

STICKERS, STRAWS, AND AUGMENTED REALITY: THE DIY APPROACH TO PROTOTYPING AR EXPERIENCES

CAITLIN FISHER | ANDREW ROTH

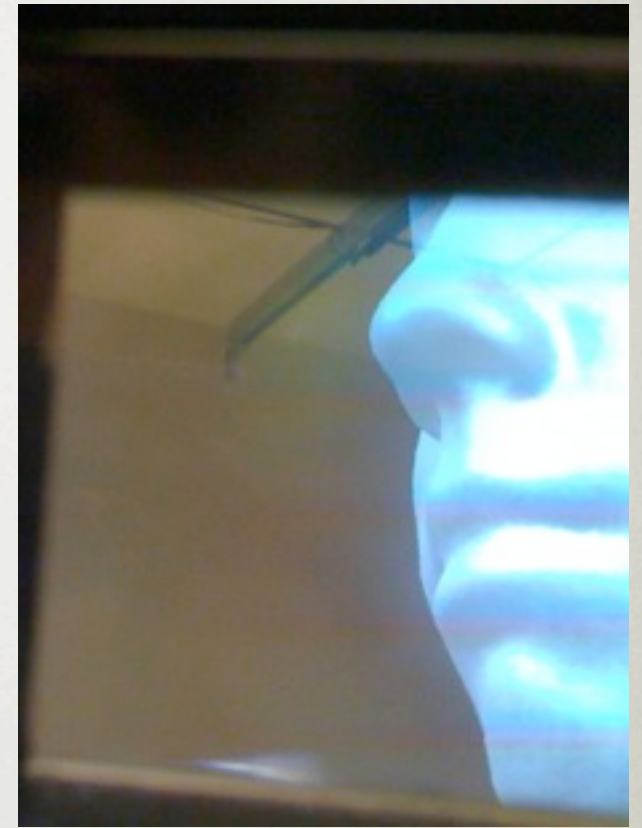
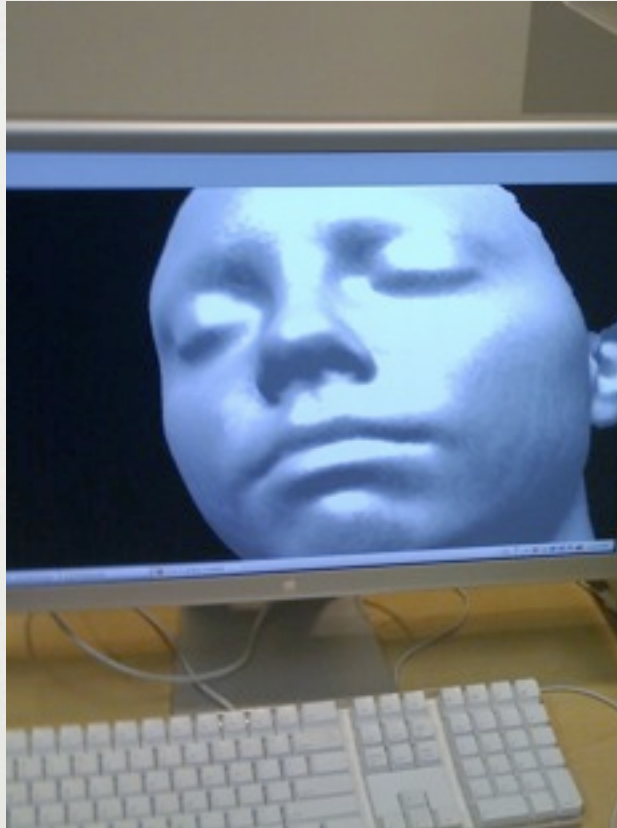
FUTURE CINEMA LAB | AUGMENTED REALITY LAB
AT YORK UNIVERSITY

THE AUGMENTED REALITY LAB AT YORK

❖ yorku.ca/arlab

❖ youtube.com/theearlab



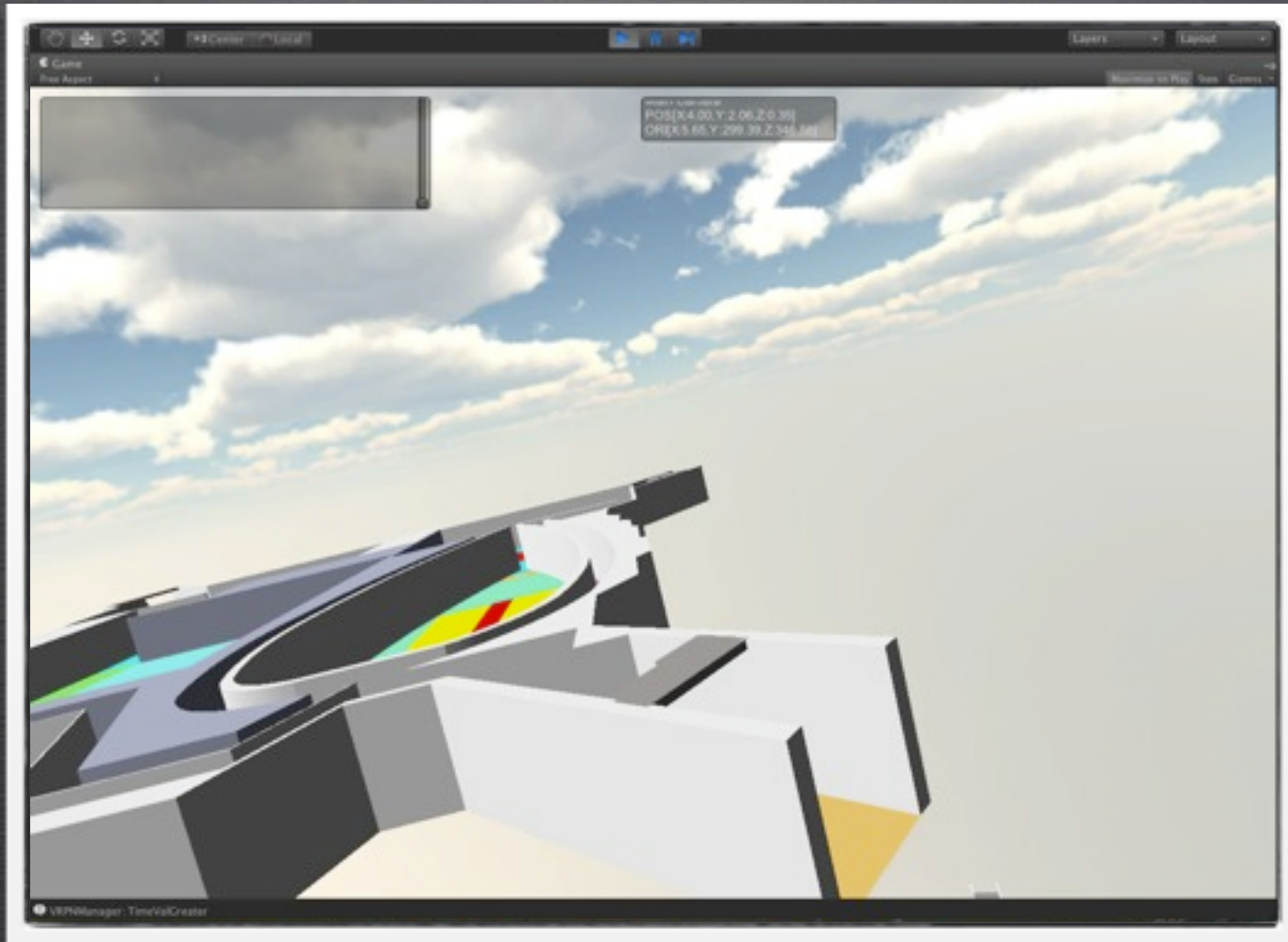


EXAMPLE OF A “MAGIC LENS”

