

IAT 320 - D101

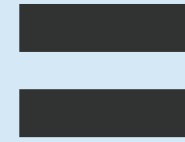
# What would you say?

Anna Koniarska, Alannah Darnel, Ethan Johanson, Heather Kincaid

Digitization  
of type



Mass User  
Adoption

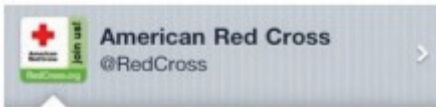


Abundance  
of Content

# Concept

The flexibility of digital text has enabled the masses to create and send messages effortlessly. This has created a society where messages are no longer meaningful; people don't focus on placement or the significance of words, nor how they present them in contexts such as social media or the Internet.

We want to put the participant in an environment where they have to take their time creating messages; this will make them think about what messages are worth creating and sending.



Ryan found two more 4 bottle packs of Dogfish Head's Midas Touch beer.... when we drink we do it right #gettnslizzerd

HootSuite · 2/15/11 11:24 PM



**Boob Seger** @SPERGERS  
@dalailama im a cat



**JaY sTaCk\$** @JDOLLA417  
MeTeOr MaN! HaVeNt SeeN DiS sHyT iN 4 eVa!

# Installation

The installation would be presented at an exhibition and would be linked to a Twitter feed, a medium notorious for users streaming all of their conscious thoughts. It would be interesting to how the change in environment would alter user behaviour.



**Kimberly Johnson**  
@johnk055

Happy Thursday :)



**Sad Guy** @sadguy  
feeling blah



**London**  
@\_LondonAlexis\_

#Titanic was a true love story. I hope for something like that one day.

“ How Long Is This Wikipedia Black Out Thing? Cause I Have A Paper To Write

19 days ago

Toni A



**feral\_pigeon** @feral\_pigeon  
fast walk bob bob bob bob bob bob bob bob bob

2h



**feral\_pigeon** @feral\_pigeon  
puff up and harass other pigeons

3h



**feral\_pigeon** @feral\_pigeon  
peck ... peck peck ... peck peck peck peck peck peck peck ... peck peck peck peck peck ... peck peck peck ... peck peck peck ... peck peck peck peck ...

4h



**feral\_pigeon** @feral\_pigeon  
pigeon feeding frenzy

4h



**feral\_pigeon** @feral\_pigeon  
peck peck peck ...

Reply Retweet Favorite · 0:5h



**@saintnicotine**  
azwan azni

I'm still depressed over the fact that my mom ordered the white iPhone 4S instead of the black one for me



# Precedents

## **Text Rain (1999)**

“Like rain or snow, letters appear to land on participants’ heads and arms. The letters respond to participants’ motions and can be caught, lifted, and then let to fall again. The falling text will ‘land’ on anything darker than a certain threshold, and ‘fall’ whenever the obstacle is removed.” The letters can form words and phrases which compose a poem.

## **Elicit (2001)**

Elicit is an interactive installation where every movement of the viewer produces animated text onscreen.

“Viewers’ motions elicit projected passages, character by character, which in turn elicit variable performances from them. Its software responds to small movements, writing letters onscreen slowly for us to read, or to rapid passersby,”

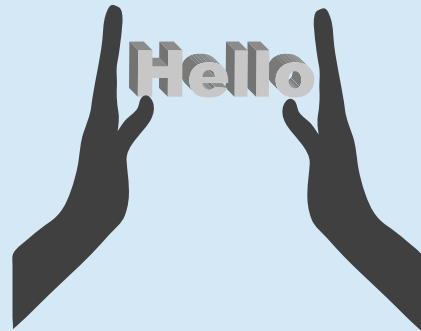
## 1. Pinching



## 2. Clasping



## 3. Guiding



## 4. Awkward guiding



## 5. Pushing



# Iconic Gestures

We started by looking at different hand gestures used around the world and found that one motion may have many different meanings.

In the end we drew inspiration from how we manipulate physical objects such as fridge magnets and blocks.



# Technical Limitations

- Blobs are constantly changing shape, this causes the 'biggest blob' to switch sporadically.
- Getting each letter to stop at separate times.
- We can only track if there was a collision between objects, but not which side it was one.
- Couldn't figure out how to average angles.

A problem has been detected and windows has been shut down to prevent damage to your computer.

DRIVER\_IRQL\_NOT\_LESS\_OR\_EQUAL

If this is the first time you've seen this stop error screen, restart your computer, If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any windows updates you might need.

# Implementation

## \*\*START\*\*

- open Camera w/ metro
- OUTPUT video

## \*\*COLOUR FILTER\*\*

- set min+max rgb thresholds
- INPUT from start
- unpack video feed to channels
- perform threshold operations
- boolean threshold results together (&&)
- OUTPUT black and white thresholded video

## \*\*FIND BLOBS\*\*

- INPUT from COLOUR FILTER
- cv.jit.label
- set charmode on
- use mode 1 to sort by size
- (OPTIONAL) find blobs.bounds, display image
- OUTPUT blobs

## \*\*GET BLOB MOTION\*\*

- INPUT from FIND BLOBS
- @dop == @dval 1 to obtain only largest blob
- get centroids of blob (cv.jit)
- pythagorean calculation of change to x and y reveals velocity vector
- tangent calculation of x and y reveals angle of vector
- blob values averaged over time to create smoother values
- OUTPUT angle + averaged x, y, mass, velocity

