PHISH-Nets:
Planning Heuristically In Situated Hybrid Networks

by
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Bachelor of Science EECS
Massachusetts Institute of Technology
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Submitted to the Program in Media Arts and Sciences,
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Abstract

Autonomous characters in interactive story systems are faced with challenges similar to those faced by both symbolic planners and situated-agent architectures. This thesis presents a new architecture based on the Agent Network Architecture developed by Pattie Maes. This new architecture, called PHISH-Nets, is especially well suited for the creation of characters with personality, who must satisfy multiple interacting goals in real-time in an only partially predictable dynamic environment. The algorithm has been used to implement The Big Bad Wolf, an autonomous character in a 3D graphical animated world based on *The Three Little Pigs*. The PHISH-Nets algorithm is explained in detail, and is informally verified in a series of experiments constructed within the graphical world. The results of the experiments are discussed, and limitations of the algorithms are presented along with possible future directions for this work.

Thesis Supervisor: Pattie Maes
Title: Associate Professor of Media Technology

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The following people served as readers for this thesis:

Reader

Joseph Bates
Professor of Computer Science
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Reader

Janet H. Murray, Ph.D.
Senior Research Scientist, MIT Humanities Department
Director, Laboratory for Advanced Technology in the Humanities

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