Augmented Reality Lab at York



ARLAB OBJECTS IN MAX/MSP



TUBMAN CENTRE - VRPN LABYRINTH PROJECT

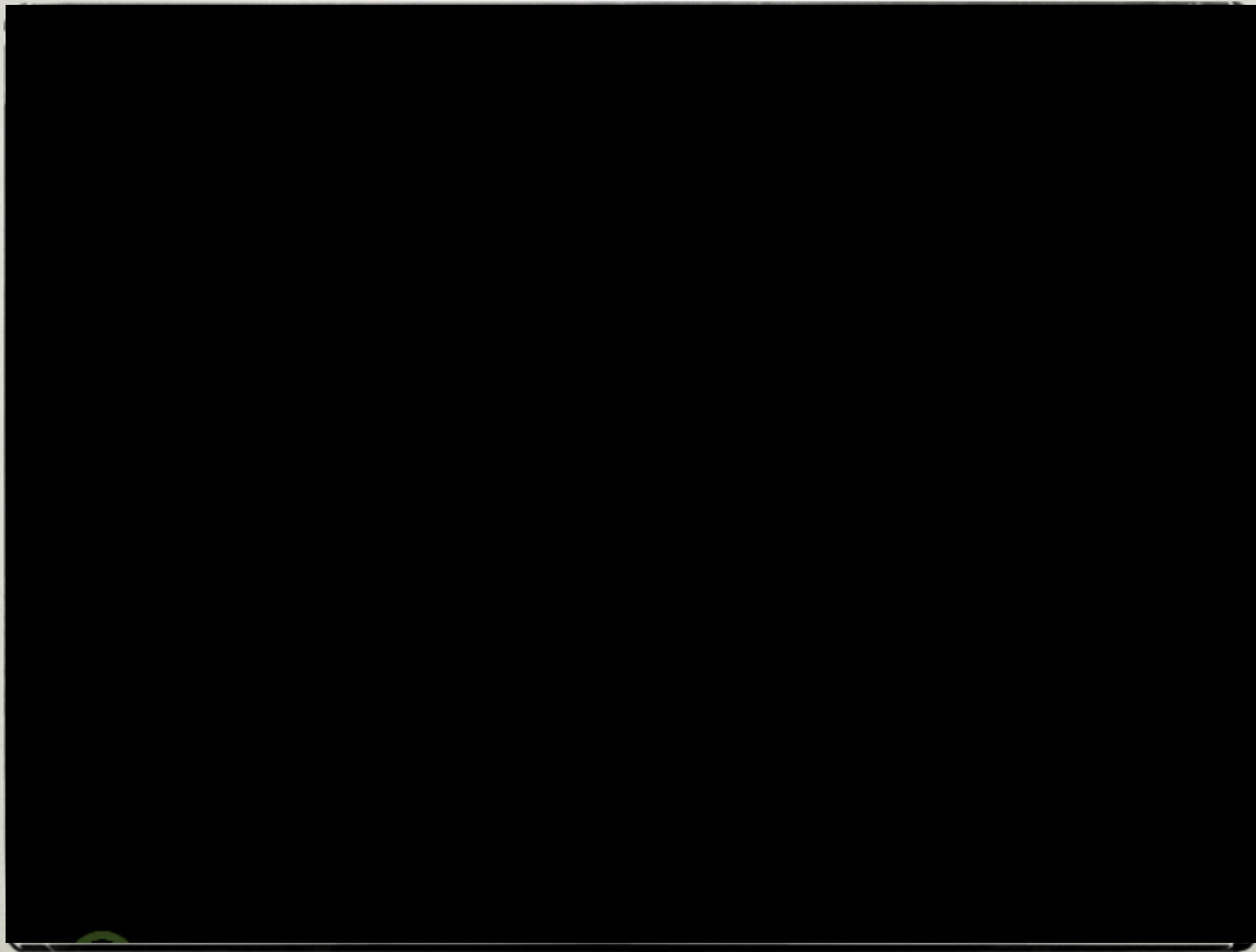


TUBMAN CENTRE - UNDERGROUND RAILROADVUFORIA ON IOS



52 CARD PSYCHO

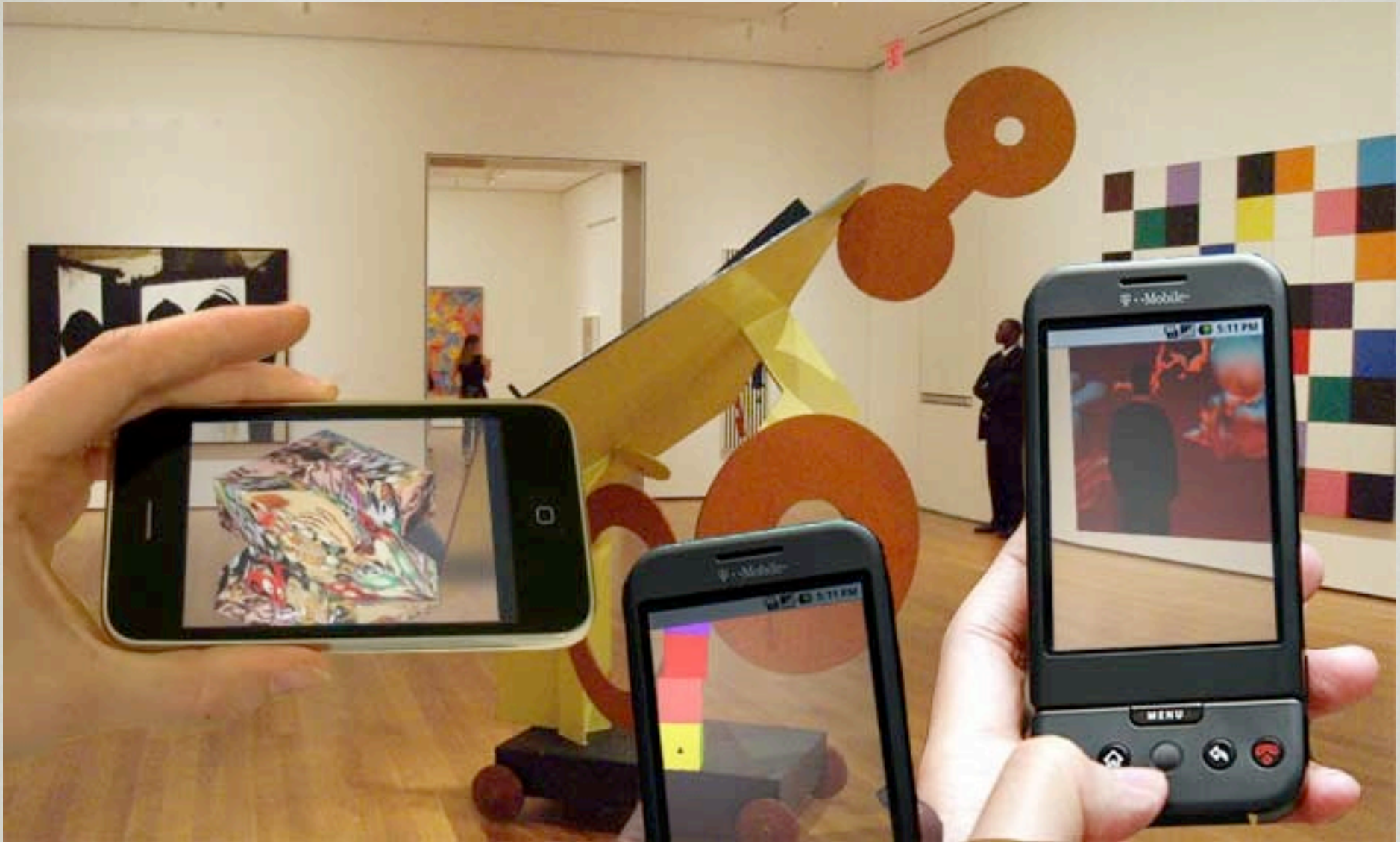
by G. A. Rhodes
www.52cardcinema.com



AR talks about AR
A presentation by G.A.Rhodes
for the Spouting Off Symposium
of performance lectures
@ The School of the Art Institute of Chicago
Feb.24, 2012

AR ON AR

Geoffrey Alan Rhodes



WE AR IN MOMA

Sander Veenhof, Mark Skwarek

<http://wttfuture.wordpress.com/2010/10/09/sander-veenhof-pioneers-augmented-reality-art-at-moma-nyc/>



GREMLIN-INFESTED POSITIONING SYSTEM

Andrew Roth
[http://www.aranarproductions.com/
envision.html](http://www.aranarproductions.com/envision.html)



