

Artificial intelligence and the future of finance

Artificial intelligent agents are about to move beyond the realms of sci-fi horror and into the finance sector, says Graham Whitehead, managing consultant, BowZer Productions.

What we all need as we journey down the Information Super Highway is help. This is at hand, in the form of agents - artificial intelligent agents rather than the James Bond variety. Just like the secretary or personal assistant of days gone by, these new agents will sort, sift and digest the mountains of information that will surround consumers. In the 'Always On Real Time Access' (Aorta) Networks of the future, these agents will pick out relevant information as they autonomously roam around the always-connected network.

'Artificial intelligent agents' is really a misnomer, as they are neither agent, intelligent, nor are they artificial. They are merely small packages of software that exist to help us. There will be little need for Qwerty keyboards in the future, as agents will respond to individual voice commands. Agents will also understand our preferences and likes and dislikes through learning from previous examples. Armed with this knowledge, they seek and sort the information that might be useful to us. This information will then be offered to us for executive decision.

Like all new inventions, people are at a loss as to how or why they would use such agents. I see them being used in everyday situations - for example, when people are watching TV. The agent will appear on the screen to help users digest the estimated 4000 channels of digital TV available to viewers. Rather than reading the programme listings - probably a metre thick book to include information on so many channels - the agent will help select programmes. It will watch what users watch, know what they like and dislike and will seek out programmes that fit these patterns. It might even have a conversation with a diary-agent and automatically record those programmes that are transmitted when users are not at home.

These agents offer great potential for the finance sector. They can help consumers source the best financial options, allowing them to manage their money more efficiently. Equipped with details of present financial products such as interest rates of savings accounts or mortgages or loans, agents will be able to identify the products that best meet a user's requirements. This may be key to breaking down international barriers and allowing consumers to take advantage of low interest rates across the world, for example Japan's two per cent interest rates.

Today we already have avatars - an early variation of agents. Newcastle Building Society has deployed an avatar, created by BT, on its Web site to help visitors with mortgage selection and applications. It presents an animated friendly face that greets Web site customers, asks how it can be of assistance and provides verbal answers to frequently asked questions on financial products.

However, this phenomenon is not restricted to the finance sector. I see agents having many duties, including shopping, TV, music downloads and car purchases. The checks and balances will be derived from the fact that agents will only be responsible for the search and breaking down of information into manageable quantities. Decision-making and ultimate control will remain with the user.

These agents will have faces, bodies and voices, much like Avril on the Newcastle Building Society Web site. Voices will be natural, not the stilted electronic voice that computers always have. Agents will be able to listen and understand, without training your voice to the computer or the computer to your voice. With a little more application the lips can be synchronized to the words being spoken and the whole process becomes very conversational. Relating to these agents will become a simple conversation. And when control is that simple everyone can do it - it will be as natural as talking to another person and the fear associated with 'programming computers' will be a thing of the past.

Agents could even travel with consumers as part of their third generation mobile device. As you walk down the street, they will interrogate the local environment searching for things of interest. For instance, if you have wanted a copy of a particular CD for a while, a bleep and a simple message on the phone will indicate that the shop to the right has a copy available. In the same way it may recognise financial institutions that offer suitable loans or overdrafts and communicate the information as you walk past.

Agents might even be scanning the local area looking for friends and let users know that someone they might like to share a coffee with is nearby, which opens up the possibility of using them as dating agents.

In short these mobile agents will ensure that consumers will live in a world surrounded by information that is specifically tailored to their needs. Computer personalities such as HAL depicted in the film 2001 might not be science fiction for very much longer.