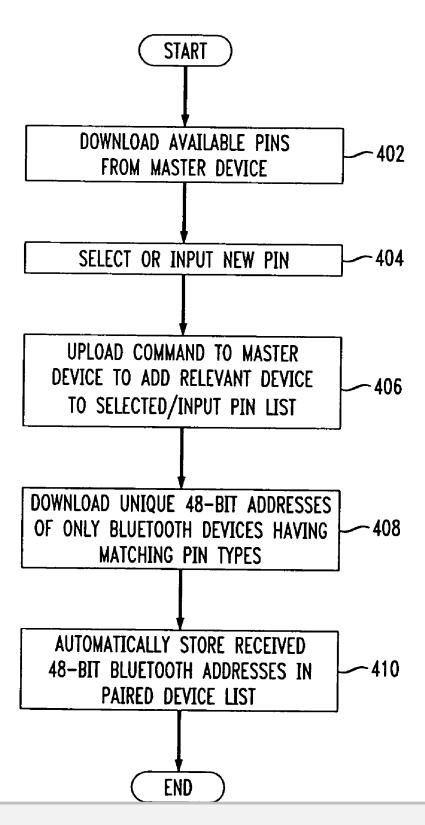




USER
INTERFACE
FOR PIN
SELECTION/
INPUT 30, SELECTED PIN (PASSCODE) 308 PROCESSOR 19g -106c PAIRED LIST #1
ENTERTAINMENT DEVICES PAIRED LIST #3 SECURITY DEVICES PAIRED LIST #2 APPLIANCES UNIQUE DEVICE ADDRESS 502 312~PIN #2 314 - PIN #3 310 _ PIN #1 BLUETOOTH FRONT END



FIG. 4





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