Street Museum iPhone App

<http://www.creativereview.co.uk/cr-blog/2010/may/streetmuseum-app>

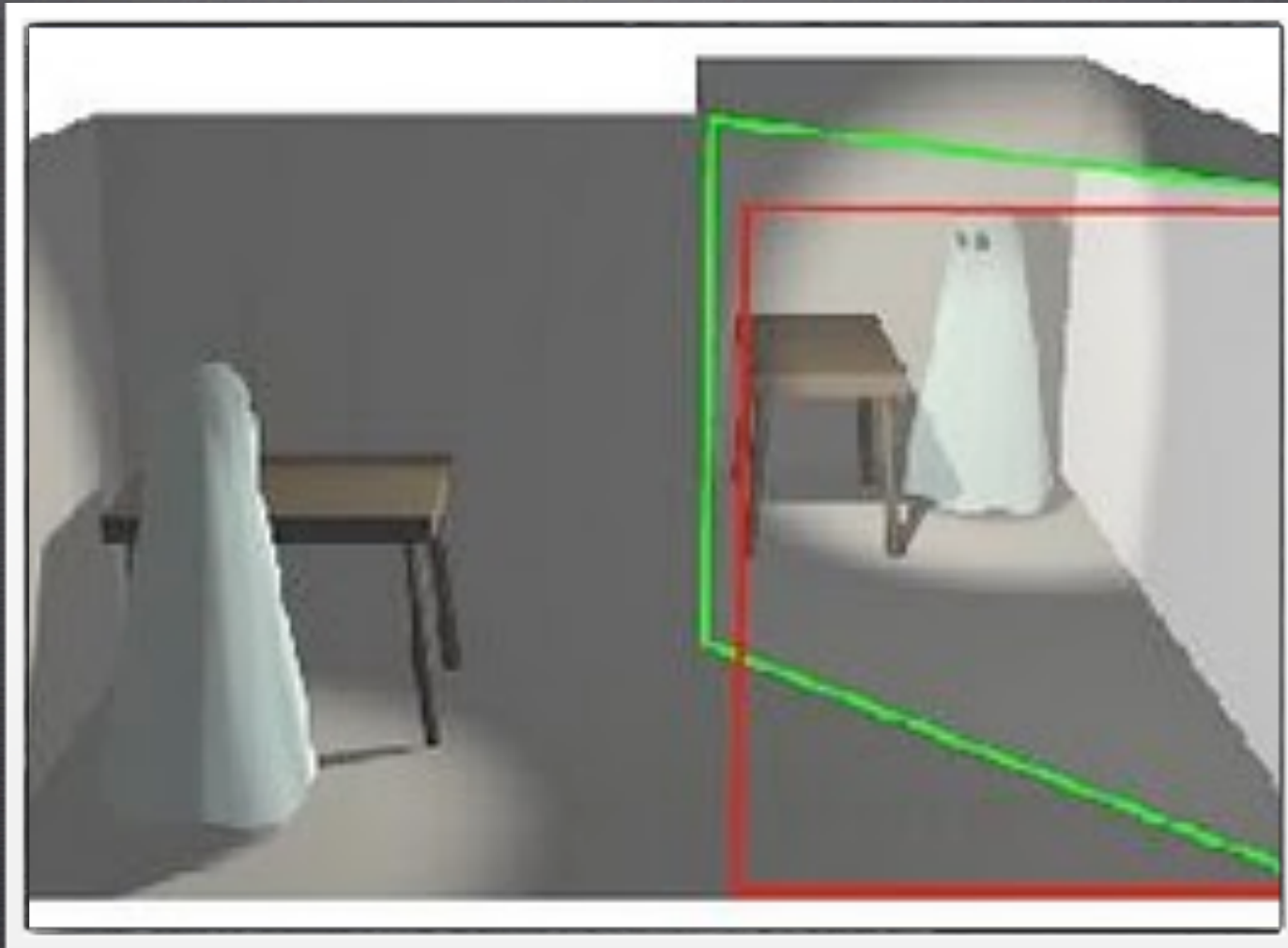


TEXT RAIN

AN EXAMPLE OF A “MAGIC MIRROR”

by Camille Utterback

<http://musesphere.com/regeneration/rain.jpg>



PEPPER'S GHOST - 1862



DAVID HOFFOS

Scenes From a Dream House

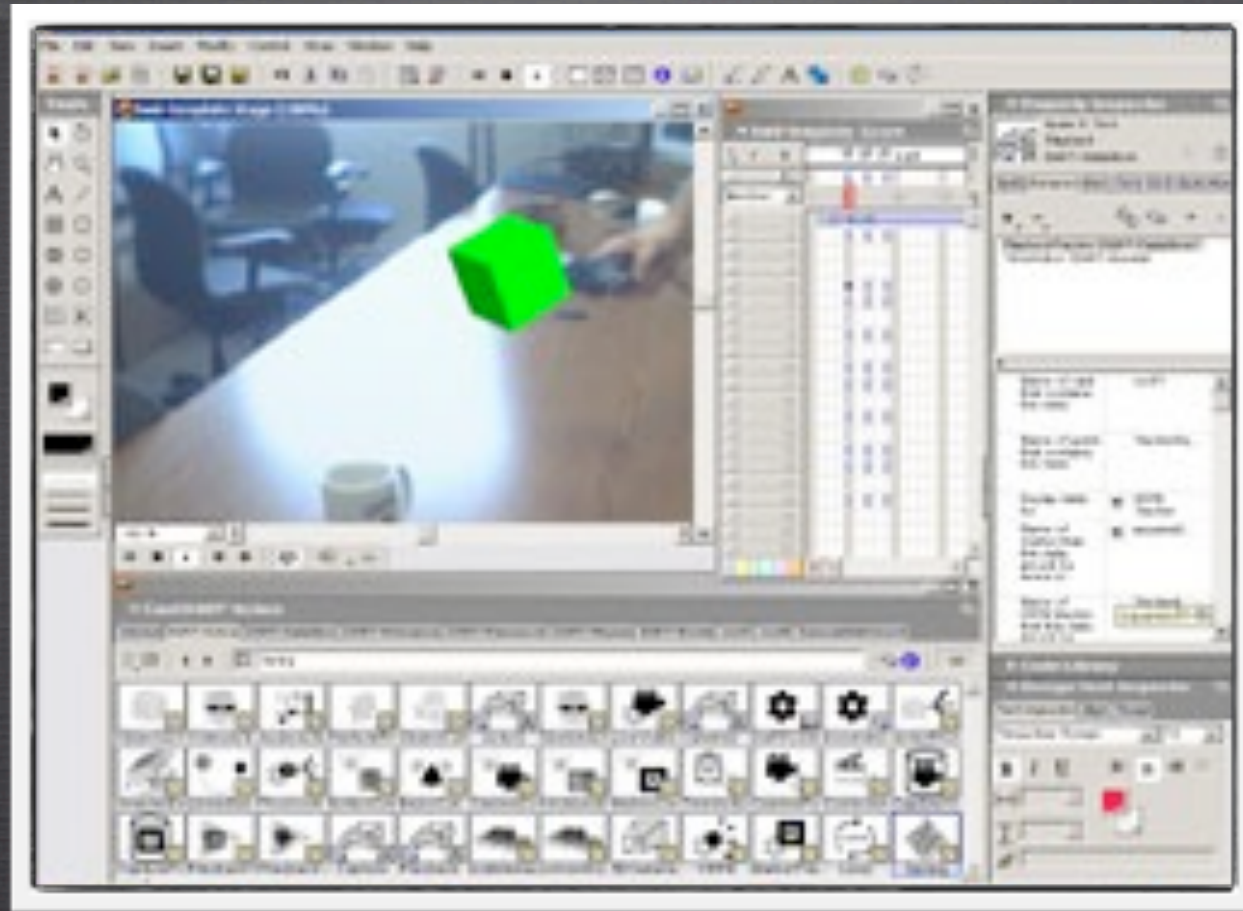


PTAM DEMO

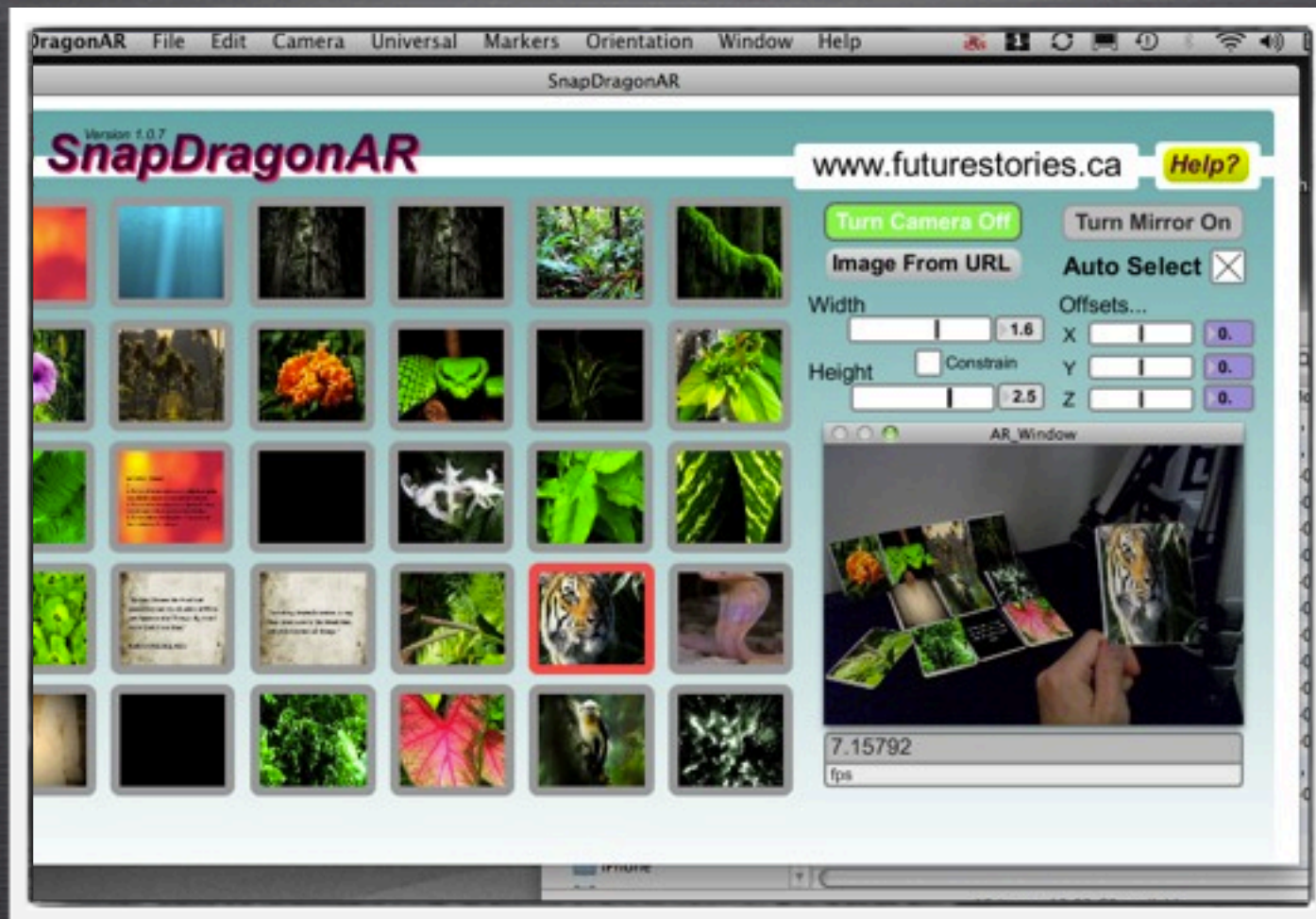
BY GEORG KLEIN

**“WE BELIEVE THAT THE LACK OF
APPROPRIATE TOOLS IS ONE OF THE
FACTORS LIMITING RESEARCH AND
DEPLOYMENT OF (MIXED REALITY)
SYSTEMS, ESPECIALLY IN DOMAINS SUCH
AS ENTERTAINMENT THAT REQUIRE
SKILLED DESIGNERS AND ARTISTS TO
CREATE ROBUST, COMPLEX CONTENT.”
MACINTYRE, AUTHORIZING... 3.**

TOOLS:
HOW DO YOU SHORTEN
THE PRODUCTION-
TESTING CYCLE?



