

DES 420 Professional Practice Project I

Mobile App Design

- Professor Philip Burton
- Associate Professor Daria Tsoupikova

Electronic Visualization Laboratory EVL

DES 420 Professional Practice Project I

1.00-2.00 - Course Intro & Logistics

2.00-2.15 – Break

2.15-2.30 - Student Introductions

2.30-2.45 – Questionnaire

2.45-3.10 - EVL History, Research and Overview

3.10-3.25 – RWD

3.25-4.00 - MAD Examples

4.00-4.35 - Longer Break

4.35-4.50 - Paint Program Demo

4.50-5.50 - Example Presentations

5.50-6.00 - Assignment 1 6.00 - Adjourn

Electronic Visualization Laboratory (EVL)

- 1969 Dan Sandin is invited to UIC's Art Dept. to bring computers to the art curriculum
- 1973 Tom DeFanti comes to UIC with the GRASS system, EVL begins as a short order media house for education and research



Electronic Visualization Laboratory (EVL)

40 years of Art/Science collaboration at UIC

Joint program: CS and Art & Design departments

First program in the US offering MFA that is a formal collaboration of art and computer science 1973-2014

Electronic Visualization Laboratory (EVL)

Advanced networking research

Distributed computing/visualization

Collaborative software

Advancement of tools and techniques for collaborative work over high-speed, experimental networks

Development of viable, scalable, deployable stereo displays

Development of VR hardware, software, tools and techniques

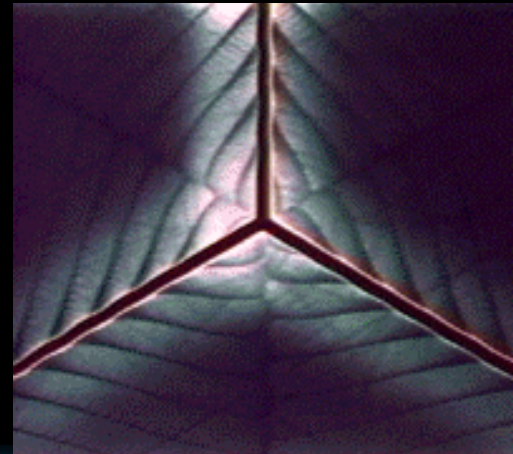
EVL – The Engine Becomes Clear

- Artists organize projects, help visualize data, create media
- Artists are supported and get the toys to do their own work: often inspired by science
- Scientists get to communicate effectively
- EVL makes them look good
- EVL delivers visualization technology and techniques to science

Electronic Visualization Laboratory (EVL)

mid-70s - the Electronic Visualization Events
a series of live performances in which images were computer generated and color processed in real time with musical accompaniment

