TANGIBLE MEDIA

BY CINDY CHAN.

CONTENTS

- Tangible Media Group

- Introduction

- Principles

- Projects

- Tangible interaction

- History

- Benefits

- Challenges

- Interactive Learning

- Case Study

- Future

TANGIBLE MEDIA GROUP

They are designing human interfaces that employ physical objects, surfaces, and spaces as tangible embodiments of digital information and processes.

TANGIBLE MEDIA GROUP

- Hiroshi Ishii in Tangible Bits

INTRODUCTION

A tangible user interface (TUI) is a user interface in which a person interacts with digital information through the physical environment.

ART IS EVOLVING

PRINCIPLES

4 Major Design Principles:

- Tangibility and materiality

- Physical embodiment of data

- Bodily interaction

- Embeddedness in real spaces and contexts

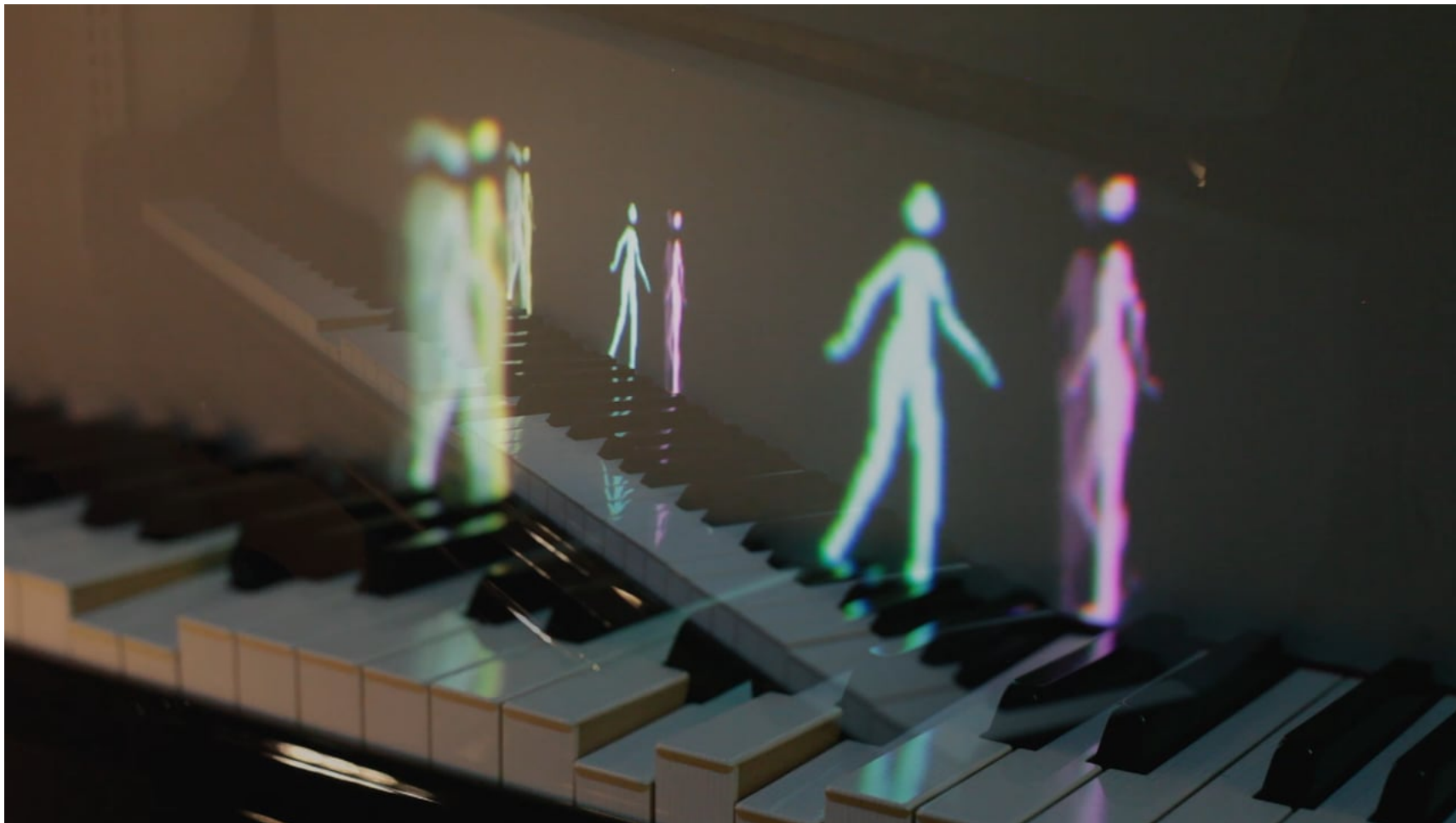By Hornecker and Buur (2006)

