



Hello, I am Andreas.

- PhD student in Information Science
- Indiana University Bloomington (USA)
- Work with Dr. Katy Borner
- Focus: data visualization literacy and the Internet of Things

What I will talk about

- ▶ **Our interests in:**

- ▶ **EDUCATION:** our research & development projects at CNS
- ▶ **SYSTEMS:** our fit with LASG
- ▶ **FUSION:** current project: “Cyclops”

Meet Katy Borner!

- ▶ Appointments (selection)
 - ▶ Victor H. Yngve Professor of Information Science (distinguished)
 - ▶ Founding Director of CNS at IU
- ▶ Research interests:
 - ▶ information visualization
 - ▶ structure and evolution of scientific disciplines
 - ▶ development of cyberinfrastructures for large scale scientific collaboration and computation



Source: https://s4.postimg.org/7sg795p99/Katy_Borner_portrait.jpg

EDUCATION: Two Highlights (1)

- ▶ Information Visualization Massive Open Online Course
 - ▶ Taken by students from 100+ countries since 2013
 - ▶ Residential and online sections
 - ▶ Teaches state-of-the-art data analysis and visualization
 - ▶ Offers self-paced learning option for free
 - ▶ Importance of visualization literacy and education



Information Visualization MOOC 2017

OVERVIEW | SCHEDULE | EVENTS | INSTRUCTORS | READINGS | GRADING | FAQ | CONTACT

ANNOUNCEMENTS

Register for 2016 asynchronous "self-paced" course [here](#).

Registration for 2017 synchronous registration will become available on November 7, 2016. Class starts on January 10, 2017.

Tweets about ivmooc

Overview

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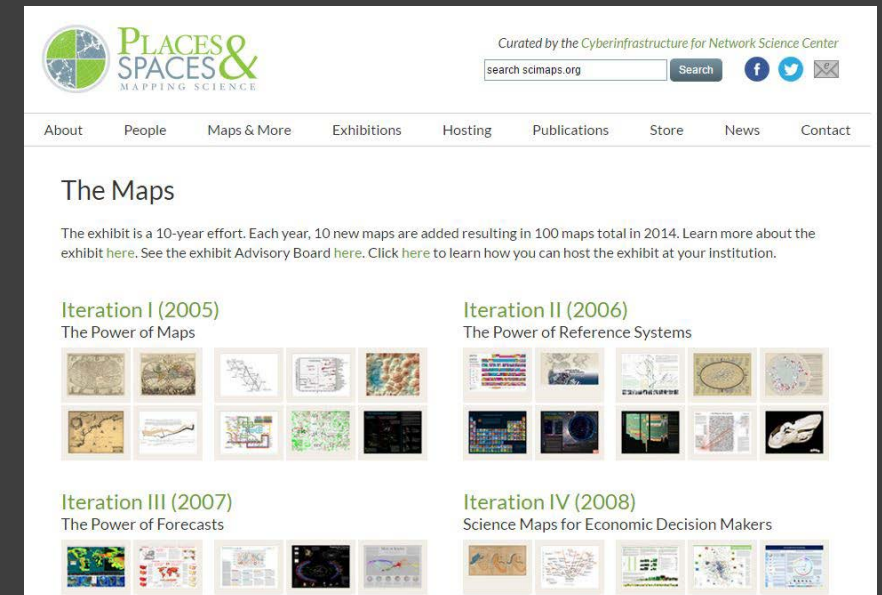
This course provides an overview about the state of the art in information visualization. It teaches the process of producing effective visualizations that take the needs of users into account.

The course can be taken for three Indiana University credits as part of the

Source: <http://ivmooc.cns.iu.edu/>

EDUCATION: Two Highlights (2)

- ▶ Places & Spaces Exhibit
 - ▶ Curated exhibit
 - ▶ Objects: maps, charts, graphs, etc.
 - ▶ Next exhibit: Vanderbilt University (Jan '17)
 - ▶ Set of over 100 maps over past decade
 - ▶ Goal: to educate people about reading visualizations



