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MIT Prof Shows Off Robot Dogs, Wallet Computers, Wearable Tech

· By Jose Fermoso
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MIT Media Lab Associate Professor Ted Selker loves objects that are easy to handle and hates the user interface of many modern cell phones. This is why he was a perfect person to talk about the future of human interfaces in mobile systems at today's Mobile Future conference.

Professor Selker, who gained worldwide notoriety with his creation of the IBM notebook's eraser-head cursor button, emphasized that any new tech in cell phones (or any new hardware) needs to understand the chaotic lifestyle of humans. They also need to pay attention to the little things that we like. For example, if we like riding superfast motorcycles, there should be a safety gadget with an accelometer on the helmet that gives cars a better visual a few moments before the bike is about to turn (see pic below). Since we like to be touched, a necklace (right) that provides conforting sensations, massages through charging pulsations, or can change the nearby temperature would be very useful.

Basically, he doesn't think that current designers immerse themselves in their creations as much as they should, and proved his point by trying on or playing with all of the gadgets he brought with him.

A fluffy stuffed dog from the MIT Media Lab is not just any fluffy dog. A part of his research into Visual Attentive Interfaces, the dog answers to the individual movements of his owner based on eye contact. Because eyes are scanning devices, and are a part of the social commentary between humans (and animals too), we should expect a variation of this tech in gadgets like cell phones, and will 'drive attentive interfaces' that become more personal and useful.

With the help of the chipset on top of his head and other circuits embedded within, this dog started barking whenever Prof. Selker put on his glasses and looked at him. When he put them down or looked away, the dog didn't pay any attention to him. This resulted in a slightly funny gag when the Prof. barked softly and the toy jumped from the podium.

Two of the Prof.'s preferred UI insights into consumer gadgets are usually not followed by manufacturers: A) gadgets that allow you to perform a task in a shorter amount of time and B) interfaces that are somewhat invisible. For the first, he noted that shortness is almost always sabotaged by functional blunders (everyone immediately nodded and probably thought of the Windows Mobile interface.)
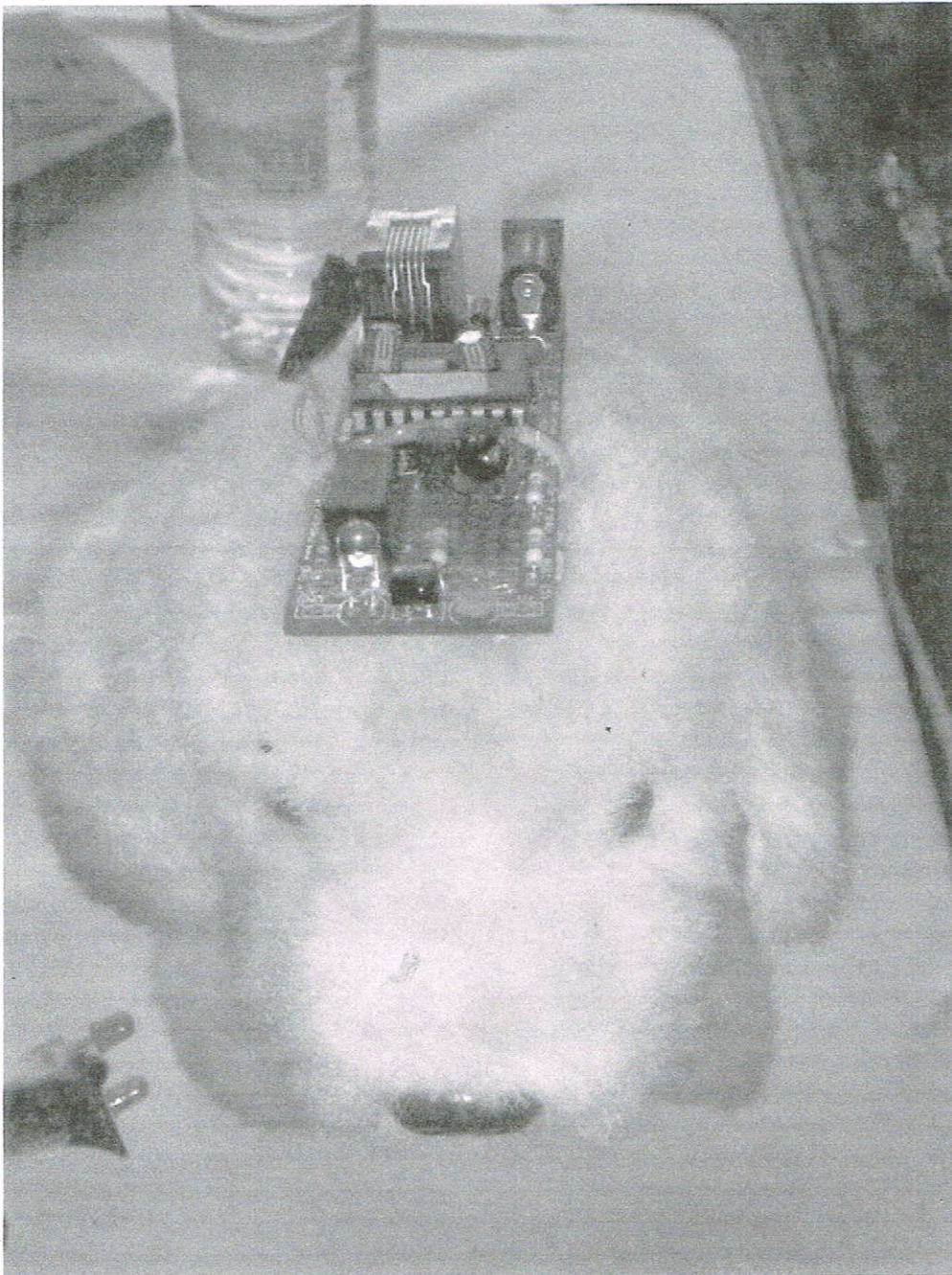
For B), he emphasized his point by passing around two soft basketball-sized balls with mics inside of them to take some questions. With the passing of the balls, he said, the interaction between the speaker and the one asking the question becomes much more personal, and it forces people who might jump in to wait until they have the ball fully within their hands. It structures the meeting better, and the visual is just more interesting.

