Liza Stark
Major Studio Interaction
MFA Design+Technology

SNAP2TRACE

Explore dynamic points of entry for learning computation and physical computing through the creation of a "soft" I/O board.

Demystification of technology.

// Understanding the basic systems that make up our interaction with the world.

MAIN IDEAS

Materials exploration.

// How you can manipulate everyday materials to create a circuit

// Craft + "Soft" Circuits

MAIN IDEAS

Modular electronic devices as a creative toolkit.

MAIN IDEAS

Design and Evaluation of a Computer Science and Engineering Course for Middle School Girls (Marcu, Kaufman, et al))

Towards a Curriculum for Electronic Textiles in the High School Classroom (Buechley, Eisenberg, and Elumeze)

Computation and Construction Kits: Toward the Next Generation of Tangible Building Media for Children (Buechley, Eisenberg, and Elumeze))

Electronic Computational Textiles and Children's Crafts (Buechley, Eisenberg, and Elumeze)

How Young Children Learn to Program with Sensor, Action, and Logic Blocks (Wyeth)

Lilypad in the Wild (Buechley and Hill)

New Pathways into Robotics (Rusk and Resnick)

Pervasive Fabrication: Making Construction Ubiquitous in Education (Buechley and Eisenberg)

Designing Systems to Design Themselves (Schwelkart and Gross)

Towards a Curriculum for Electronic Textiles in the High School Classroom (Buechley, Eisenberg, and Elumeze)

Toolkit Support for Integrating Physical and Digital Interactions (Klemmer and Landay)

RESEARCH

STEM education

Scalability and scaffolding

Diverse audiences
// novices
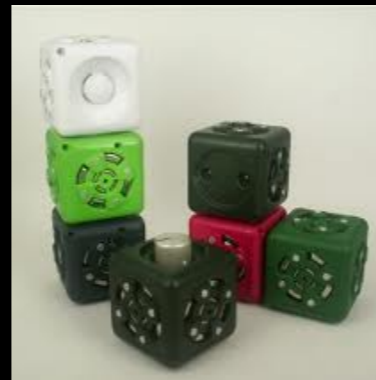// soft circuiteers
// hardcore p compers

