SCIENCE FACT

Graham Oakes finds an unlikely connection between mind reading and life in the data centre.

Graham Oakes: our systems become sense-and-respond networks

Imagine a computer that reads your brain waves and adjusts its behaviour to match your state of mind. That's not so wild. Microsoft just filed a patent on it.

Games companies are exploring ways to use EEG caps (ie, devices to read brain waves) to improve the gaming experience. For example, they might constantly adjust the driving conditions in a racing game to keep you in an adrenaline rush.

In a more serious context, I'm working with a team that's exploring EEG to support medical procedures. It's still advanced research, but it's product development research, not academic research.

This probably seems a long way from the corporate data centre. Most of us are happy when we get our applications to parse each other's XML messages correctly. Brain waves are a long way down the track.

But consider. Many areas of application integration are moving in directions where traditional development paradigms break down. As organisations begin to pull live data from a variety of sources, apply real-time analytics to it and then feed the results back to drive decision making within those same operational systems, people will find that defining business rules gets increasingly tough.

We're moving into a realm where we need to learn our rules on the fly, not define them upfront. This may not be mind reading, but it's close to being the corporate equivalent – our systems become sense-and-respond networks that are constantly learning in real time.

Some systems have dabbled in this – for example, CRM with its champion/challenger approaches to campaign management – but they haven't begun to test the limit yet.

What does this mean for application integration? Here are some thoughts:

● We'll be reconfiguring connections between applications on the fly. What we learn from one set of data may tell us that we need to start accessing other data.

● The separation of development, test and live environments needs to be rethought: some lessons can only be learned in the live world.

● Requirements management will become a much more dynamic concern.

● Even agile development approaches will be challenged: we're talking iterations of hours or minutes to reconfigure systems, not weeks.

This raises many questions for business controls and governance models. How do we keep track of which rule was used to make any given decision, when the rules change every 30 seconds? How do we manage security and change control when we don't have a safe test bed to try out new rules?

Like EEG for games, this is still a long way from the mainstream. But it's on the horizon. Organisations that begin to prepare their approaches, infrastructure and governance to handle it may just be able to drive things a little faster.

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