

How Virtual Agents Work


Sprint's Advanced Technology Lab in Burlingame, Calif., continues to develop a Virtual Agent, which is an interactive personal assistant designed to help users manage communications, schedules, and household tasks. The Virtual Agent, currently called "Chase Walker," will appear as a 3-D character—when possible, depending on the communications device you're using—with voice capabilities who can interact with you using many human characteristics. (Headpedal is developing the graphical character.) Chase would be able to communicate with you on any device connected to

Sprint's network, such as a TV, computer, mobile phone, land-line telephone, or PDA (personal digital assistant). Chase, which Sprint could deploy in three to five years, would use a personal database of information about you, voice recognition, and image recognition to meet your day-to-day needs. As Chase interacts with you, he would use a form of artificial intelligence to "learn" by noting new relevant information about you and then making necessary changes to your personal database. Here's how it could work:

1 As you wake up in the morning, Chase uses "multiple arms" to retrieve information from the Internet and your home network. He then greets you on your television with your personal calendar and your personalized newspaper, and he tells you he's started the coffee pot connected to your home network. You ask Chase to download news about a new stock (XYZ Corporation) that you had asked your broker to purchase for you later today. Chase searches the Internet for the information and makes note of the change in your portfolio, automatically adding that ticker symbol. Because Chase knows you're viewing him on the TV, he'll give you the option of viewing complex graphs about XYZ stock while he reads the relevant news stories. If you had been communicating with Chase on your PDA instead, for example, he simply would've read any relevant news stories because he knows your PDA screen couldn't properly display the complex graphics.


2 While you're driving to work, you receive a call from Chase on your mobile phone. Knowing your typical route to work, Chase has linked with the city street department's Web site and alerts you to a road that's closed for repairs up ahead. Chase then suggests an alternate route. As you're turning onto the new route, you realize you neglected to check the sports scores from the night before, and you ask Chase to read you the score from the Giants game. Knowing that it's summer and you live on the West Coast, Chase deduces you mean the San Francisco Giants baseball team, not the New York Giants football team. After Chase returns with the score, you tell him you meant the San Jose Giants minor league baseball team. Chase finds this score and then updates your personal database with this new information.





3 As you're walking from the parking garage to your office, you realize you still haven't received the key e-mail message from your boss, who is out of the office, containing the data for this afternoon's presentation. You contact Chase on your mobile phone and ask him whether the e-mail message has arrived. After he tells you it hasn't, you ask Chase to try contacting your boss through every potential communications option. You then tell Chase to filter out all incoming messages, other than e-mail or phone calls from your boss, so you can work all morning uninterrupted on Plan B for the presentation. Just as you complete Plan B, Chase alerts you that a message from your boss has arrived. (It looks like all your work was a waste, just your luck.)

Then the boss tells you to come up with a new plan for the presentation because his data is no longer relevant. (Maybe your luck is changing after all.) Once you've completed your work, you ask Chase to give you all of the messages he had filtered.



4 After your presentation, you return to your work computer to finish some last-minute tasks before heading home. Chase pops up on the screen, alerting you that the doorbell at your home just rang. You ask Chase to call up your front door security camera, and you realize it's a delivery driver. Through Chase and your home security system, you tell the driver to leave the package inside the front door. You then instruct Chase to deactivate the security system and unlock the front door. You continue watching the delivery driver through your security system's cameras until his task is completed. After he leaves, you instruct Chase to reactivate the security system and relock the door.



5 Once you return home from work, Chase collects the afternoon's relevant news for you, taking special note of the changes in your personal database from earlier in the day. Chase appears on your television, alerting you that XYZ stock lost five points from where your broker purchase it this morning (with the appropriate sad look on his face). He also tells you that the San Jose Giants game is available on Internet radio in one hour, and he asks if you want to listen. You instead ask Chase to replay your favorite soap operas, which he recorded earlier in the day, while you eat dinner. (Hey, it's OK; Chase won't tell your buddies you like soap operas. Just like any good assistant, he knows when to keep quiet, too.)

*Compiled by Kyle Schurman
Graphics & Design by Lori Garris*