EVL helped to produce the CG special effects for the first Star Wars film



CAVE® 1992



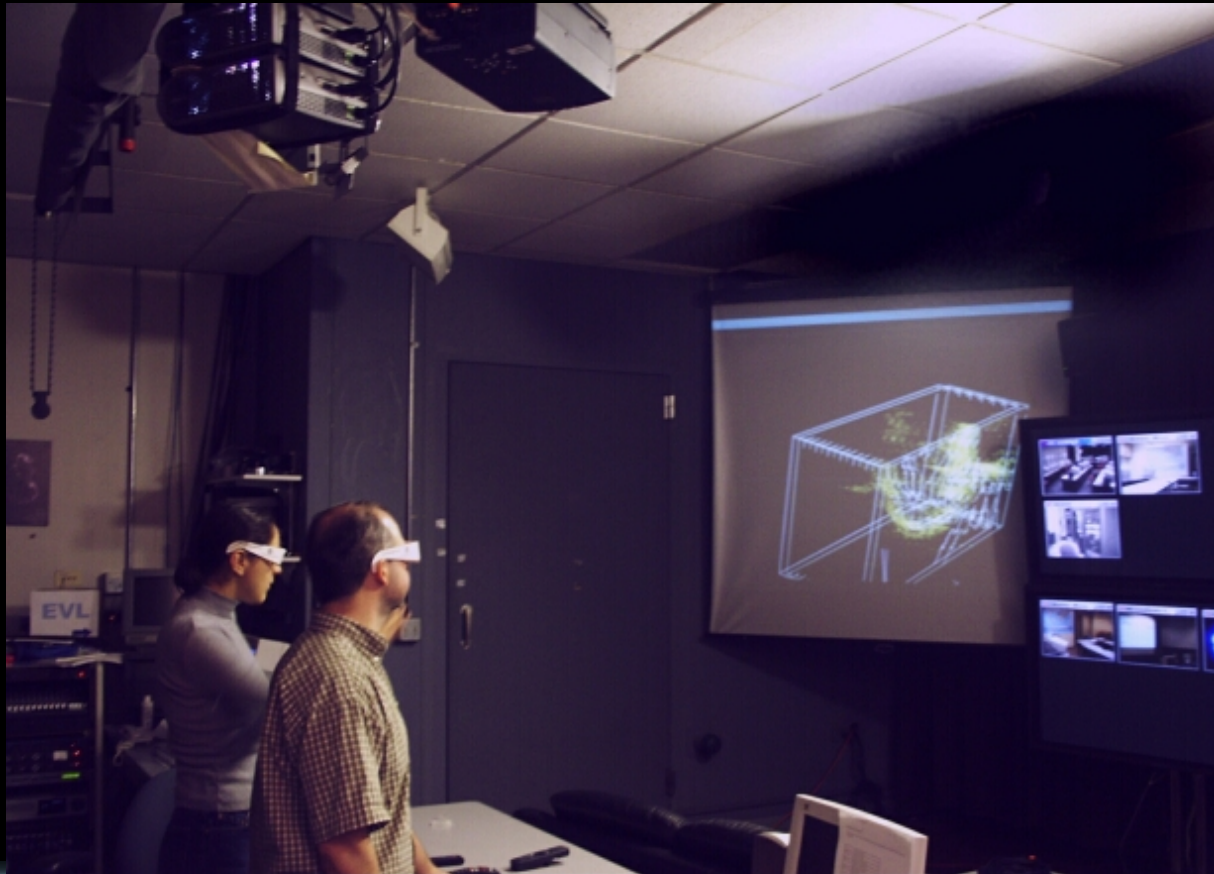
ImmersaDesk® 1995



Paris 1998



GeoWall -2000



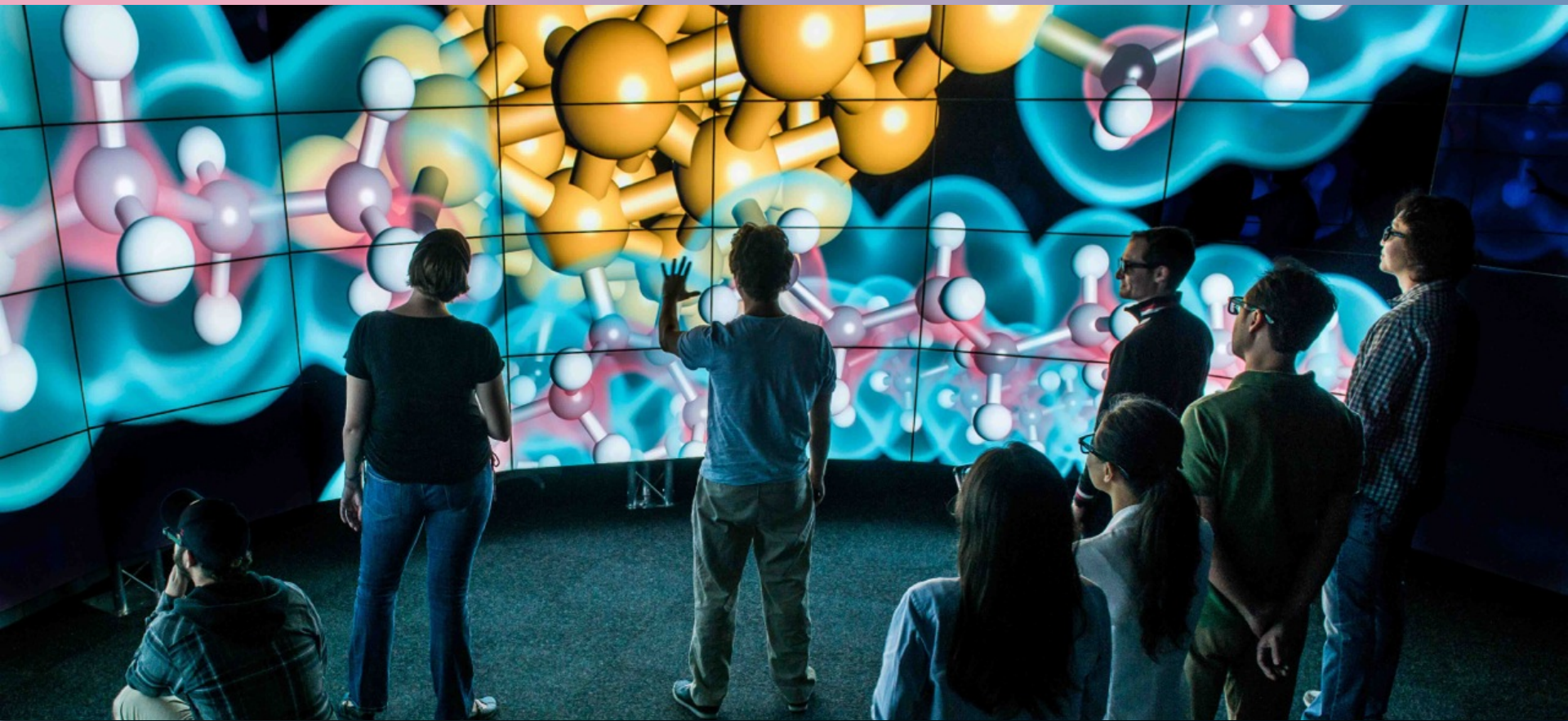
Varrier



CAVE2 -2012



Molecular Chemistry Dataset



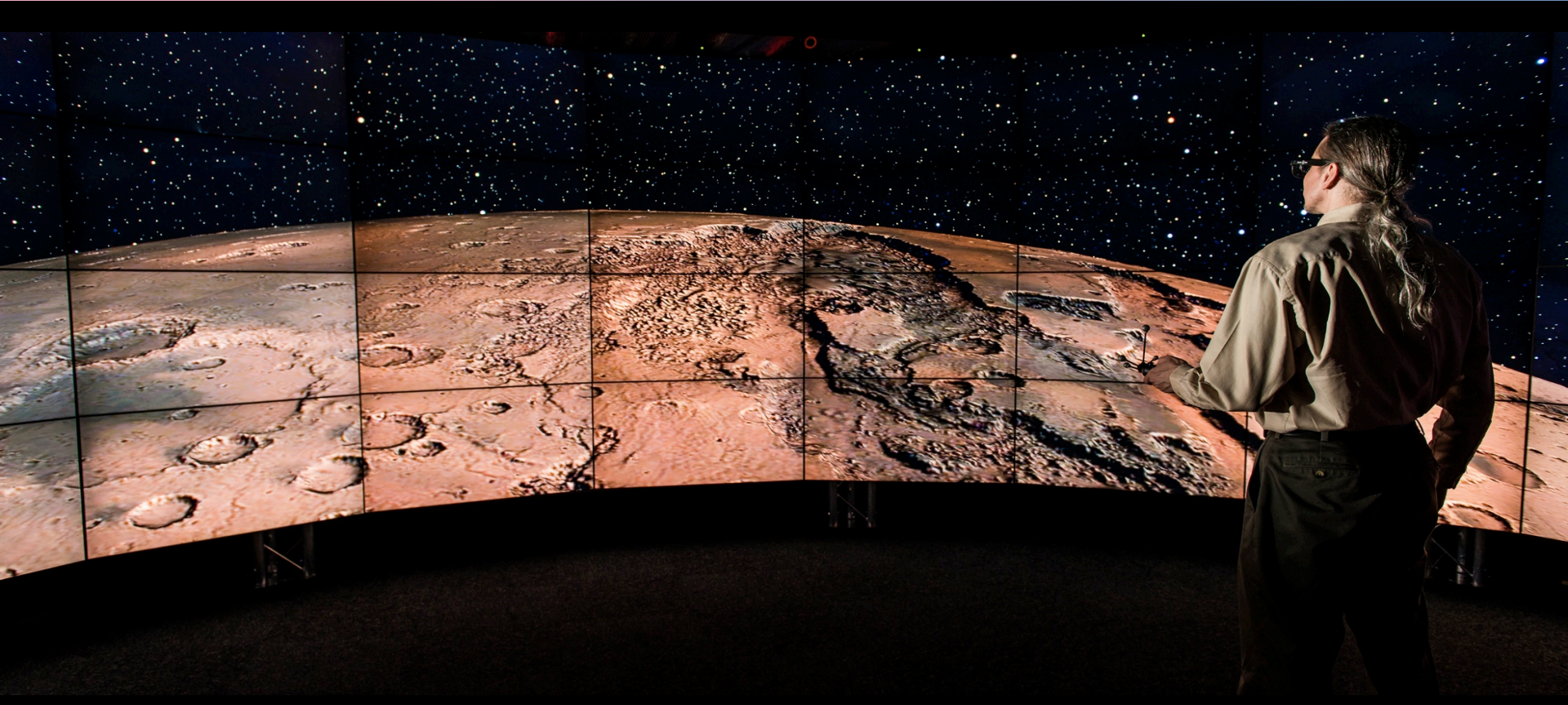
Particle Dreams in Spherical Harmonics



