

FUTURE BYTES

Abasoft introduces the Robot Companion

by Tom Atwood

While many robots are more mechanics than software, Abasoft's Talking Desktop and Robot Companion are just the opposite. These two offerings harness the computing power of your PC to provide artificial intelligence (AI), speech recognition, environment interaction and loads of opportunity for customization. It may be just the solution for those who want more brain than brawn from their robots.



TALKING DESKTOP

You may often have spoken to your computer, but how many times did it talk back? Enter the world of Talking Desktop from Abasoft—a Panama City Beach, FL, company that specializes in speech recognition and AI software.

Abasoft started with Version 1.0 of Talking Desktop back when Microsoft 2000 was making inroads and speech recognition was still a hope for the future. Back then, it was their vision to keep on the forefront of speech recognition, and late 2009, the company will release Version 6.0 with even greater speech capabilities and more ways in which the software can interact with its user.

With a 100,000-word vocabulary and an unlimited number of words to be added by the user, Talking Desktop can be used to create dialogues to interact with its user, but it is more than that. The software is designed to take command of your computer, and users can verbally direct it to search the Web, dictate letters, read the news from your favorite sites, remind you of your schedule, and even recognize when you have entered the room or have fallen silent.

By utilizing the built-in microphone, Talking Desktop can "sense" when someone has entered the room and can call out your name and tell you the time. If you are using the computer and then stop for a period, it can ask if you are OK or want to continue to work. The software comes with two built-in avatars, Jessica and Mary, but users can add different text-to-speech voices that meet the SAPI 5 standard. The vendors of SAPI 5 include Cepstral, AT&T natural voice and Neospeech.

Not surprisingly, Talking Desktop has been adopted by those with disabilities and those who have difficulties with the tactile manipulation required for typing. By using a headset and microphone, they can dictate letters, and by assigning words to specific commands such as Internet searches, they can call up their favorite websites to check on news, weather or stock quotes. Talking Desktop can also be synched to your calendar to remind you of events, when to take medicine or give simple reminders about birthdays, anniversaries, or just when you need a compliment at a certain time of day. The Talking Desktop Version 6 costs \$98 and is available as a download and as a CD.

ROBOT COMPANION

Building on the development success of Talking Desktop, Abasoft has been working on The Robot Companion—a marriage of robotics and computing that provides hobbyists with an AI robotic platform that can learn over time as it interacts with its environment via audio, visual and tactile cues.

The Robot Companion has a camera for vision, two microphones for hearing, and touch sensors for tactile response. It can react verbally with text-to-speech technology and by motion through two servos that provide neck movement. The AI software will allow the Robot Companion to grow as it asks questions and is given answers by its user. For example, if it hears a dog bark, it may ask, "What was that?," and it registers that noise and the answer: "Ralph, the dog." The next time it hears the dog bark, it may respond with, "That's Ralph, the dog."

Users will be able to upgrade the system by adding servos, new microphones, cameras and up to eight touch sensors. They will also be able to customize the look of the Robot Companion by altering its shell, electronics positioning and the length of the neck, torso and base. We look forward to a 2010 release of this remarkable innovation.

Editor's note: These applications resonate to the future of robotics. If you implement one of these packages in your own robot project, we'd love to share your progress with our readers; email us at toma@botmag.com. ©

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Links

Robot Companion, www.1Robotcompanion.com
Talking Desktop Software, www.talkingdesktop.com, (850) 819-6711

For more information, please see our source guide on page 89.