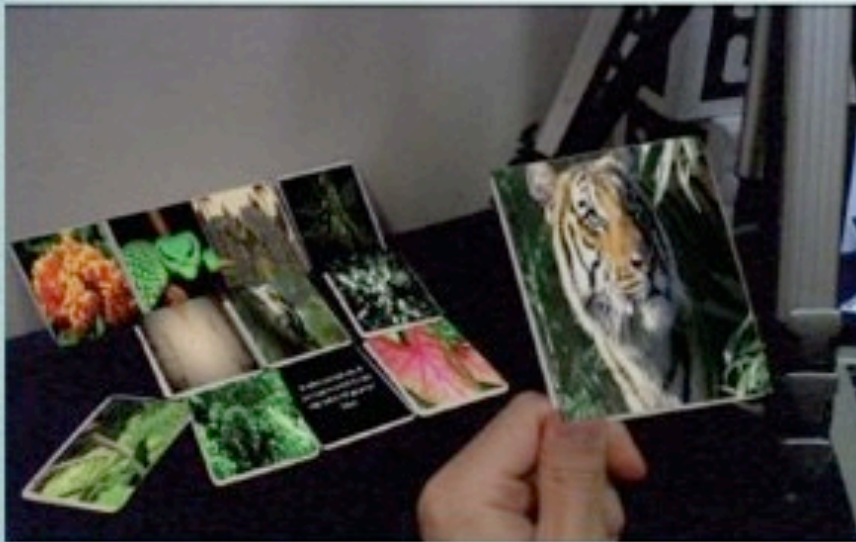
D.A.R.T. - DESIGNERS AUGMENTED REALITY TOOLKIT



SNAPDRAGONAR - INEXPENSIVE DRAG AND DROP 2D AR

SnapDragonAR

Drag and Drop 2D
Augmented Reality
Version 1.0.8+



info@futurestories.ca

Augmented Reality for Everyone.

SnapDragonAR makes it easy...

1. Open SnapDragonAR.
2. Click on Help. Print the markers you want to use.
3. Turn on the Camera (⌘ R).
4. Drag and Drop your favourite Movies and Images into the markers on your screen (even directly from iPhoto).

When you hold up the marker to the camera you will see your media clip attached to the marker.

Bring your favourite clips to life!

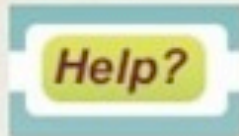
Open the Application

- * This program is designed to run on intel Mac computers only (OS X 10.5 or later).
- * You will need to connect a USB or Firewire webcam if your mac does not have a built in iSight. If the camera isn't recognized right away you may need to restart the application.

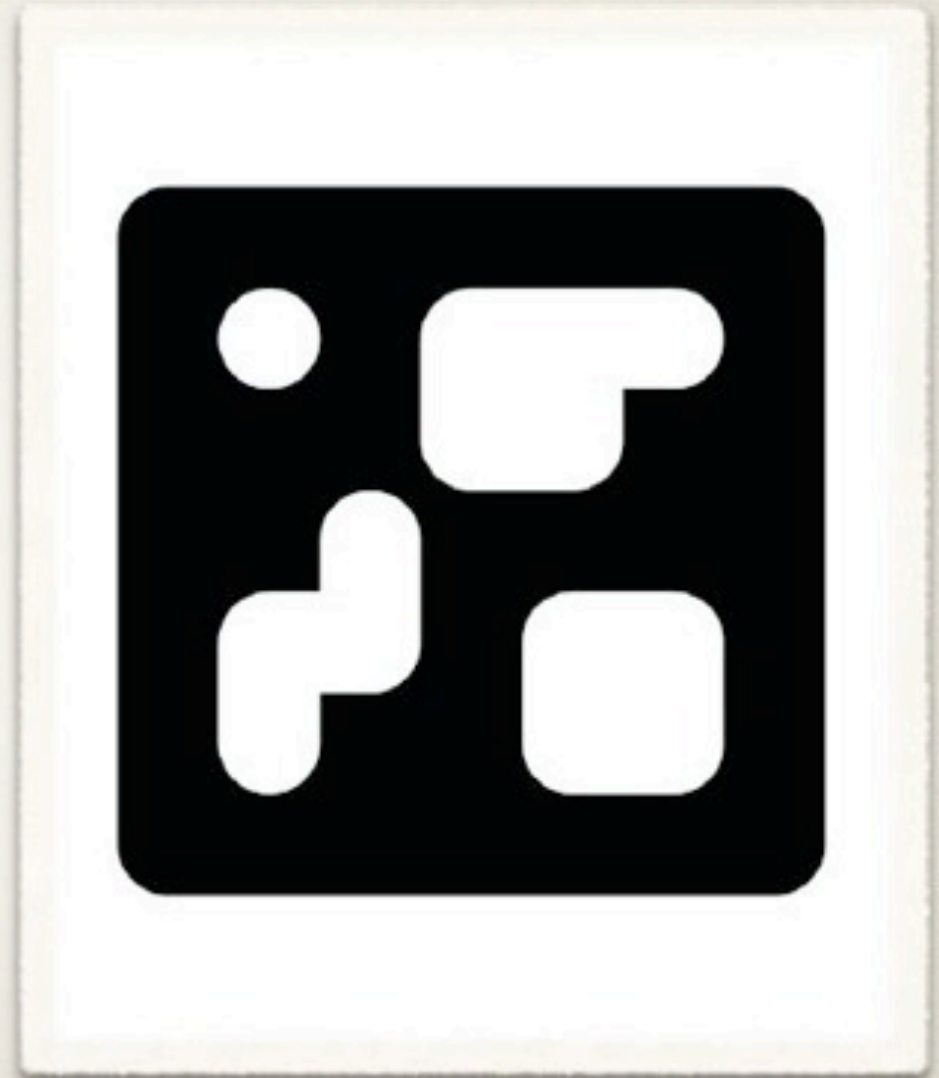


Print Your Markers

* Click



* The appendix to this .pdf document contains all the markers you need to run the software, simply print them off ensuring there is a thick white border around the black square.



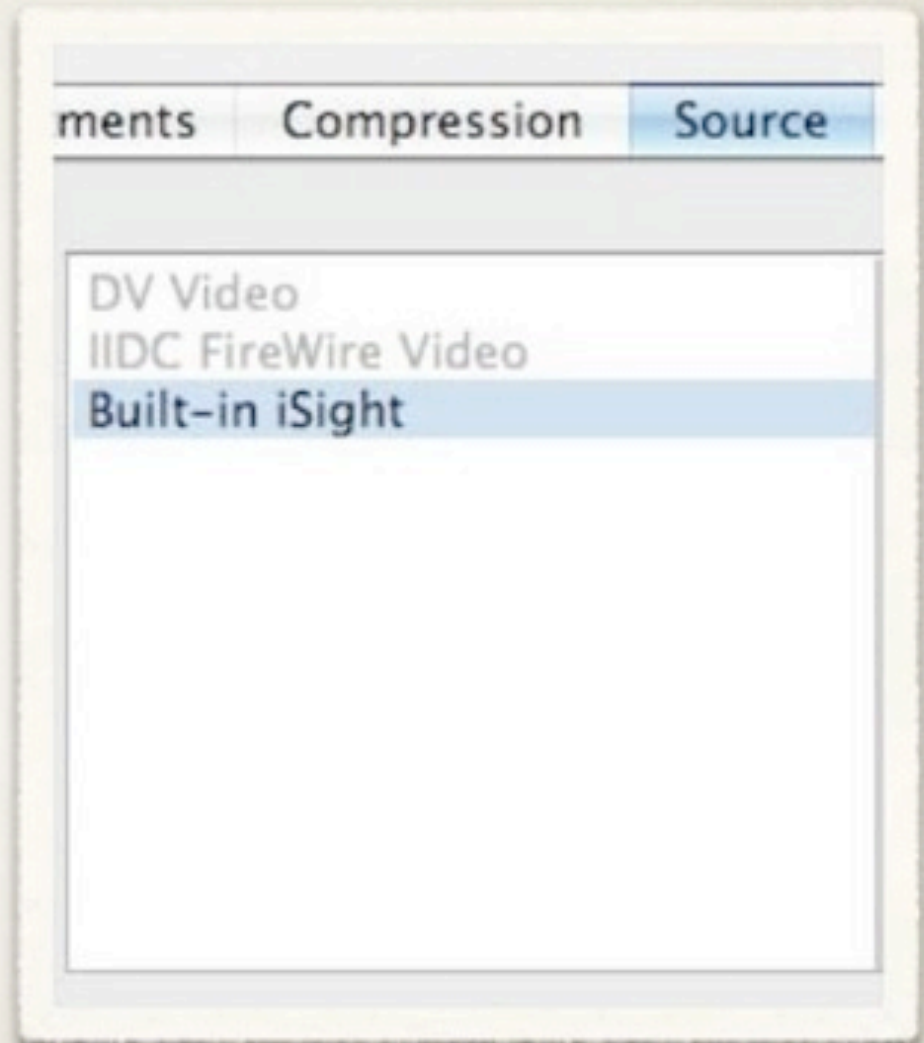
Turn on the Camera

- * To turn on your camera:
 - * Click 'ON'
 - * *or* ⌘R
 - * *or* Camera Menu>Run.
- * Be sure any external camera is plugged in before starting the app and that your webcam isn't in use by another application.