The ProRider Helmet is part of the embedded systems research by the MIT Media Lab. Almost all of these devices take something that is useful and necessary and make it slightly better. When a rider moves his head to the left, the lights on the back of the helmet will go off towards the side he is moving. Only a few head nudges would create a safer gadget for the user.

It can also play audio files, records speech with a built-in mic (this would be useful for the mobile blogger who gets ideas for the next day's posts). It also includes Bluetooth, built-in GPS, and recognizes potentially dangerous noises such as a cop's siren or a wailing pedestrian.

However, one of the problems with this one is that several laws prohibit any radios on the helmet, so we'll have to wait for this one for awhile.

Below you can see the wooden, tough, extremely simple prototype of the very first OLPC computer (from about 1996), developed in the MIT Media Lab and later pursued fully by Selker colleague Nicholas Negroponte. I pushed it around a little bit, and thankfully, it did not have any super-tiny green keys that I can't use.
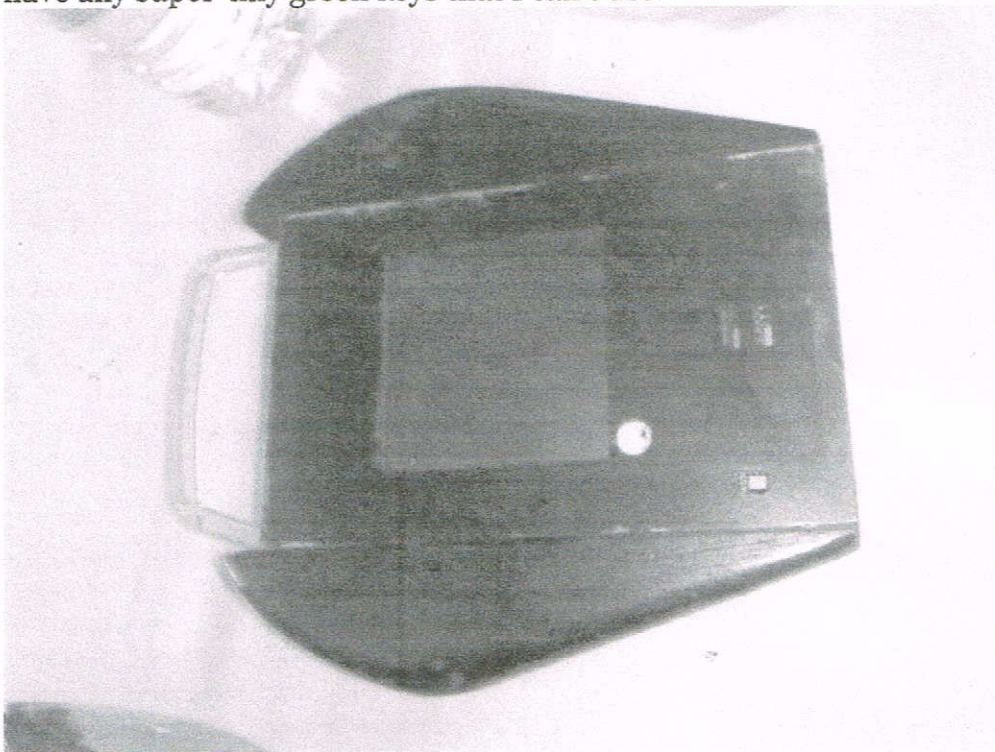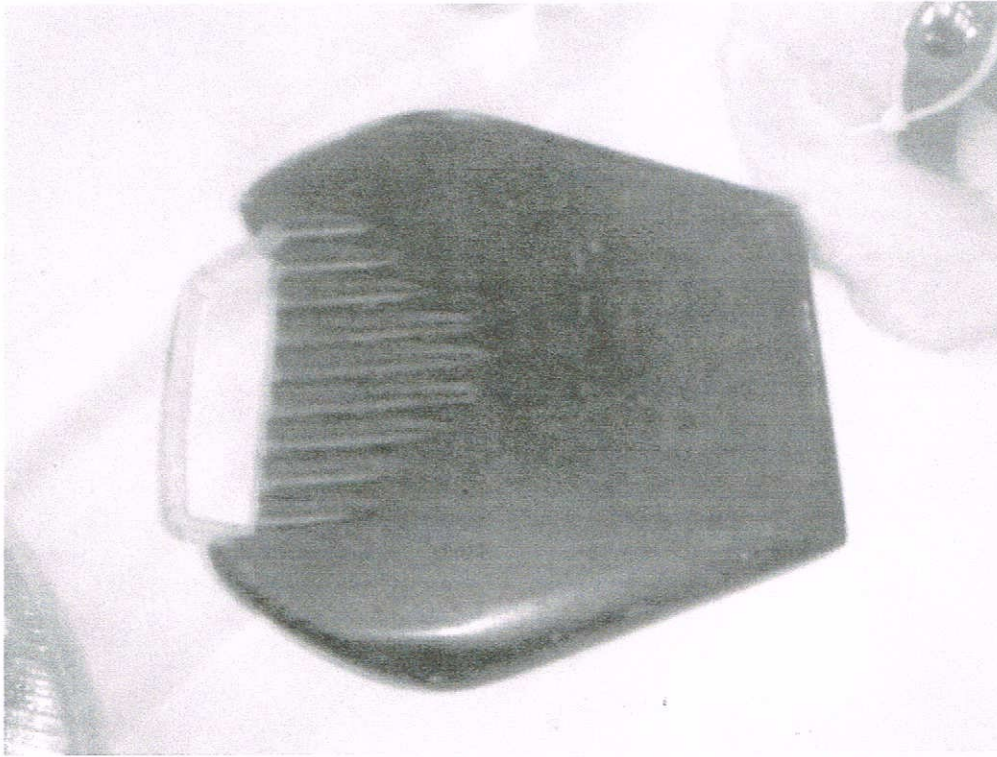
The wallet below was one of the first prototypes that Prof. Selker came up with (as an IBM fellow), and it was proposed to the U.S. government as a better, safer, trackable alternative to regular passports (this was before the RFID tags of recent years). It included a cryptograph to prevent forgery, and the inlay had to be 'mechanically reinforced to protect the inlaid chip and antenna.'

They ultimately did not choose this design. However, smart identification and automated cataloguing were influenced by these types of inventions.