PROJECTS

# ZERON: LEVITATED INTERACTION ELEMENT

ZERON

ANDANTE

ANDANTE

TANGIBLE INTERACTION

- Movements of the human body provide direct input into interactive technologies of various kinds

- Both gestures and whole-body movement (eg.dance) can be used to interact within these environments

- These movements can be pure and/or related to physical objects

- Tangibility and materiality of the interface

- Physical embodiment of data

EXAMPLES
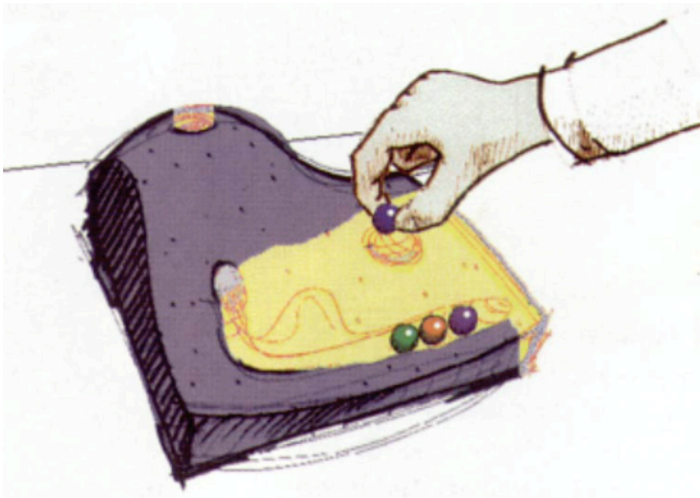
PHYSICAL TELEPRESENCE

inFORM
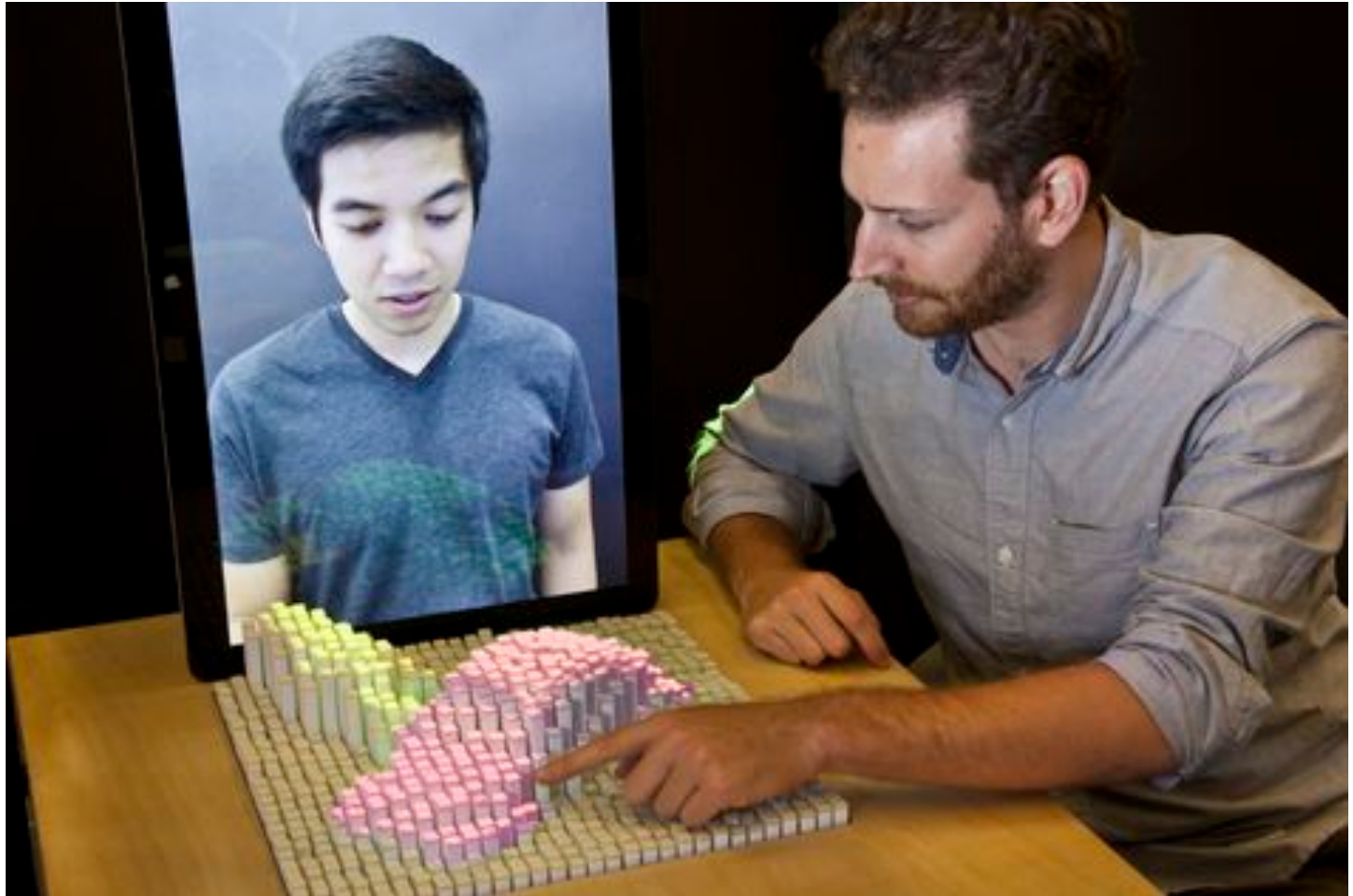
inFORM

HISTORY

MARBLE ANSWERING MACHINE

- Durrell Bishop, 1992, RCA

- Phone call represented by coloured marbles

- Drop marble to play message or call back