To Change the Camera

- * Under the Camera Menu, click 'Settings...' and a quicktime Preview window will open. Under the Source tab you will be able to select which camera to use as an input device.



Auto-Select: how does it work?

- * Auto-select will tell you which marker the camera is looking at by highlighting it in red. If multiple markers are in the scene, the one that appears largest to the camera turns red. If you want to manually select one of the markers, just click on it, and auto select will turn off. Click the Auto-select toggle to turn it back on.



Drag and Drop

- * Dragging and dropping quicktime movies or images into the drop zones attaches them to the corresponding markers. The video will play when visible and the sound will increase and decrease based on the markers distance from the camera. You can drag objects directly from iPhoto!



From the Web

- * Hosting movies and images on the web is a great way to share your project. Select the marker you wish to use, then click Add URL.



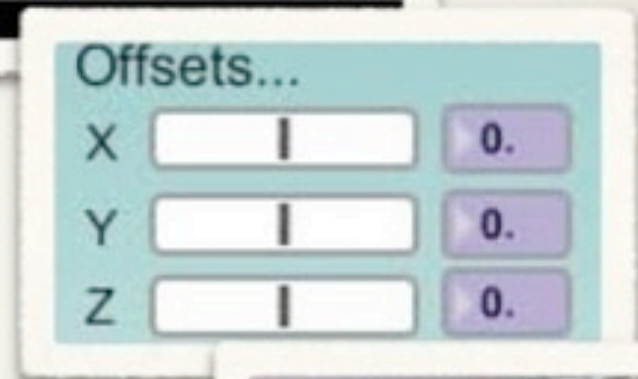
- * Cut and paste the full URL from your browser of the .mov or .jpg hosted on the web. You can even read from an RTSP link! (version 1.0.8+)

eg. <http://www.example.ca/images/not-a-real.jpg>

eg. <rtsp://www.example.ca/picture/not-a-real.mov>

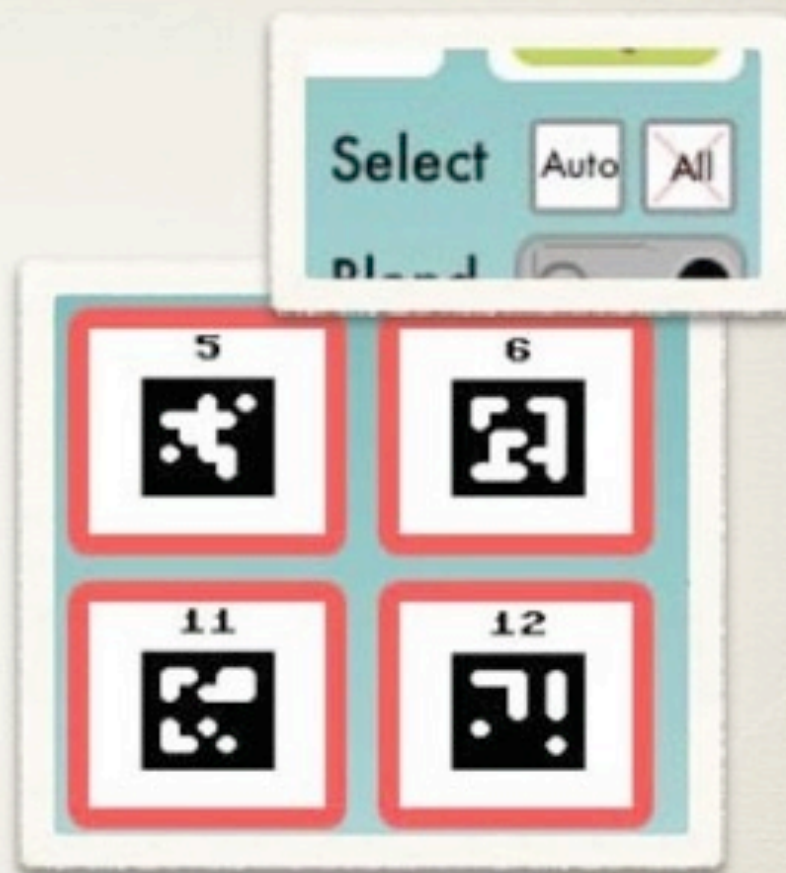
To Change Media Dimensions

- * You can adjust the size of the image relative to the marker in real time by changing the Width and Height boxes.
- * You can also adjust the X, Y and Z to control how far the media clips sits offset relative to the marker.
- * NOTE: the further you move the video from the centre the less stable the tracking may appear.

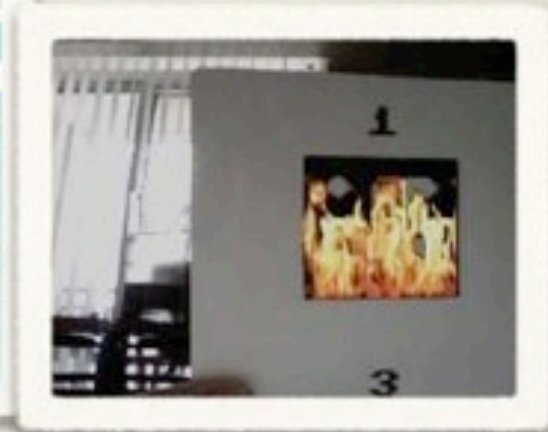
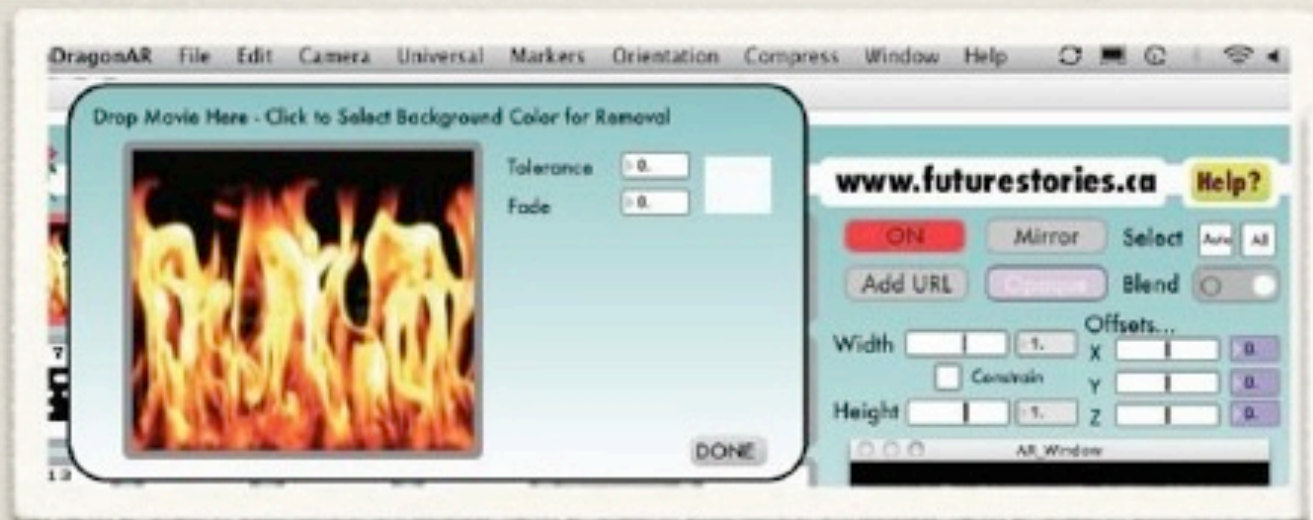


Select All

* Select all allows you to scale all markers to the same dimensions at once, but because it does so in real time it may be a little slow to present the change. It allows you to quickly make major changes to all the planes. But be careful, if you select all and start changing the size you will overwrite the sizes you've already changed.

