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STYLUS WITH A BUZZER DESIGN TO NOTICE A USER ON ITS OWN

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Stylus with a Buzzer design to notice a user on its own

The Stylus buzzer design installs a buzzer in the capacitive pen. The pen makes a sound when it is away from a tablet for a while. This function helps a user to find his or her pen back. The sound will stop if the button on the pen is clicked. This invention provides the benefit helping users to find their pen no matter where it is, and manage the risk the pen may go missing.

The previous design does not have such a mechanism. As a result, when the stylus is away from the tablet, the stylus won't notify users where it is on its own. Compared with previous design, this disclosure solves the issue when a user misplaces its stylus.

The design concept of the inner structure is to install buzzer and Hall Effect sensor in the capacitive pen. The magnets in a tablet will trigger the Hall Effect sensor in order to shut the sensor down. The Hall Effect sensor provides signal to the buzzer. The buzzer stops working. In contrast, the buzzer will work when the Hall Effect sensor is on. The Hall Effect sensor is on when the stylus is away from the tablet.

The algorithm is dependent on where the stylus is. When stylus is away from tablet, the buzzer works because the Hall Effect sensor is not receiving a signal. The buzzer will start to work around 1 to 3 minutes when it is not on a tablet. The buzzer keeps working until the user finds it. When the user clicks the button on the pen, the pen will stop making noise.
There are the advantages when a designer uses this:

1) Reminding a user of his stylus is away from the tablet. It helps users to find its stylus.
2) Manage the risk when the stylus goes missing.

**Disclosed by Harris Tsai, Jerry Ni and Mark Huang, HP Inc.**