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Robots on track to bend it like Beckham

Reporter: Brett Evans

TONY JONES: To our feature story tonight and will humanoid robots be able to bend it like Beckham by the year 2050?

A number of the world's top computer engineers certainly think so.

Each year, they organise RoboCup - the world cup of robot soccer - and it's their aim eventually to develop a team that could take on the real thing within four decades.

It shows how rapidly robotics and artificial intelligence are advancing, but are we really any nearer to the world portrayed in films like the recently released *I, Robot*, based on the Isaac Asimov classic?

Shortly, we'll speak to the British scientist they call 'Dr Cyborg', but first, here's Brett Evans on the state of play in robotics.

BRETT EVANS: It's the beautiful game and even the robots are playing.

At RoboCup 2004, held last month in Portugal, Australia had a year almost as bad as David Beckham's.

Though several of our teams made the finals in the four-legged division, Germany won the tournament.

PROFESSOR CLAUDE SAMMUT, UNIVERSITY OF NSW: OK, so on board, there's quite a powerful little computer and its working completely autonomously.

We don't have any control off board.

BRETT EVANS: Professor Claude Sammut is one of Australia's leading experts in robotics and artificial intelligence.

PROFESSOR CLAUDE SAMMUT: This is a really sophisticated robot.

It looks like a toy but it's really one of the most sophisticated robots you can get.

BRETT EVANS: And each year, he and his students at the University of New South Wales take a team to RoboCup for the thrill of competition and the chance to develop their programming skills.

PROFESSOR CLAUDE SAMMUT: When we started with this - I mean, our first time in the competition was in 1999 - the robots were hopeless.

Since then, the robots themselves haven't changed that much, but the performance is dramatically better because as we've learnt how to write the software in a much more clever way.

BRETT EVANS: Even though the science of artificial intelligence is developing rapidly, it's still a long way from supplying the robots of popular imagination.

Through films like *I, Robot* and *The Stepford Wives*, we've grown accustomed to the notion that robots will either enslave us or be our slaves.

Yet at least one leading Australian sci-fi writer thinks the future could be even stranger than fiction.

SEAN McMULLEN, SCIENCE FICTION WRITER: You're looking at basically breeding an alien race that will evolve by itself.

It'll evolve in symbiosis with human beings and they'll develop our civilisation in quite revolutionary directions.

BRETT EVANS: But the question remains, why robot?

Well, the Japanese see a real human need for humanoid robots.

As their population ages, they argue, there will be an increasing demand for robotic carers capable of looking after elderly Japanese.

And it's predicted that these highly sophisticated household appliances could develop one day into sentient beings with minds of their own.

So how far away are these changes?

According to the science fiction writer, they're just around the corner.

SEAN McMULLEN: At the rate at which the industry is evolving, I'd be very surprised if we didn't have something that could really effectively function like a human being within two decades.

BRETT EVANS: The scientist, however, is not so sure.

PROFESSOR CLAUDE SAMMUT: You know, humanoid robots are really, really hard to build.

Right now, they are made out of the kinds of technology we have, which is the sort of electric motors and gears and that kind of stuff.

But to get the power supply to last for a long time and not be recharged all the time, to get the motors to be reliable and quick, to be able to do things with their hands like we do - there are lots

of problems still to be solved.

BRETT EVANS: David Beckham's job, it seems, is safe - for the moment.