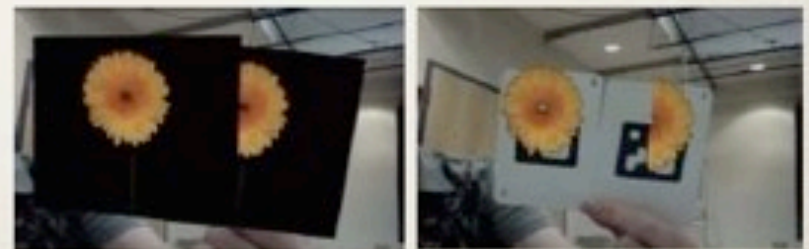


Green Screen your Videos



1. Drop in a video.
2. Click on the Alpha button to make a colour transparent.
3. Choose the colour to remove by clicking on the preview video.
4. Adjust the fade and tolerance to achieve the proper transparency.
5. Adjust and reopen using the Blend controls.

* NOTE: This effect is created using chromakey. You may notice artifacts or "blank space" where the videos overlap.



Save Your Progress

- * You can save all of your progress to a project file.
- * Select “Save” from the file menu and choose a name for your file. To reload those settings just choose “open” and select your file from the dialog. NOTE: if your movies have changed locations since you last opened your project you will need to add them again and re-save your project.
- * When you load from a previous project you clear the current settings, make sure you save before you do!

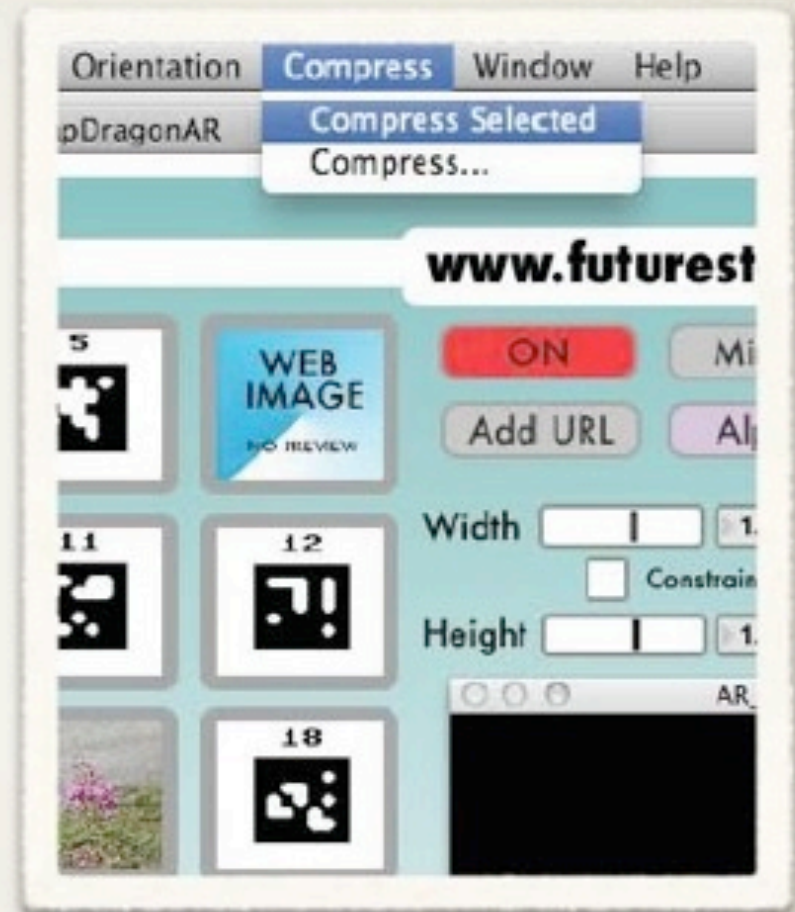
Optimizing your Videos for Playback

- * When using multiple files, the right size and compression are important. Try compressing or re-exporting your movies as follows:
mjpegA, with streaming, less error correction turned on, 320X240 or 160X120, 12fps, audio with aac 24hz.



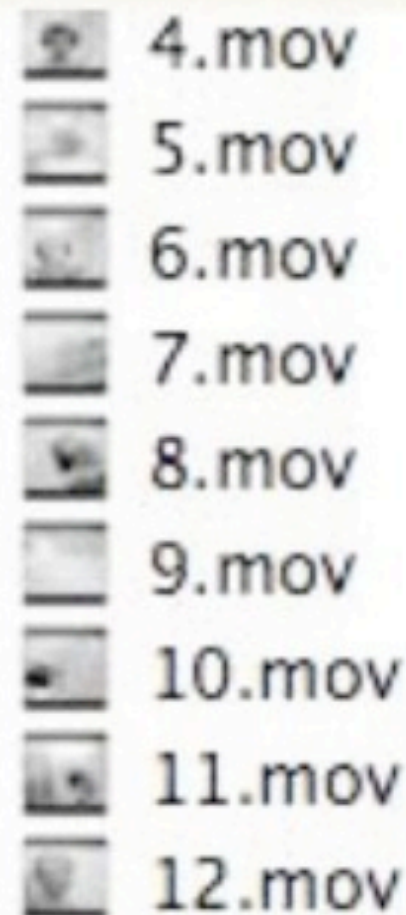
Compress your Movies

- * Compress any or all of your movies right in SnapDragonAR! No third-party software is necessary.
- * Compressed Movies are saved to Applications>SnapDragon>Library
- * Your project will automatically be updated with the optimized file in your Library



“Automagically” load

- * You can also choose to automatically load movies into the application simply by naming your movies 1.mov to 30.mov. If you place the movies in the SnapDragon>Library Folder it will automatically load all 30 movies to their corresponding markers when you open the application.