3D Brain MRI Data



Mars Surface



Fleet Commander





VISUALIZATION EXPLORER



NASA Visualization Explorer (NASAViz)

- Free NASA iPad app
- Developed for the general public
- Releases 2 data-viz stories per week
- Scientific Storytelling effort from NASA/GSFC
- Covers all NASA science themes: Earth, Planets, Sun, Universe



NASA Visualization Explorer



A NEW DAWN



The Milky Way and Andromeda galaxies are destined to collide. See how it will all unfold.

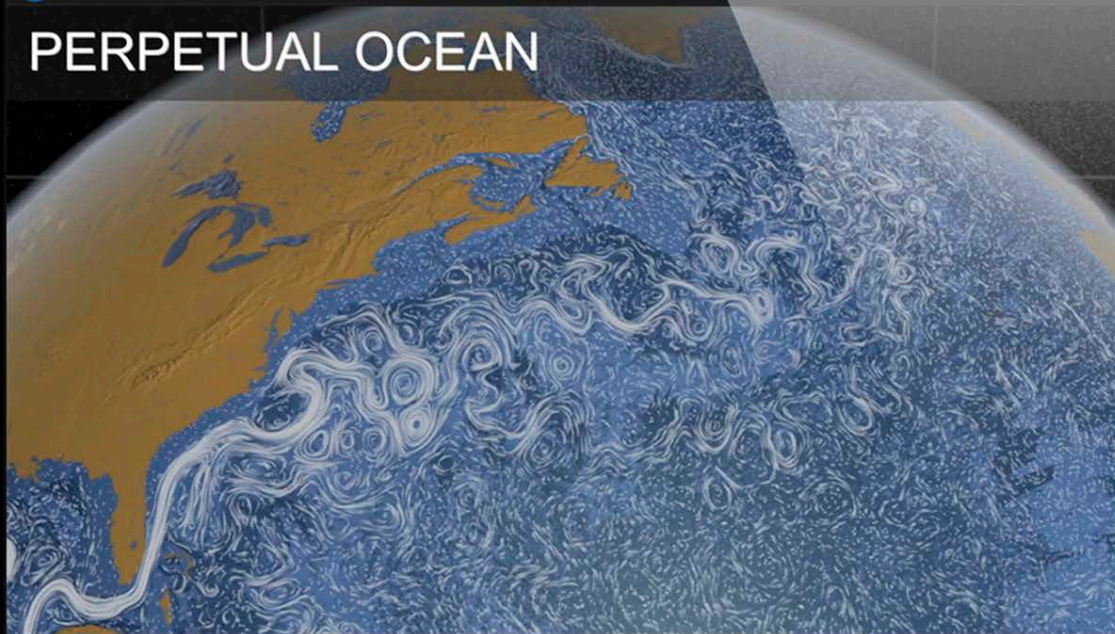




NASA Visualization Explorer



PERPETUAL OCEAN



◀ Watch surface currents circulate in this high-resolution, 3D model of the Earth's oceans. ▶



To Learn More About NASA Viz:

<http://svs.gsfc.nasa.gov/nasaviz>

Contact:

