ROBOT Interpreter

MARTIN C. CARLISLE and KEITH SHOMPER U.S. AIR FORCE ACADEMY

The ROBOT Interpreter is an environment for running programs for the ROBOT computer. It is intended to be a companion teaching device. The ROBOT computer is a simple demonstration of the fetch/execute cycle useful for an introductory or computer literacy course. The ROBOT has simple movement and sensing commands (and a **go to** command to implement looping), which are stored in its thirty-two 8-bit memory locations.

The ROBOT's environment (called a scene) is a square room from 1x1 to 11x11, possibly containing doors. The ROBOT initially begins somewhere inside the room facing in any direction. The interpreter allows for ROBOT programs and scenes to be loaded and saved.

ROBOT Interpreter is freely distributed by the Department of Computer Science at the United States Air Force Academy as a service to the CS education community.

Categories and Subject Descriptors: K.3.2 [Computers and Education]: Computer and Information Science Education – Computer and information science education; I.2.9 [Artificial Intelligence]: Robotics – Commercial robots and applications; Operator interfaces.

General Terms: Experimentation, Languages, Measurement Additional Keywords: Lego Mindstorms, Ada, robots

Authors' address: Department of Computer Science, U.S. Air Force Academy, Colorado Springs, CO 80840. Permission to make digital/hard copy of part of this work for personal or classroom use is granted without fee provided that the copies are not made or distributed for profit or commercial advantage, the copyright notice, the title of the publication, and its date of appear, and notice is given that copying is by permission of the ACM, Inc. To copy otherwise, to republish, to post on servers, or to redistribute to lists, requires prior specific

permission and/or a fee. © 2003 ACM 1531-4278/02/0600-0001 \$5.00

Received June 2002; revised December 2002; accepted December 2002