Proposal Status | MAIN

Organization: Pace University New York Campus

Review #5

Proposal Number:	0710790
Performing Organization:	Pace University
NSF Program:	Robust Intelligence
Principal Investigator:	Benjamin, David P
Proposal Title:	Cognitive Robot Schemas: Integrating Perception, Language and Planning in a Mobile Robot
Rating:	Good

REVIEW:

What is the intellectual merit of the proposed activity?

The proposed research investigates a cognitive architecture for integrating robot capabilities. This is an important task. The envisioned architecture will combine capabilities such as perception, vision, and natural language perception and generation; perceptual patterns from vision will be used both to guide motion and to guide search between alternative semantics for utterances. A central strategy is "comprehension through generation", using a world model provided by the Ogre3D gaming engine, which appears novel for the proposed task.

The proposer has strong qualifications for this work, having already performed substantial development.

More is needed to establish the generality of the image schemas.

The work plan gives a major role to learning by chunking and cross-pattern transfer, which aren't emphasized in the proposal. More description is needed for the evaluation. What baseline will be used for comparison?

What are the broader impacts of the proposed activity?

The software will be made publicly available. The project will be conducted as an interdisciplinary collaboration; joint work is already under way. The current project development team includes undergraduate and women. In the long term, systems to enable rich robot behaviors could have substantial interest.

Summary Statement

The proposal explores the integration of Soar with RS in an intergated robot system using predictive vision and using image schemas for

language.

Back to Proposal Status Detail

Download Adobe Acrobat Reader for viewing PDF files

National Science Foundation
4201 Wilson Boulevard, Arlington, Virginia 22230, USA
Tel: 703-292-5111, FIRS: 800-877-8339 | TDD: 703-292-5090

Privacy and Security