Kickstart 2012

Day 2b

Chromakey

Mini-project: Chromakey

Who knows what this is?

Mini-project: Chromakey

Green screen is an example!

Example: Background Subtraction

- Take a picture of a girl and put her on the moon

Example: Background Subtraction

- Make a picture of a girl on the moon.

- her against the wall

- just the wall

Example Solution

- For each pixel in the picture
  - get the corresponding pixel from the background

- Are the colors close?
  - This must be where the girl is NOT!

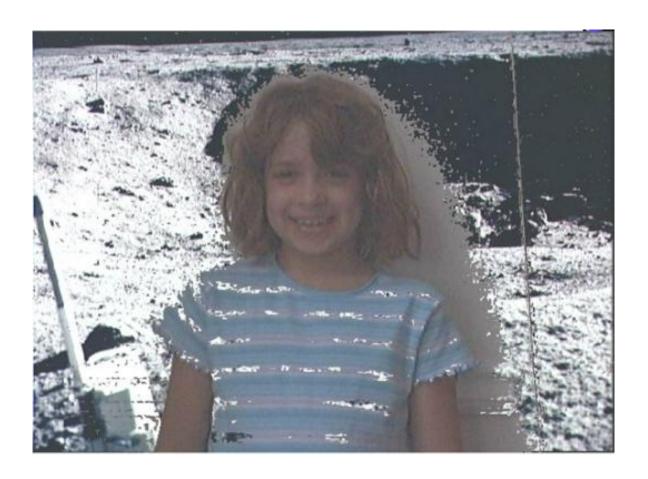 →So replace the original pixel with the moon pixel

picture
(pic)

background
(BG)

moon?
(newBG)

Result…

What happened?

- colors on the shirt ~ the colors of the wall

Chromakey!

- Weathermen!
    - Pose in front of a blue screen
    - Swap all "blue" for the background

Pseudo-code

```
def chromakey(source, background):
  for each y              #do the rows
    for each x              #do the columns
      get source pixel sourcePX
      if color of the sourcePX IS green   #???

        get background pixel's color

        set color of sourcePX to be the background color
```

Which would work to test if a pixel is green?

a) `getGreen(pixel) > 200`

b) `getRed(pixel) + getBlue(pixel) < getGreen(pixel)`

c) `green = makeColor(0, 100, 0)`
   `distance(getColor(pixel), green) < 15`

d) `getGreen(pixel) > 50`

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