

Emotional robots in the spotlight

July 17 2008



Are you feeling okay today? Photo: EPFL

(PhysOrg.com) -- A robot with empathy sounds like the stuff of sci-fi movies, but with the aid of neural networks European researchers are developing robots in tune with our emotions. The tantalising work of the Felix Growing project is grabbing the world's attention.

Felix Growing is developing software empowering robots that can learn when a person is sad, happy or angry.

The learning part is achieved through the use of artificial neural networks, which are well suited to the varied and changing inputs that 'perceptive' robots would be exposed to.

Using cameras and sensors, the very simple robots being built by the researchers – using mostly off-the-shelf parts – can detect different parameters, such as a person's facial expressions, voice, and proximity to

determine emotional state.

The technology pulls together research in robotics, adaptive systems, developmental and comparative psychology, neuroscience and ethology, which is all about human behaviour.

Are you feeling ok?

Much like a human child, the robot learns from experience how to respond to emotions displayed by people around it.

If someone shows fear or cries out in pain, the robot may learn to change its behaviour to appear less threatening, backing away if necessary. If someone cries out in happiness, it may even detect the difference, and one day fine-tune its responses to individuals.

“It's mostly behavioural and contact feedback,” project coordinator Dr Lola Canamero is quoted as saying in a BBC News story on Felix Growing. “Tactile feedback and emotional feedback through positive reinforcement, such as kind words, nice behaviour or helping the robot do something if it is stuck,” she said.

Citation: Emotional robots in the spotlight (2008, July 17) retrieved 1 June 2023 from <https://phys.org/news/2008-07-emotional-robots-spotlight.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--