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Ocarina by Smule

One of Apple's All-Time Top 20 Apps

In 2013 crossed the 100 million app download mark

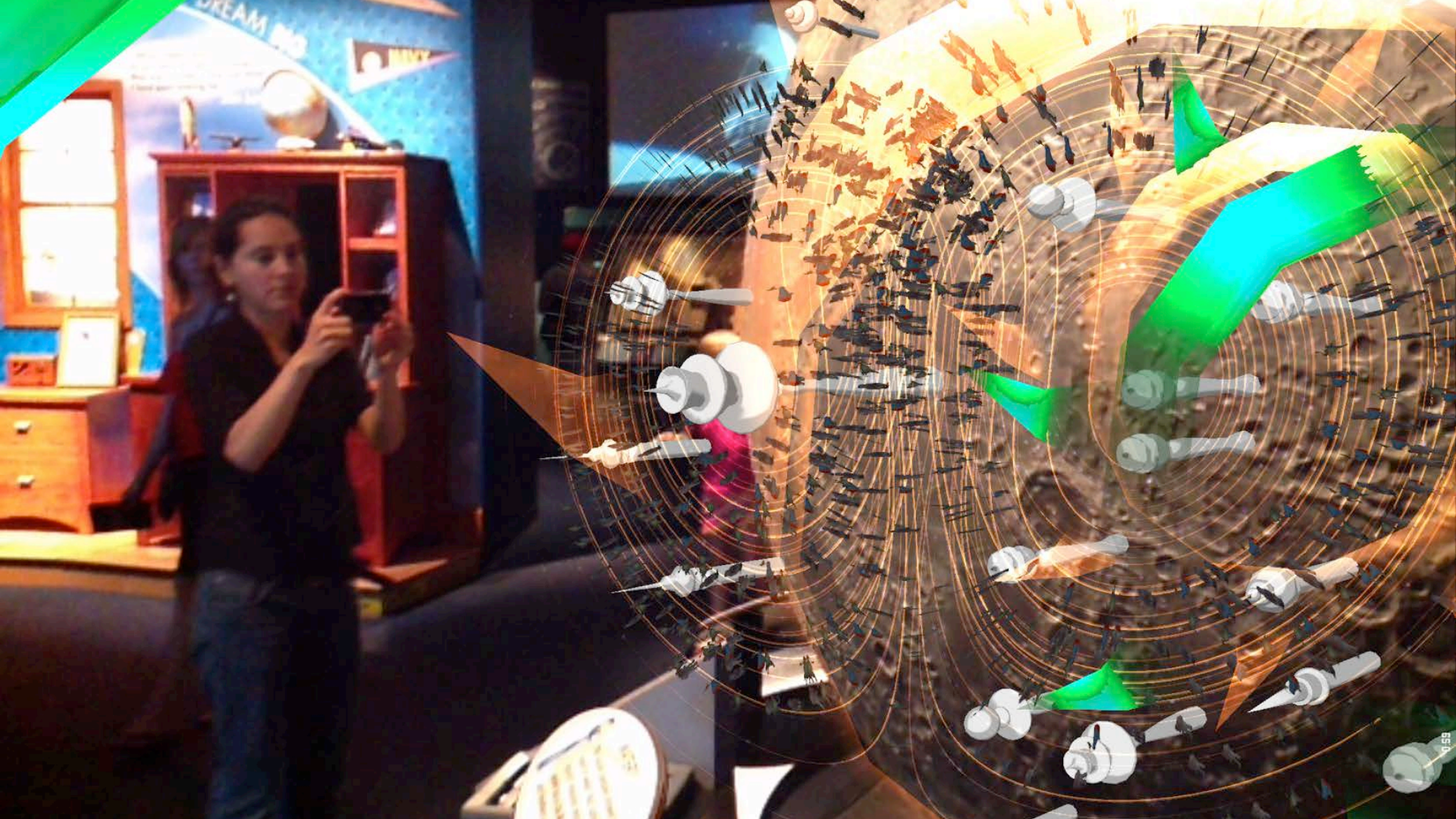
Free

For iPhone and iPad

Social music-making experiences for everyone, no talent required.

Smule - founded in 2008 by Stanford PhD student and entrepreneur Jeff Smith and Stanford assistant professor Dr. Ge Wang.





