Technical Area:
Common Sense Reasoning and
Intelligent User Interfaces

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Description
One reason why software and robotic agents are helpful for humans is that they can function autonomously (at least partially). Functioning with autonomy in turn requires being context sensitive. One important aspect of context sensitivity is the ability to reason with common sense. Although research has been conducted in this area for years now, artificial common sense reasoning does not seem to be developed far enough to be applied to “real-world” products and applications. Nevertheless, could implementing such capabilities help create better user interfaces and autonomous agents? Could intelligent user interfaces to such entities profit from common sense reasoning methods?

Written Requirement
The written requirement for this area will consist of a 24-hour take-home exam.

Signature: ______________________________     Date: _____________
Reading list

Besides classics like John McCarthy, Marvin Minsky, Ernest Davis, Mark Maybury (intelligent user interfaces), and Jeff Bradshaw (agents), a large portion of the reading list consists of papers and books by people who are working on actual common sense reasoning systems, like Doug Lenat (CYC), Erik Muller (ThoughtTreasure), Push Sing (Openmind Common Sense), and Tim Berners-Lee (Semantic Web). Another chunk of readings are conference papers published by Intelligent User Interfaces (1999 to 2001) and Common Sense 2001. Finally, there are papers that describe efforts to apply some (partial) kind of common sense reasoning to robotic and software agents.

The online version of this reading list contains links to most of the papers, as well as abstracts for most items: http://www.media.mit.edu/~stefanm/generals/


*Openmind Commonsense - Teaching computers the stuff we all know.* Web site, URL http://commonsense.media.mit.edu/


Selected papers from the Intelligent User Interfaces IUI conferences 1999–2001.