SIMON & IMOGEN'S HOUSE

© Durrell Bichop 1992

GRASPABLE USER INTERFACE

- Now known as Tangible User interface

- (Fitzmaurice, Ishii, Buxton, 1995)

- Uses wooden blocks as handles to manipulate digital objects, early form of multi- touch

- Blocks are placed on monitors

Physical Handle (brick)

Virtual Object
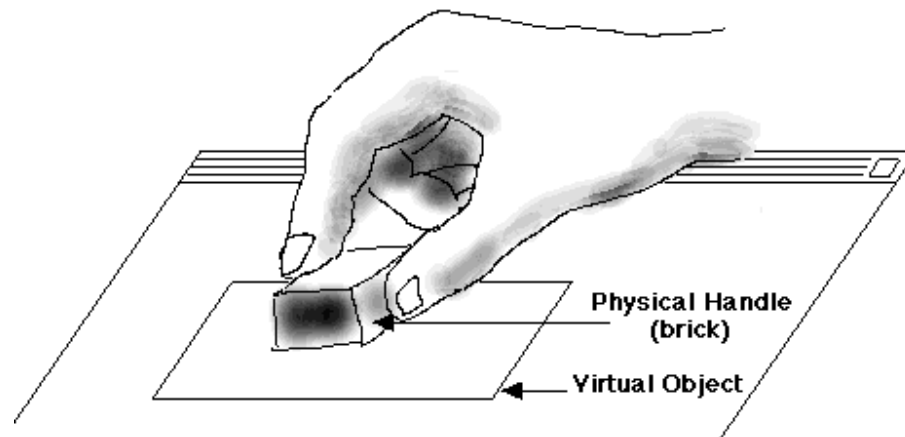
TECHNOLOGY

" We have been very good at putting computers into the environment, but we have been very bad at getting them out of the way."

- Weiser (1991)

BENEFITS OF TANGIBLE UI

- Appropriate for those who have lost their sight or have difficulty with motor control

- Enhance learning – physical learning environments engage all sense and thereby support the child development.