## \*\*GESTURE CHECK\*\*

- INPUT from GET BLOB MOTION
- ```
///// CONCEPT /////
```
- check if velocity is greater than threshold
  - check if mass is greater than threshold
  - check if angle is within thresholds

///// END CONCEPT /////

///// IMPLEMENTATION /////

- check if mass is greater than threshold

///// END IMPLEMENTATION/////

- if all conditions are met, OUTPUT TRUE

## \*\*DRAW IMAGE\*\*

- INPUT from STOP IMAGE, Y ADJUST
- set display metro
- import specified image
- set output to clear on new frame
- set usedstdim to specify location in image
- set x and y motion metros
- if NOT stopped, NOT at max value, increase Y by set increment
- if Y ADJUST, set new Y
- if X at bounds value, \*- to x increment
- if NOT stopped, adjust X by increment
- create dstdimstart and dstdimend from new X and Y
- send to matrix
- OUTPUT MATRIX, Y

# Implementation

## \*\*COMPARE IMAGE\*\*

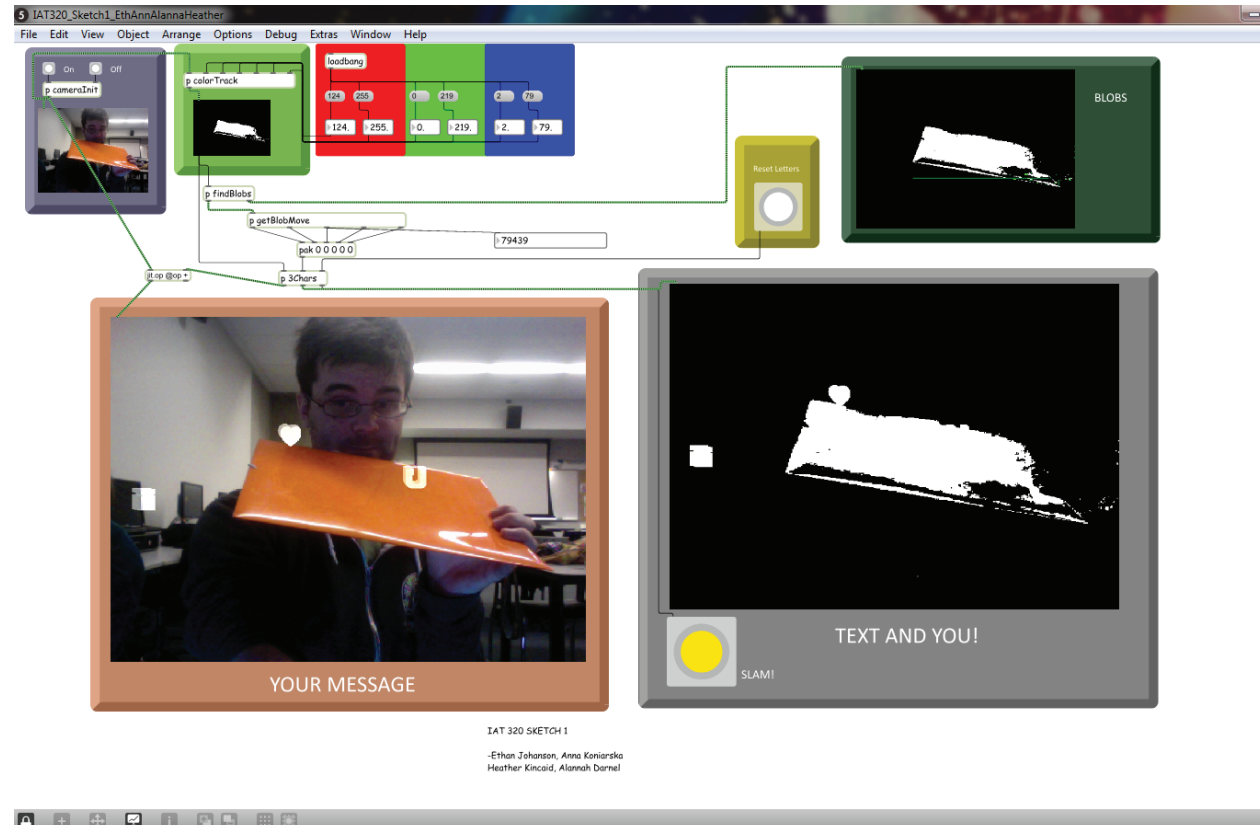
- INPUT from DRAW IMAGE, COLOUR FILTER
- convert DRAW IMAGE Matrix to luma
- (RECOMMENDED) render || boolean of inputs
- multiply both inputs by .5
- add results from previous step together
- threshold for min val 0.8 to discover overlap
- generate blobs from threshold result
- (OPTIONAL) render blob bounds
- OUTPUT Blob Bounds

## \*\*Y ADJUST\*\*

- INPUT from COMPARE IMAGE
- if blob bounds Y exists, OUTPUT bounds Y - ImageHeight

## \*\*STOP IMAGE\*\*

- INPUT from GESTURE CHECK, GET BLOB MOTION
- //////// CONCEPT //////////
- for all image:



-if X ← blobX && X+width → blobX && if Y + height\*2 → blobYstart && Y ← blobYstart:

-OUTPUT STOP image

//////// END CONCEPT //////////

//////// IMPLEMENTATION //////////

-for all image:

-if Y → threshold && if GESTURE CHECK:

-OUTPUT STOP image

//////// END IMPLEMENTATION //////////