AURASMA

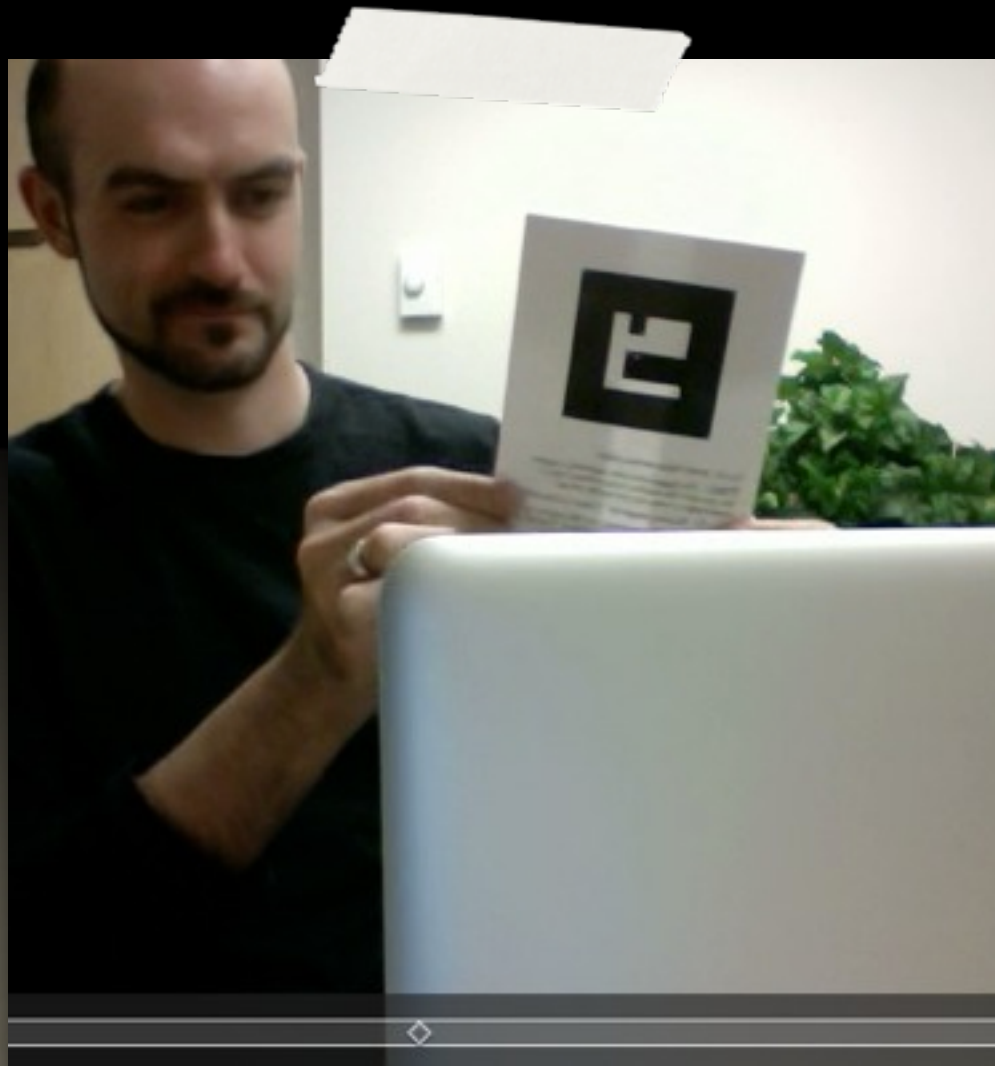
<http://www.aurasma.com/>

- On your iOS device or Android



- Break





FLARToolkit

•&• Open Source
Built on
ARToolkit
•&• Making it DIY

Source: <http://www.libspark.org/wiki/sagoosha/FLARToolKit/en>

Tunnel Pop-up Book



Source: <http://www.futurestories.ca/osc>

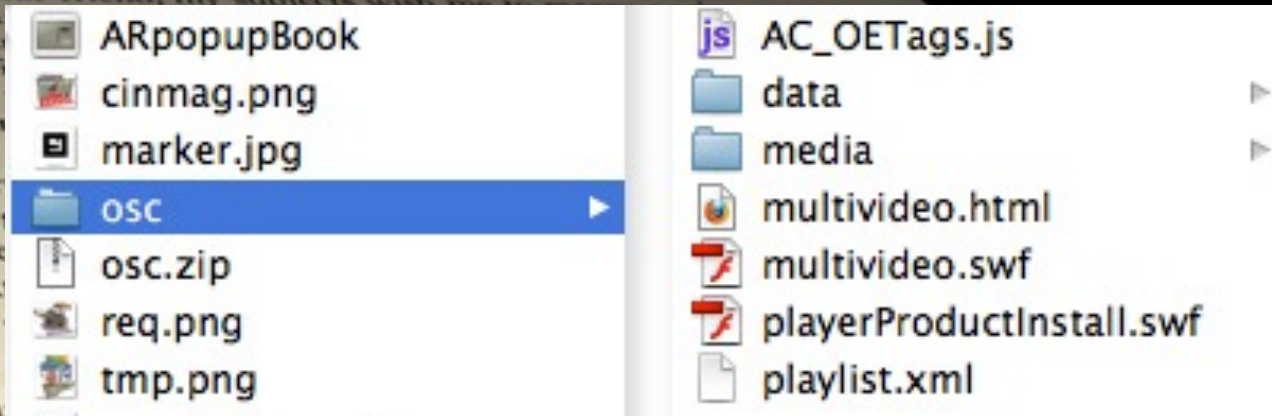


The Toronto Museum Project

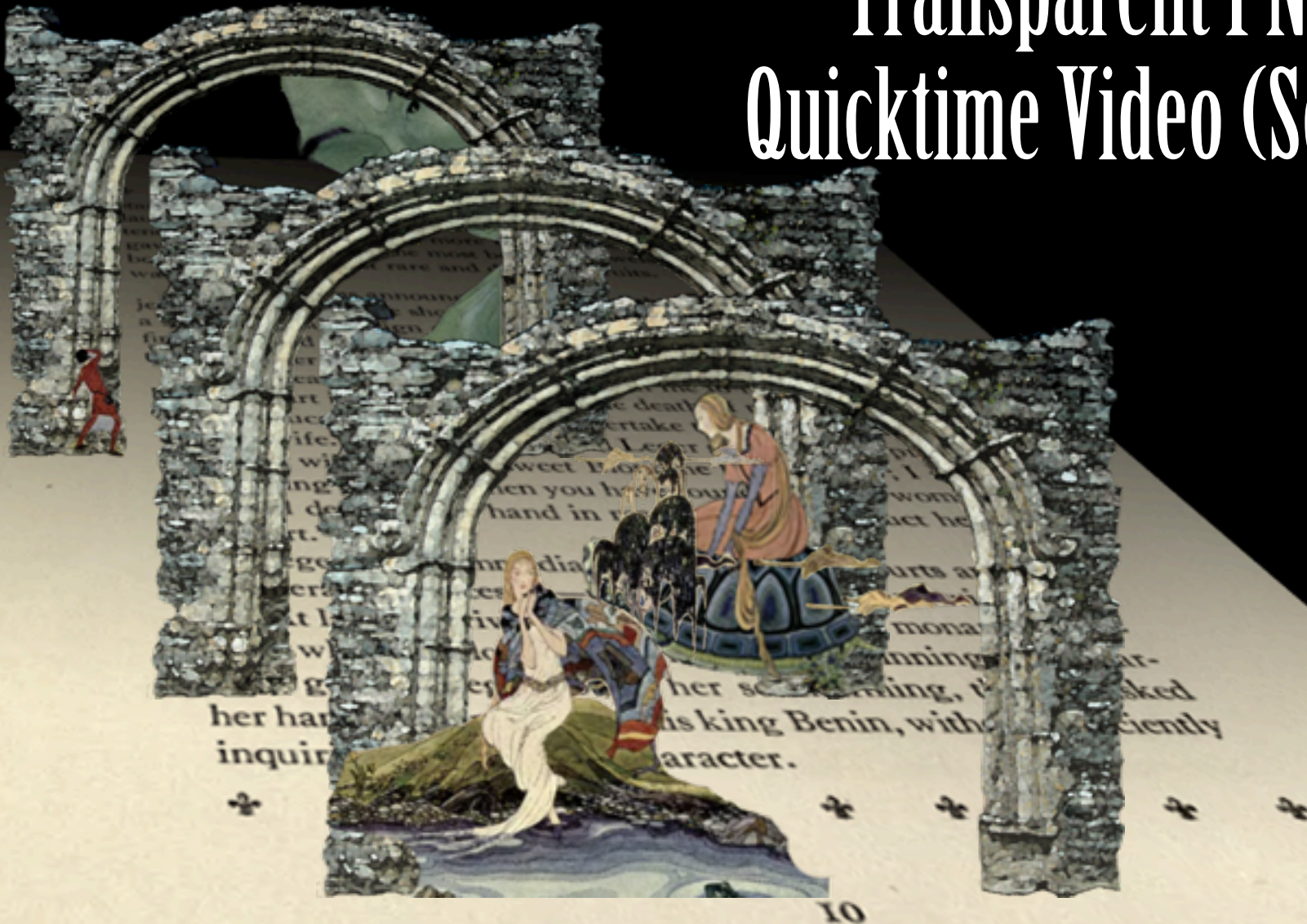


By: Andrew Roth

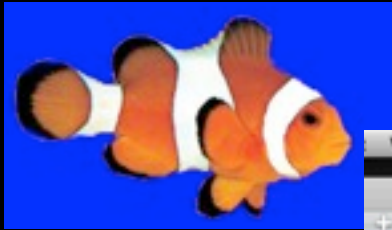
Download: futurestories.ca/osc
or
futurestories.ca/toronto



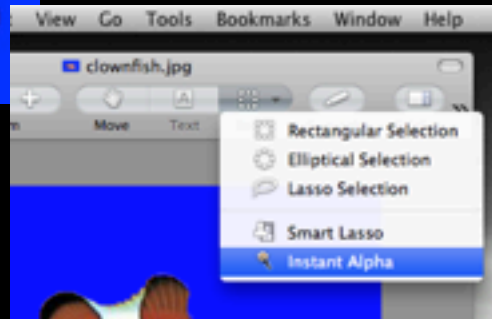
Make your images and video. Photoshop Layers Transparent PNGs Quicktime Video (Sound)