- Support ambient awareness

- Can use tags to trigger digital information

CHALLENGES

- Requires not only designing the digital (software) but also the physical (hardware) and the interrelations between the two (affordances)
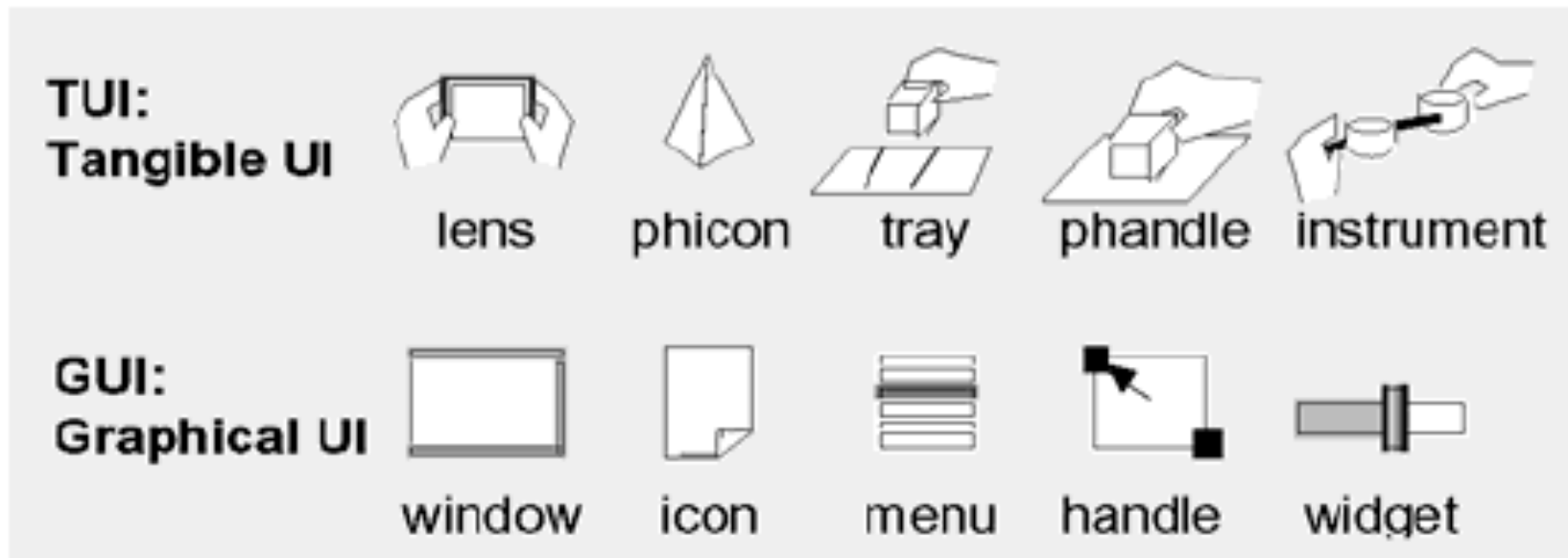
PRIVACY

Intelligent Fridge Scenario

- Knows what products you regularly buy and sources offers and coupons

- Re-orders food when your stock levels are low

INTERACTIVE LEARNING

SIFTEO CUBES

Sifteo Cubes Intelligent Game System (Newest Model)
by Sifteo
★★★★☆ ▾   34 customer reviews | 5 answered questions

Price: $250.14 + $4.84 shipping   ℏ Log In To Amazon For The Best Deal

Only 1 left in stock.
Estimated Delivery Date: Oct. 21 - 26 when you choose Standard at checkout.
Ships from and sold by BrittonsBooks.

- Portable interactive game system for Intelligent Play
- Sifteo Cubes sense each other, and react to your moves
- Four pre-installed games work right out of the box
- Sync to your computer to get more games
- Expand up to 12 cubes to enhance your gameplay (three cubes included)

4 new from $239.00   5 collectible from $79.83

MOTION MATH
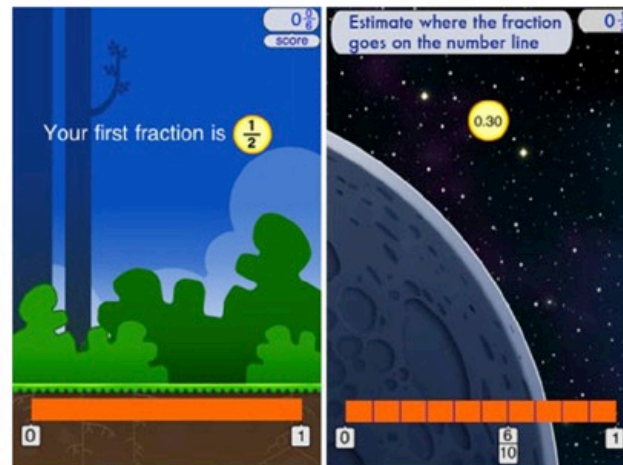
CASE STUDY

An appcessory for early
math concepts

ALTERED WAYS OF DOING

While much of this looks to a future in which physical and digital converge, there is one profession that has been exploring this intersection for some time now:

Museums

EXAMPLE

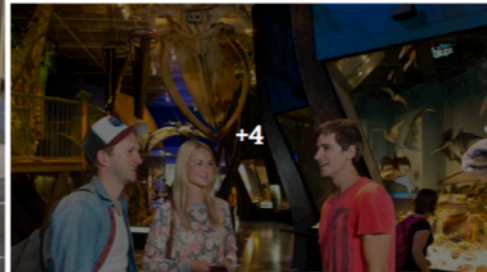**Museum of New Zealand Te Papa Tongarewa**

Te Papa is New Zealand's bold and innovative national museum and a recognised world leader in interactive and visitor-focused museum experiences.

BOOK NOW ⌄   ⊕ Add to my planner

Share this

f

🐦

✉

I WONDER..

What if physical objects could reshape themselves in the same way that pixels do?

What if one device, could reshape into an infinite number of things?