DREAM BIG

NAVY

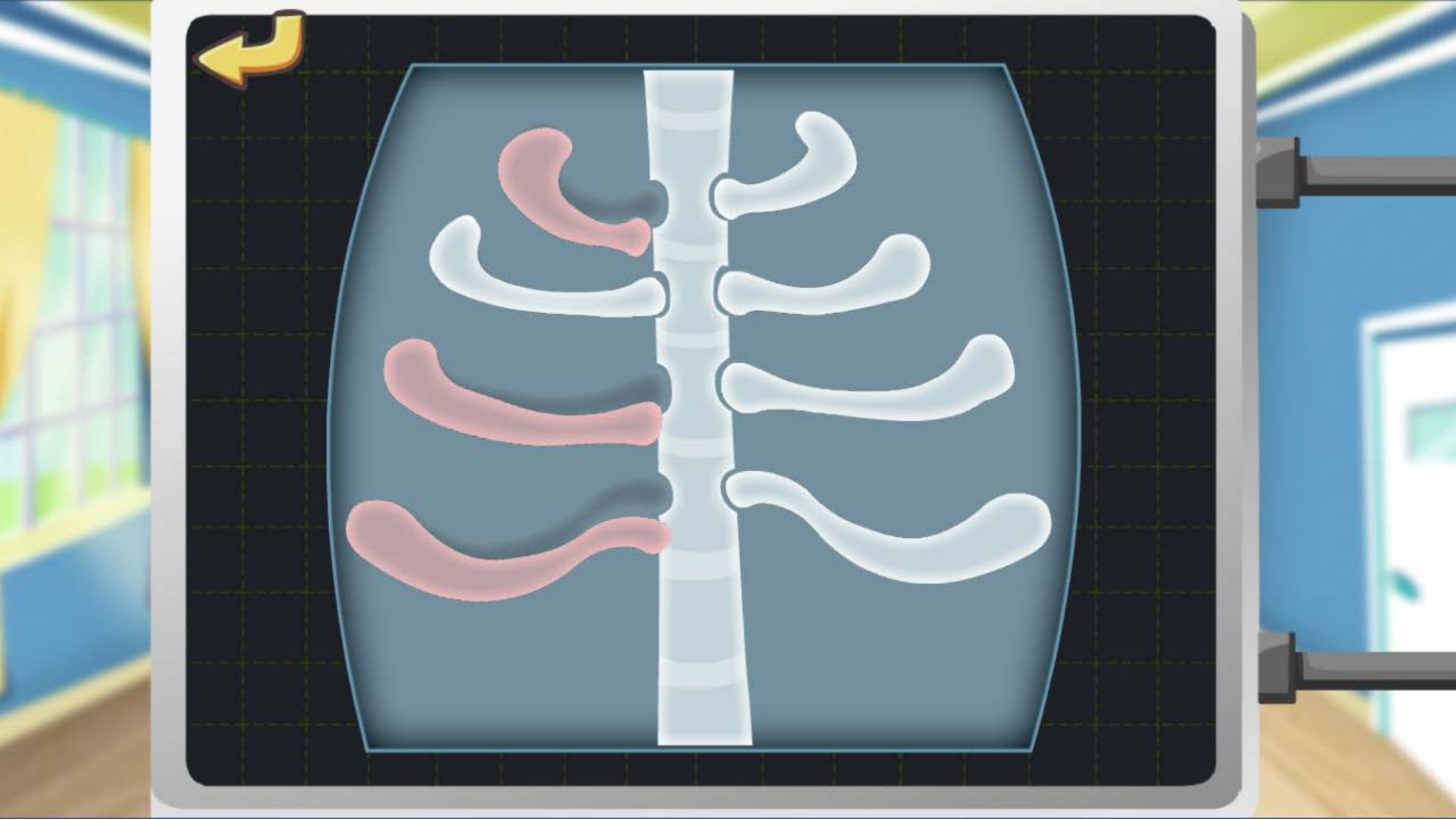
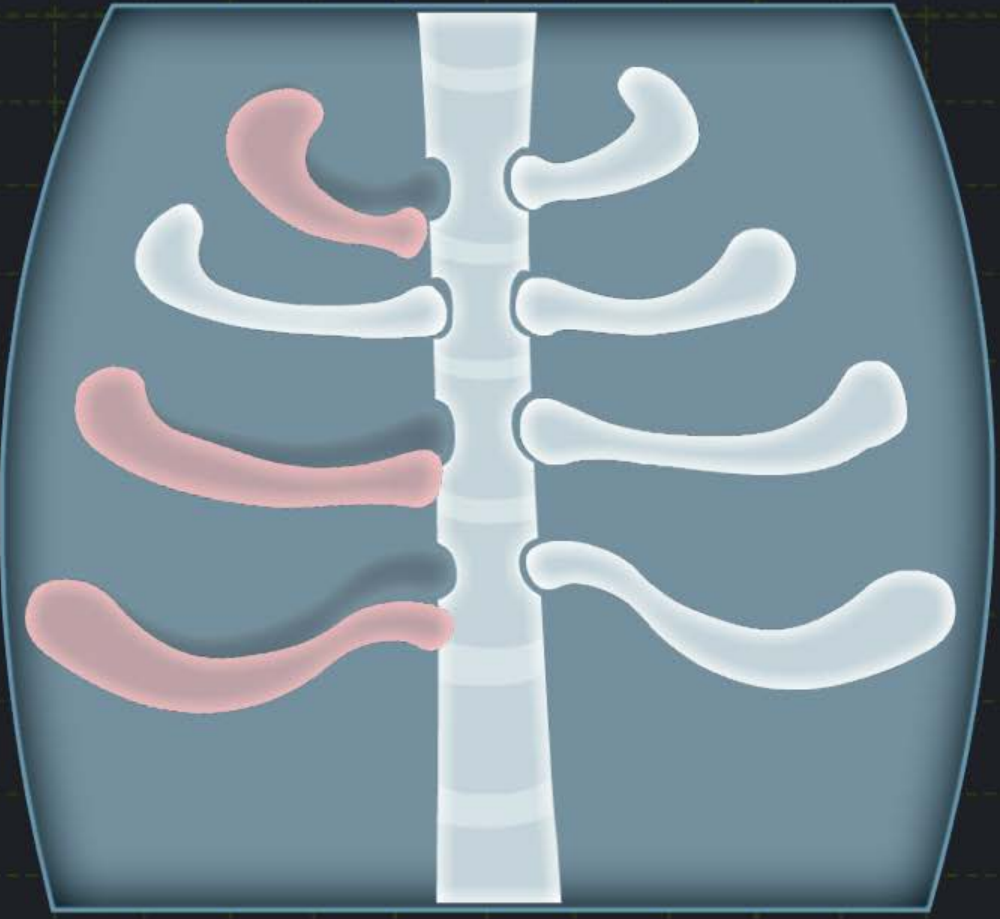


