Mblocks Stigmergic Tags and Algorithims

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***Abstract*— This paper presents the work adding stigmergic tags WOO!, Mesh network communications... etc... to the M-Blocks modular robots. The first M-Blocks described in [?] could pivot about one axis of rotation only. In contrast, the 3D M-blocks can exert on demand both forward and backward**

I. Introduction

THIS is the INTRODUCTION !!! Robots Robots Robots Robots are Grand!!

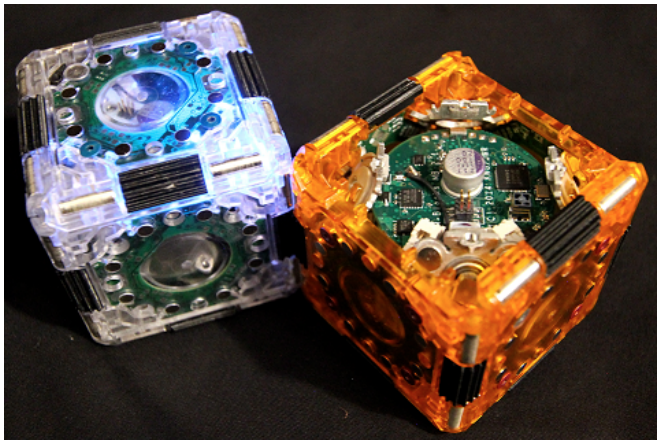

Fig. 1: THis is a ROBOT!!

More Text...Organized... as follows. Section **??** gives an overview of related work that pertains to the 3D M-Blocks system. Section **??** presents the mechanical and electrical design of the Modules. Next, Section **??** presents data characterizing the hardware and the results of experiments with the system. Finally, Section **??** concludes with a short discussion and ideas for future work.

II. Related Work

Modular self-reconfigurable robots are often characterized by their system topology: lattice, chain, or hybrid [**?**]. Most of the systems currently under development including U-Bots [**?**], Roombots [**?**], and SMORES [**?**] utilize a hybrid architecture. The fundamental distinction between hybrid or chain modules and strict lattice systems is that hybrid or chain modules have either fewer connector faces than lattice faces, or these connector faces are located in off-lattice positions. Chain and hybrid systems are typically designed to self-reconfigure using complicated implementations which approximate simpler models, such as the sliding cube model [**?**] or the pivoting cube model [**?**].

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To the best of our knowledge, the 3D M-Blocks are the only self-reconfigurable robots capable of implementing a simple movement model in three dimensions that allows for both independent and lattice-based locomotion.

III. Hardware

Text is supposed to go here!!! Tag technologies are shown in Table **??**.

TABLE I: Comparison of tagging technologies

	Passive	Size
RFID	0	0
QR Code	-1	-50

A. Magnetic Barcodes Overview

Text goes here!

IV. Experiments

A. Tag Characterization Experiments

We did some stuff, wrote it down here...

B. Crystalization Experiments

We did some stuff, wrote it down here...

V. Introduction

We did things... Things are good. Bye!

Acknowledgments

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Supplementary Material

http://youtu.be/y27gUFO6mTA

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