

CeBIT 2005: 'Wearable Hub' for Communications in the Home

March 16 2005



The day isn't far off when it will be possible to control all home communications and automation systems by using a single wearable device that recognizes voice commands. Siemens developed such a small multi-talented communications device. It can be worn like a badge or pin on an article of clothing. The commands are transmitted via the Bluetooth short-range digital radio standard to a central home communications server. The server is equipped with voice recognition software, which converts the words into unambiguous commands for the

hooked-up systems.

The user activates the “badge” with the push of a button and can then issue voice commands from any place in the home. A user can, for example, control the intercom system of a house or apartment and communicate with a visitor standing at the front door. Via voice command, the user can instruct the master locking system to open the door. The device can also be used to accept telephone calls and conduct phone conversations over a loudspeaker. A connection with an e-mail inbox on a PC is also envisioned. The voice recognition software reads incoming e-mails and uses a computerized voice to recite an e-mail’s text content to the user.

And there’s even a second variant of the communications wonder that’s worn around the neck. Both of the devices can replace a headset, which can become uncomfortable to wear on an everyday basis. Siemens developed a special acoustic design that makes it possible to place a device’s microphone and speaker close to each other without causing disturbing echo effects. And the design gives the integrated speaker a tone that can be clearly understood.

The server’s voice recognition software was developed by Siemens researchers in Munich and is already being successfully used in the SX1 cell phone. The program is user-independent; i.e. it doesn’t have to be “trained” to recognize the user’s voice. It can recognize 30,000 words, and predefined commands can be spoken. What’s more, the software also recognizes semantically linked words from longer sentences.

In the dealers’ pavilion at CeBIT, Siemens Communications is presenting several functions of the devices, which are still in the testing stage. Visitors can use a voice command to turn a lamp on and off, for example, or to open and close a door.

Citation: CeBIT 2005: 'Wearable Hub' for Communications in the Home (2005, March 16)
retrieved 10 December 2023 from <https://phys.org/news/2005-03-cebit-wearable-hub-home.html>

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