Dr. Panda's Hospital



Dr. Panda's Hospital



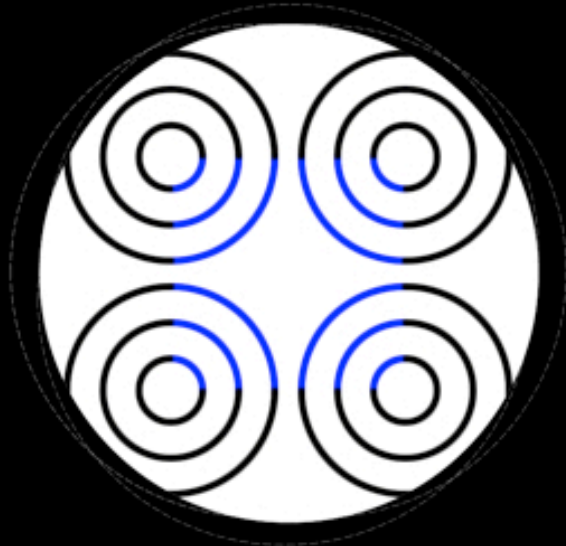


Paint Program



Color Uncovered by Exploratorium

SEE THE BLUE SQUARE?



IT'S NOT THERE.

Drag the circles around.
How far can you move them before the illusion "breaks"?

SEE THE BLUE SQUARE?



