CELLULAR SQUIRREL

WE HAVE A LOVE-HATE RELATIONSHIP WITH OUR TELEPHONES: WE CAN'T LIVE WITHOUT THEM, BUT THEY ANNOY US TO NO END—ESPECIALLY WHEN THEY INTERRUPT US AT THE MOST INOPPORTUNE TIMES.

To address this dilemma, recent PhD recipient Stefan Marti, working with Chris Schmandt in the Lab's Speech Interface group, has developed the Cellular Squirrel—an autonomous interactive intermediary to manage telephone interactions.

"Humans are experts in social interactions, devices are not," says Marti. "But the squirrel can send out readable social cues, such as gaze and gesture, to alert in a subtle and non-annoying way—to give human-like social intelligence to our telephone agents."

"We now have agents to filter out our overwhelming number of communications," adds Schmandt. "But the problem is that we operate in physical reality, and these agents operate in cyberspace. How do I know that my agent is working? And how do I have a satisfying interaction? We thought the answer might be to give the agent a physical presence—to create a personal companion—a cute stuffed animal that can signal an incoming call by a simple movement."

The squirrel (which has been a parrot and a rabbit in earlier prototypes) is a small, wireless, Bluetooth-enabled, robotic animal that actively mediates between a telephone caller, the recipient of the call, and anyone in the room with the recipient. Sporting a fully digital link for audio and data, it is equipped with a custom-made skeleton, actuators, and data and audio transceivers. While future models may be controlled directly by a cell phone—or may in fact be a cell phone—this prototype is operated by a computer-controlled, remote "brain."

The social interaction takes place at two levels: first, by the animal's subtle physical movements, which gently signal to everyone present that a call is coming in; and second, by engaging in spoken interaction with both the user and the caller in real time. A simple squeeze of its paw can either turn the squirrel into telephone mode, or can divert the call to voice mail.

Sensing devices enable the squirrel to detect and analyze conversation. Then, aided by caller ID, it can evaluate the importance of an incoming call to determine whether it is appropriate to interrupt. Alternatively, it can suggest leaving a voice instant message, or can just let the call go to voice mail.

"This is a real improvement over placing my phone on vibrate," says Schmandt, "because it gives both you and the other people in the room a chance to interact socially —to negotiate—with the communication device."

In the end, it's all about improved social interaction and politeness. Miss Manners would be pleased.

To learn more, visit
http://www.cellularsquirrel.com