CZECH TECHNICAL UNIVERSITY IN PRAGUE

Long-Term Human-Robot Teaming for Robot-Assisted Disaster Response

TRADR

THE TRADR PROJECT

The Teaming for Robot-Assisted Disaster Response project (TRADR) began on November 1, 2013. This is an EU-funded 4-year FP7 Integrated Project, which builds on research and experience from the NIFTi project. Using a proven-in-practice user-centric design methodology, TRADR develops novel S&T for human-robot teams to assist in disaster response efforts, over multiple missions: the novel S&T makes experience persistent.

Various kinds of robots collaborate with human team members to explore the environment and to gather physical samples. Throughout this collaborative effort, TRADR enables the team gradually to develop its understanding of the disaster area over multiple, possibly asynchronous missions (persistent environment models), to improve team members' understanding of how to work in the area (persistent multi-robot action models), and to improve team-work (persistent human-robot teaming). Cases of the use of TRADR include the response to a medium-to-large scale industrial accident by teams consisting of human rescuers and several robots (both on the ground and airborne). TRADR missions will ultimately stretch over several days in increasingly dynamic environments. DFKI is the coordinator of the TRADR consortium, which consists of 12 partners from 6 countries, including 5 universities, 3 research institutes, one industry partner and three end-user organizations – representatives of fire brigades from Germany, Italy and the Netherlands. Eight of the partners have already collaborated very successfully in the NIFTi project.

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CONTACT

CZECH TECHNICAL UNIVERSITY IN PRAGUE

CTU in Prague
Center for Machine Perception

Karlovo namesti 13
121 35 Prague 2
Czech Republic

tel.: +420 224 357 465
e-mail: hlavac@fel.cvut.cz

www.tradr-project.eu