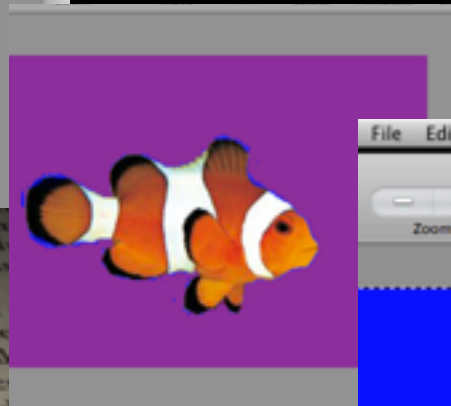
Open in Preview



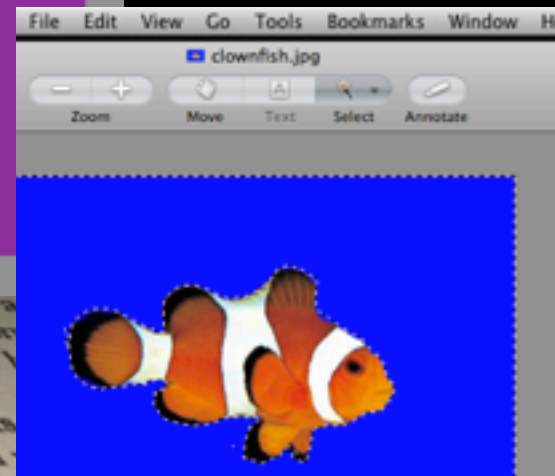
Preview: Instant Alpha



Select the background



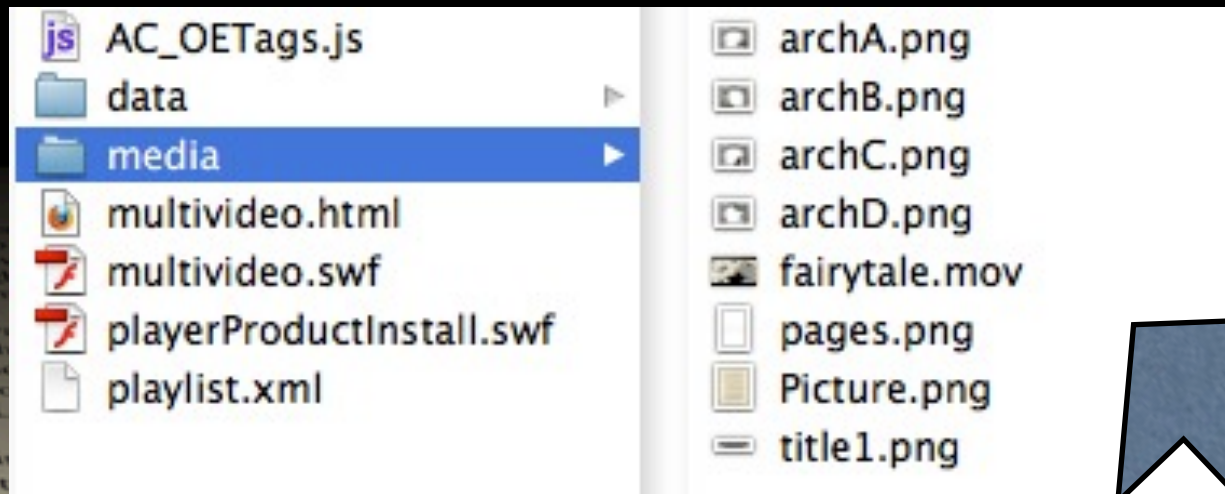
Delete Selection



Save As PNG with Alpha



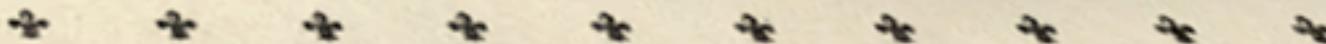
Add them to the Media folder



MYFISH.png



Leger set off immediately, visited many courts and saw innumerable princesses—ugly, humpbacked and wicked. At last he arrived at the kingdom of the monarch Turbulent, who had a lovely daughter, bright, winning and apparently good. Leger found her so charming, that he asked her hand in marriage for his king Benin, without sufficiently inquiring into her real character.



Edit playlist.xml

```
<video id="myScene" desc="myDesc">fairytale.mov</video>  
<image id="myScene" desc="clouds">MYFISH.png</image>
```

stand her mother's laugh, to play and tenderly and she loved him more than all the world. He gave his little daughter the most beautiful jewels, the finest bonbons, and the most rare and delicious fruits. Blondine was very happy.

One day it was announced to the king, that all his subjects demanded that he should marry again in order to have a son who should reign after him. He refused at first but finally yielded to the pressing desires of his people and said to his minister Leger:—

"My dear friend, my subjects wish me to marry again but my heart is so sad because of the death of my cherished queen Doucette that I cannot undertake the task of seeking another wife. Go, then, my good Leger and find me a princess who will make my sweet Blondine happy. Go; I ask for nothing more. When you have found a perfect woman, you will demand her hand in marriage and conduct her to my court."

Leger set off immediately, visited many courts and saw innumerable princesses—ugly, humpbacked and wicked.

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✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦

Keep between the `<media>` `</media>` tags.

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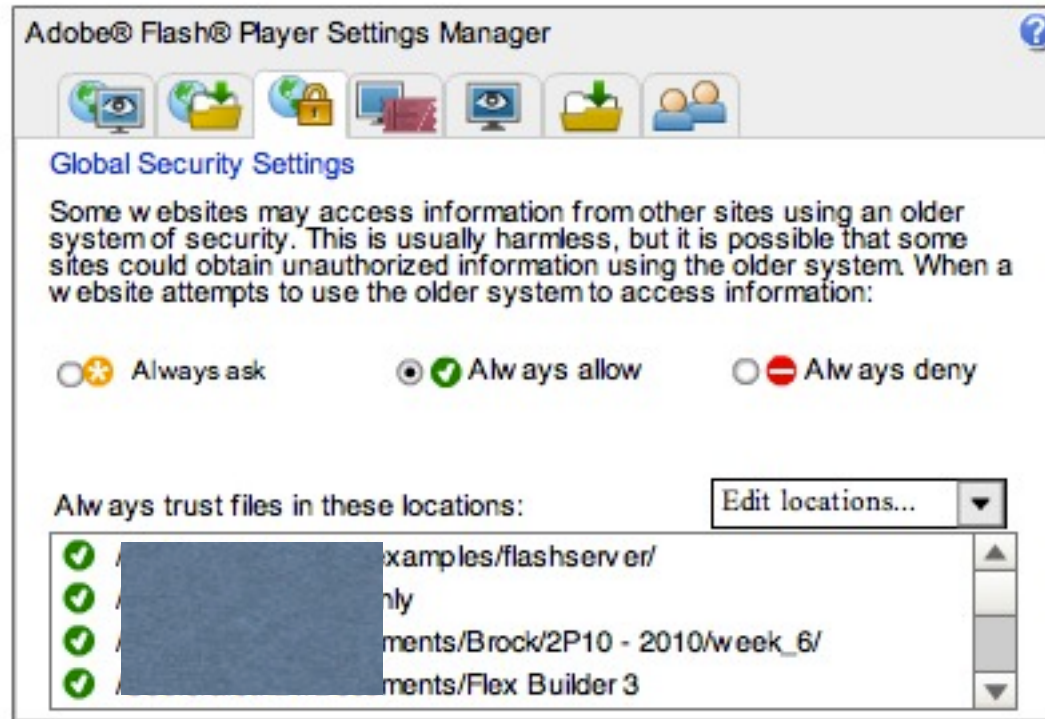
Leger set off immediately, visited many courts and saw innumerable princesses—ugly, humpbacked and blind.

✥ ✥ ✥ ✥ ✥ <image id="scene Andrew" desc="Floor">P

10

3. Fix the “Global Flash Security Settings” to test

Global Security Settings panel



Open multivideo.html.

Embed it in your own webpage.

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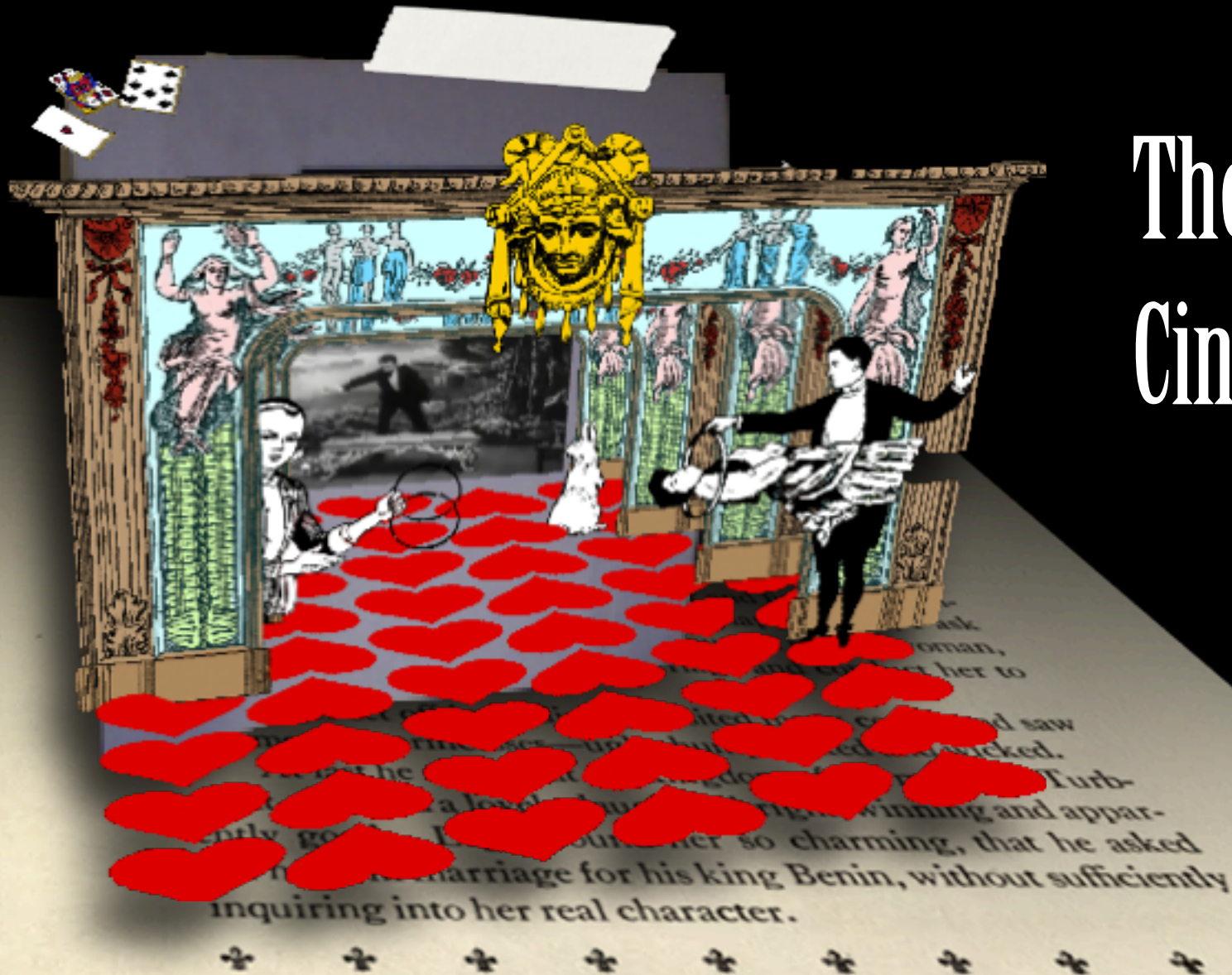
✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦ ✦

Requiem

By: Caitlin Fisher and Charles Fisher



The Amazing Cinemagician



By: Helen Papagiannis