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Responsive Web Design

The broadening spectrum of screen sizes and resolutions is

A collection of techniques and ideas

Design layout and elements adjusting to a size of the screen

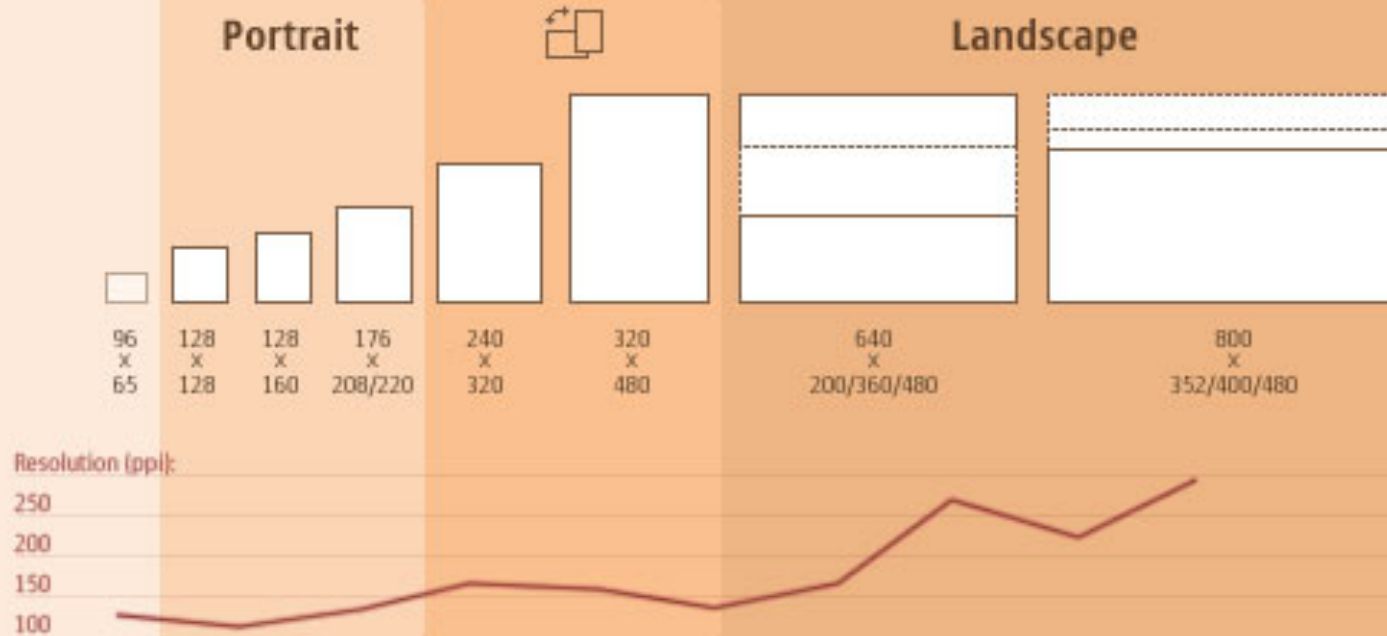
Design fits to any resolution

Relies on:

- Media Queries

- Fluid Grids

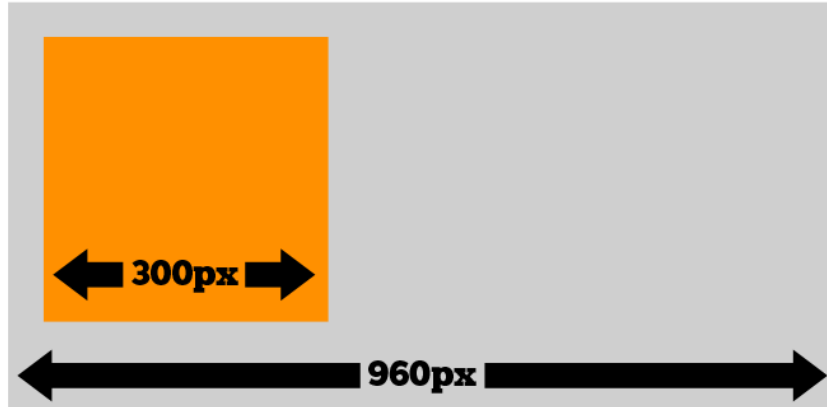
Morten Hjerde statistics on >400 devices sold in 2005-08



Fluid Grids

- a 'liquid' or "fluid" layout that expands with the page

target / context = result



$$300\text{px} / 960\text{px} = 31.25\%$$

**These measurements are not to scale.*

Media Queries

CSS₃

A module allowing content rendering to adapt to conditions such as screen resolution
(e.g. smartphone vs. high definition screen)

Allow to target not only certain device classes, but to actually inspect the physical characteristics of the device rendering your design.

Media Queries

The query contains two components:

- a media type (screen)
- the actual query enclosed within parentheses, containing a particular *media feature* (max-device-width) to inspect, followed by the target value (480px).

```
<link rel="stylesheet" type="text/css"  
media="screen and (max-device-width: 640px)"  
href="sheetiPhone4S.css" />
```

Media Queries

- placement of images
- show / hide content
- alternate layouts tuned to each resolution range
- increase the target area on links for smaller screens
- selectively show or hide elements that might enhance a page's navigation
- we can even practice responsive typesetting to gradually alter the size and leading of our text, optimizing the reading experience for the display providing it