CONSIDERATIONS

LEGO Mindstorms

Cubelets

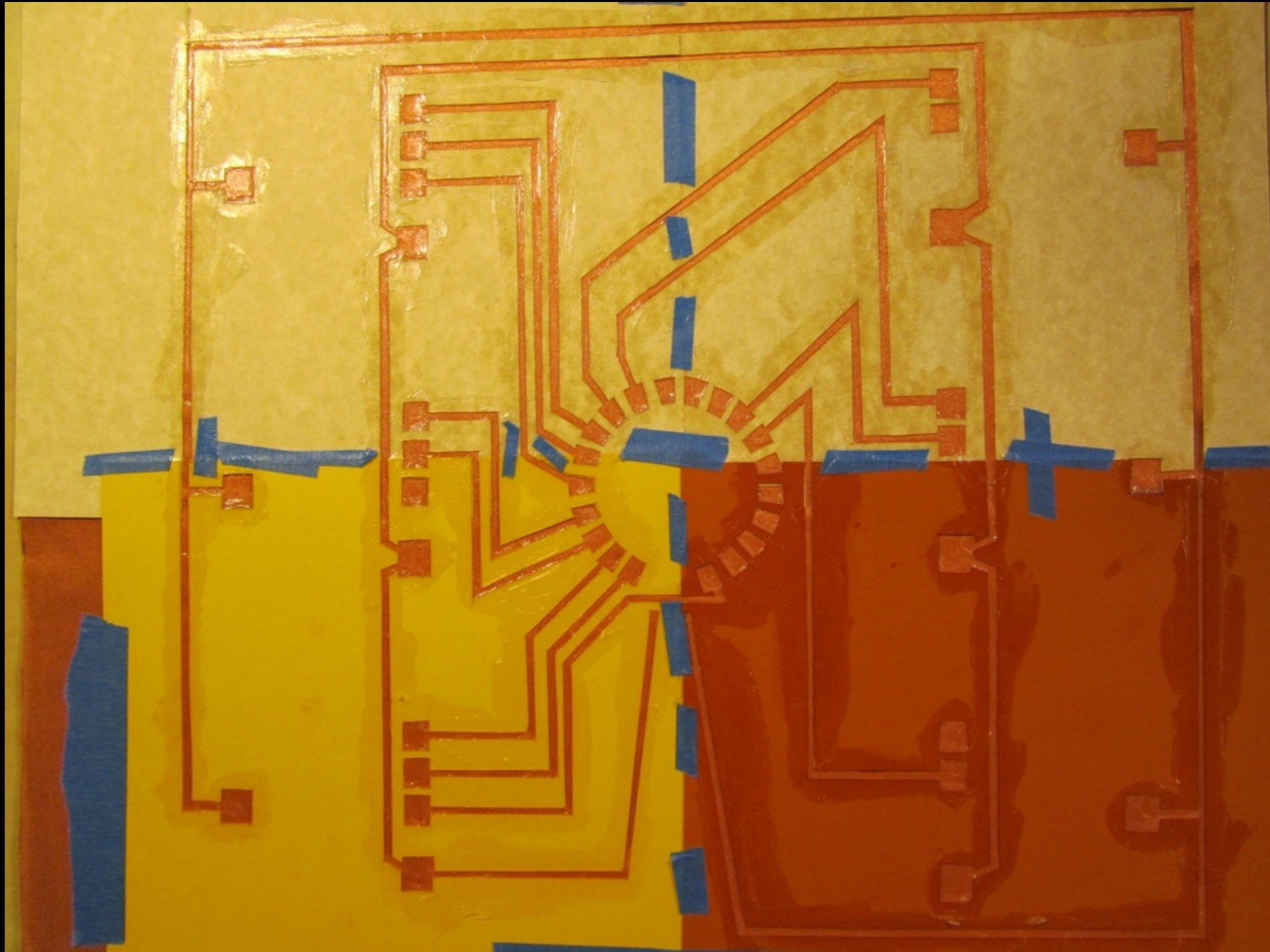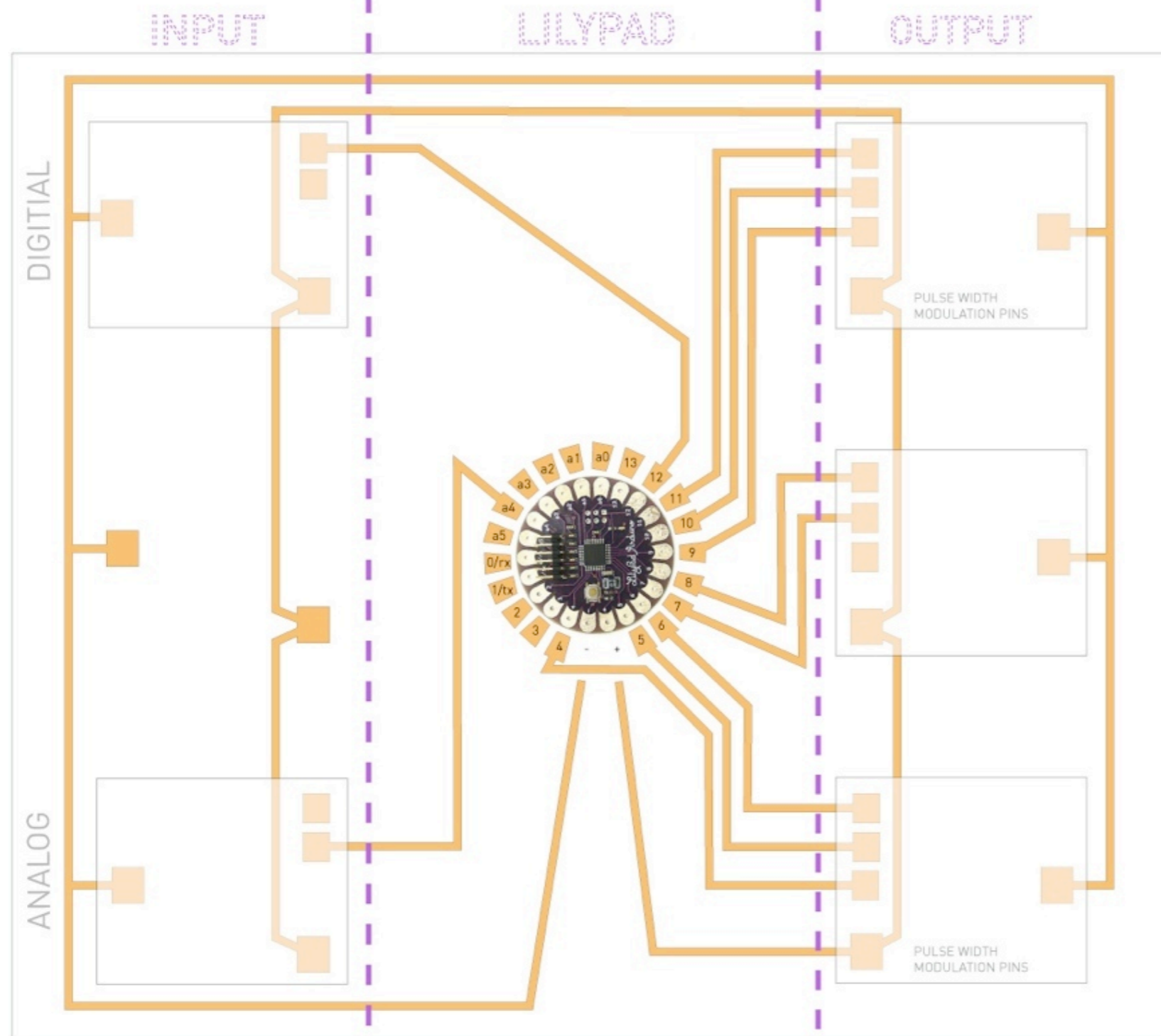littleBits

PRECEDENTS

Scalability
Accessibility
Workability

Creativity
Exploration
Expression

GOALS

MAKING IT

HOW IT WORKS

Further mat development
Ornamentation
More input and output components

Take it off the board
Ability to rearrange components off-mat

Focus on programming
Include buttons that allow users to change interactions

FUTURE ITERATIONS

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THANK YOU!