PaperTab goes on show as flexible paper-thin tablet (w/ video)

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School of Computing professor Roel Vertegaal is working with Intel and Plastic Logic to develop a paper-thin, flexible computer tablet.

(Phys.org)—Call it the paper tablet. Or flexible e-paper touchscreen. Or an all in one computing experience made up of a cluster of papery, tablet screens, each behaving like an app. However you look at the PaperTab, it is difficult to avoid the word "revolutionary," and the prototype was Tuesday's talk at the Consumer Electronics Show in Las Vegas.

PaperTab is,a 10.7 inch, e-ink, flexible touchscreen display powered by an Intel Core i5 processor. The tablet looks and feels like a sheet of paper. Its "bendiness" delivers durability and also interactions, as by bending the sides, one can flip through pages.

When a PaperTab is placed outside of reaching distance it reverts to a thumbnail overview of a document, as one would see icons on a PC. Then, when picked up or touched, the PaperTab returns to a full screen page view. The concept of a PaperTab as not just a bendable screen but a device that promises a full computer experience becomes clear in the device's position awareness of other PaperTabs. Multiple PaperTabs work with each other. Pushing two PaperTabs together results in an extended app across the two screens. A user can move pictures between screens. Tapping one tablet with content can send it to a waiting document in another.

The user can send a photo by tapping one PaperTab showing a draft e-mail with the other PaperTab showing the photo. The photo is then automatically attached to the draft e-mail. The email is sent either by placing the PaperTab in an out tray or by bending the top corner of the display, according to a PaperTab release.

The concept extends to having numerous PaperTabs on a table with each tablet representing a single app—browser, e-mail, calculator—and in turn becoming one's computer.

The collaborative thinkers behind the PaperTab are a team at Canada's Queen's University who worked on it in collaboration with Intel Labs and Plastic Logic . The latter is a plastic electronics company founded by researchers at Cambridge University. Plastic Logic developed the plastic transistor technology in PaperTab.

"Using several PaperTabs makes it much easier to work with multiple

documents," said Roel Vertegaal, Director of Queen's University's Human Media Lab.

This is a prototype, nonetheless, with no word on when it might be brought to commercialization. Whether this might materialize in the form of a flexible tablet screen or a full-blown new computing paradigm is not certain. An Intel researcher, though, is fully optimistic: "Within five to ten years, most computers, from ultra-notebooks to tablets, will look and feel just like these sheets of printed color paper," said Ryan Brotman, Research Scientist at Intel.

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