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PLAYER IDENTIFICATION USING PITCH DETECTION IN MULTI-PLAYER GAMES ON A SMART SPEAKER DEVICE

ABSTRACT

A system and method is disclosed that may shorten the waiting time for a player while playing multiplayer games in a smart speaker device system. Accordingly, an application is included in the players' mobile phone that may link the player with the device. Each player may be assigned a pitch or unique sound that identifies the player to the device. At the start of a multiplayer game, the device may place a request to all the players. Each player may race to respond to the request by pressing a button on their phone to establish priority. The device may listen with a microphone and may use audio processing to determine the pitch to identify the prioritized player. The device may call on the prioritized player to respond to the request. The prioritized player may then respond to the device. This provides an exciting game experience by making the interaction fast-paced.

BACKGROUND

Smart speaker devices enable integrated services that allow users to listen to music, play games, watch videos or photos, or receive news updates entirely by voice. Multiplayer games on the smart-speaker devices follow a turn-based order of play. When playing in a group, players are idle for most of the game during the other players' turns and hence it requires long hours of waiting. This causes players to lose interest in games due to slow game play. A short attention span would be a necessary feature when these games are developed for younger children.

DESCRIPTION

A system and method are disclosed that may shorten the waiting time for a player while playing multiplayer games in a smart speaker device. Accordingly, for fast-paced gameplay,

each player may have a noise-making device, such as a mobile phone, to use as a buzzer to prioritize the player's turn.

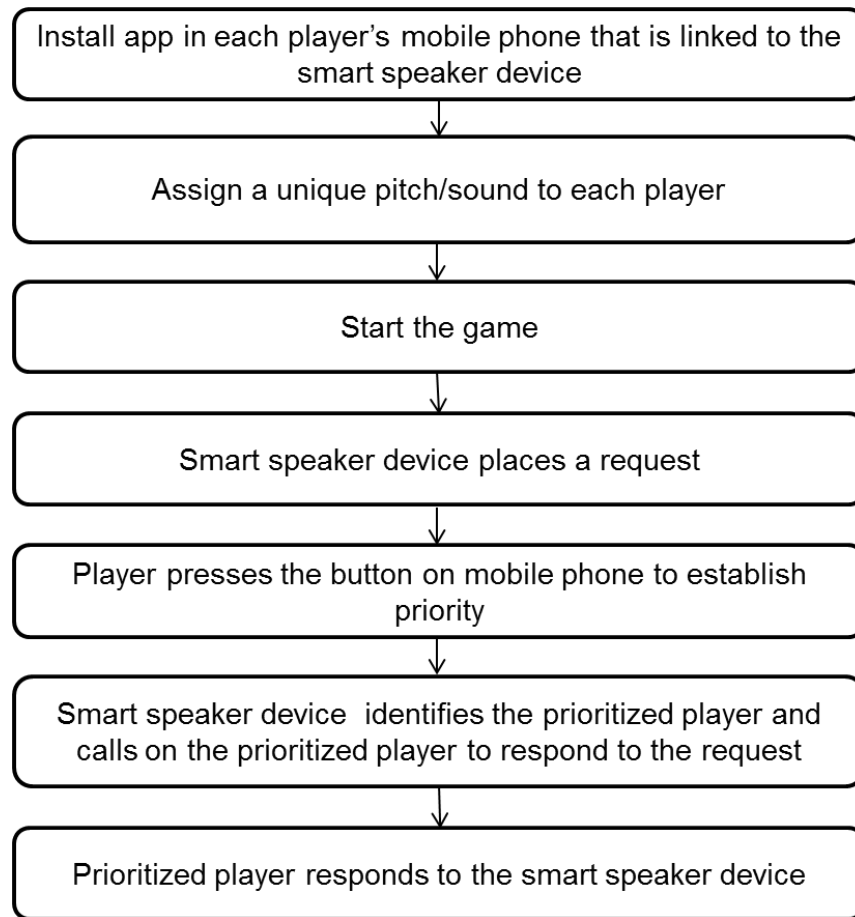


FIG. 1: Method to identify and prioritize player's turn in multiplayer games in a smart speaker device

The method as shown in FIG. 1 may include an application in the players' mobile phone that links the player with the smart speaker device. Each player may be assigned a pitch or unique sound that identifies the player to the smart speaker device. At the start of a multiplayer game, the smart speaker device may place a request to all the players. Each player may race to respond to the request by pressing a button on their phone to establish priority. The smart speaker device may listen with a microphone and may use audio processing to determine the pitch that was heard first to identify the prioritized player. The device may call on the prioritized

player to respond to the request. The prioritized player may then respond to the device to complete the turn. A round of play may thus be completed within a few seconds. The disclosed system and its elements engaged in a 4-player game are illustrated in FIG. 2.

The system and method disclosed here may provide an exciting game experience to players by making the interaction fast-paced. Multiplayer games incorporating the method create competitive spirit among the players that may boost one's attentiveness and concentration.

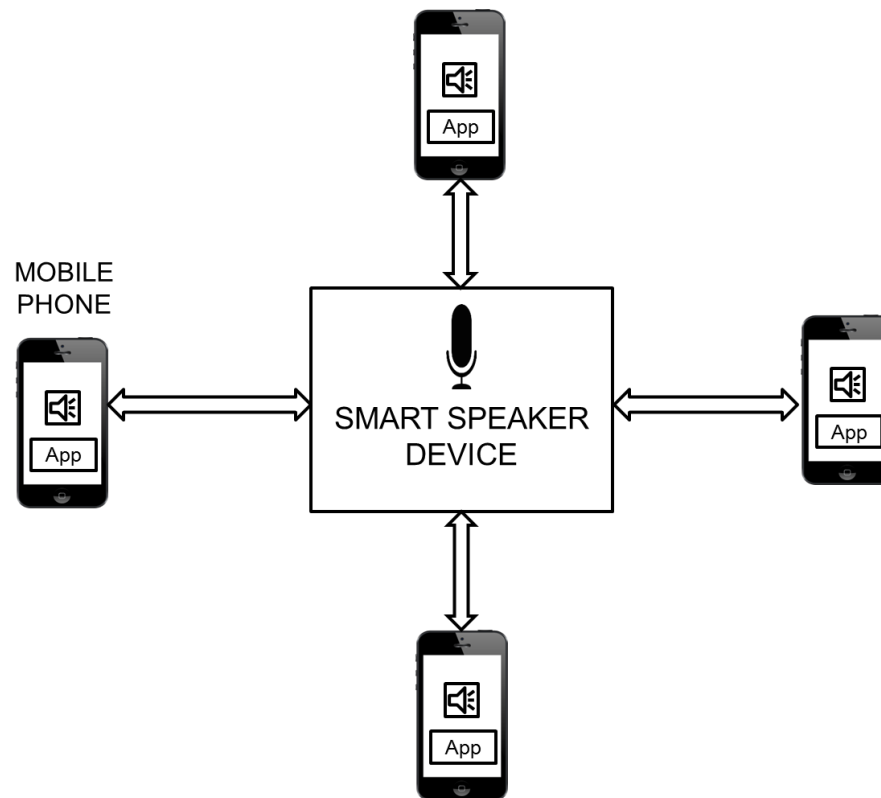


FIG. 2: Smart speaker system with player identification for multiplayer games