



The challenge

How do we create a new computer technology that supports long-term relationships between humans and synthetic companions? To date artificial companions have had limited abilities to support long-term, meaningful social interactions with users in real social settings. Whether embodied physically as a robot or as a virtual character on a screen, LIREC will develop and test methods that will allow the companion to perceive, remember and react to human users, thus enabling a new generation of socially aware companions.

LIREC objectives

- LIREC aims to create a new generation of interactive, emotionally intelligent companions that is capable of long-term relationships with humans.
- LIREC focuses on both virtual companions and physical embodiments such as robots.
- LIREC will examine how people react to a familiar companion when it migrates from a robot body into a virtual form, for example on a mobile PDA screen.

Research fields

- Psychology of the human-robot long-term relationships
- Technologies supporting verbal and non verbal communications
- The architecture for autobiographical memory to support believable synthetic companions
- Mechanisms allowing the companion to detect and respond to the user's affective state, motives and intention
- The issues surrounding socially acceptable embodiment
- Ethology of the human-dog relationship as a model for synthetic companions
- Migration of the companion entity into different bodies
- Ethics and privacy issues surrounding long-term relationships with synthetic companions

Partnership

The LIREC project is a collaboration of six universities, two research institutes and two companies spread across seven European countries.

Universities: Queen Mary University London (UK), The University of Hertfordshire (UK), Otto-Friedrich – Universität Bamberg (Germany), Heriot Watt University (UK), Eötvös Loránd University (Hungary), Wrocław University of Technology (Poland)

Research institutes: Swedish Institute of Computer Science (Sweden), Instituto de Engenharia de Sistemas e Computadores, Investigação e Desenvolvimento (Portugal)

Companies: FoAM (Belgium), Cnotinfor Ltd (Portugal)

LIREC ID

LIREC is a collaborative project co-funded by the European Community under the Seventh Framework Programme, Information and Communication Technologies theme.

Title: Living with Robots and intERactive Companions

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Acronym: LIREC

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