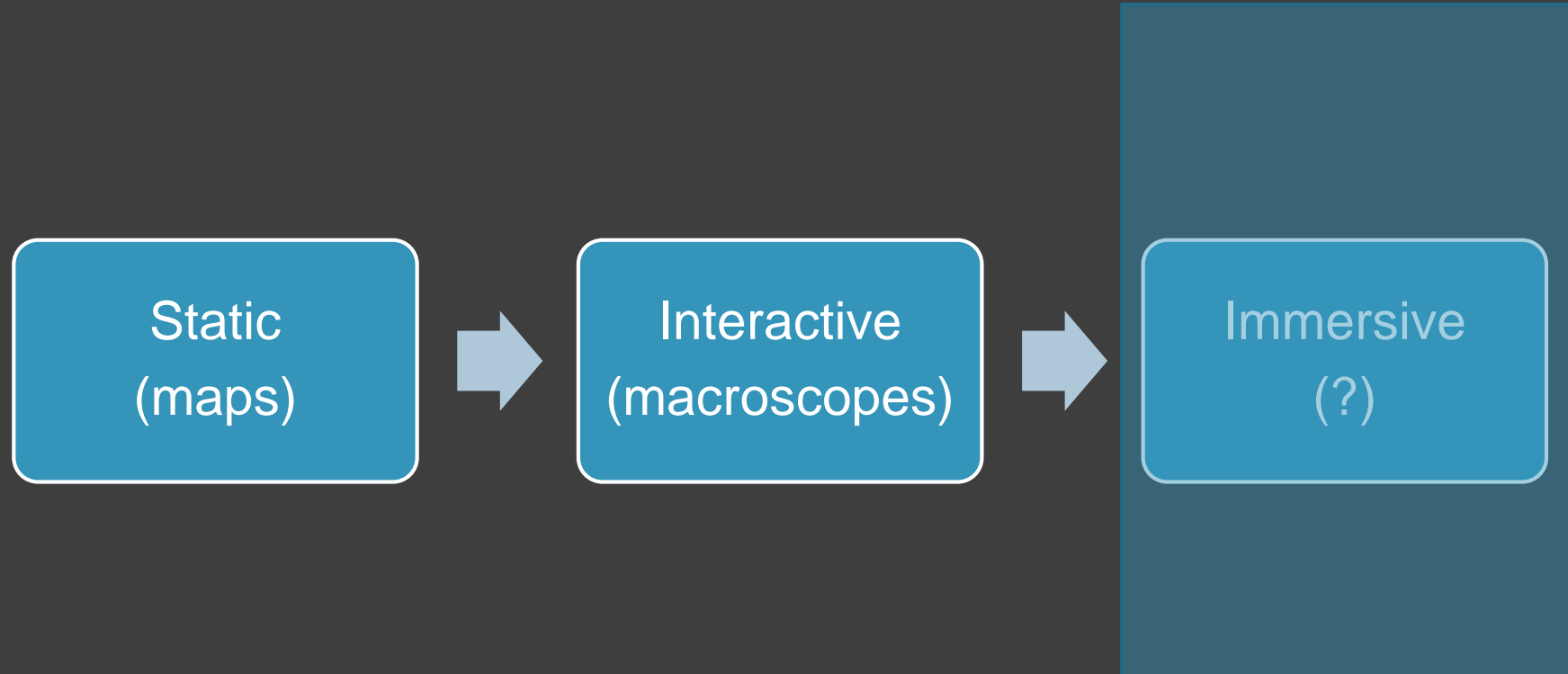
Source: <http://scimaps.org/>

EDUCATION: What are Macroscopes?



Source: <https://www.youtube.com/watch?v=Ef3tAxoW9mE>

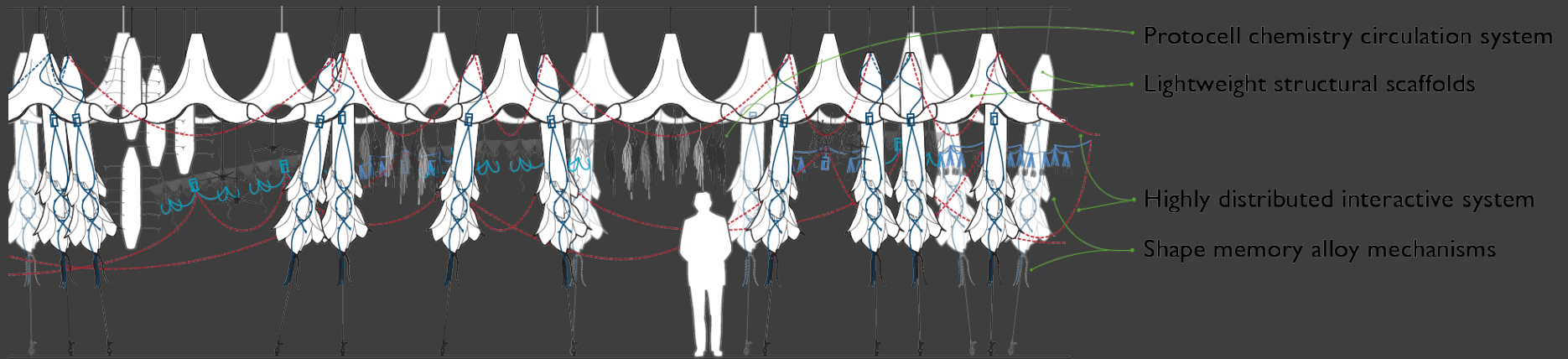
EDUCATION: transitions In Our Work



SYSTEMS: Fear and awe



Source: Andreas Bueckle



Drawing of a test-bed with architectural prototypes

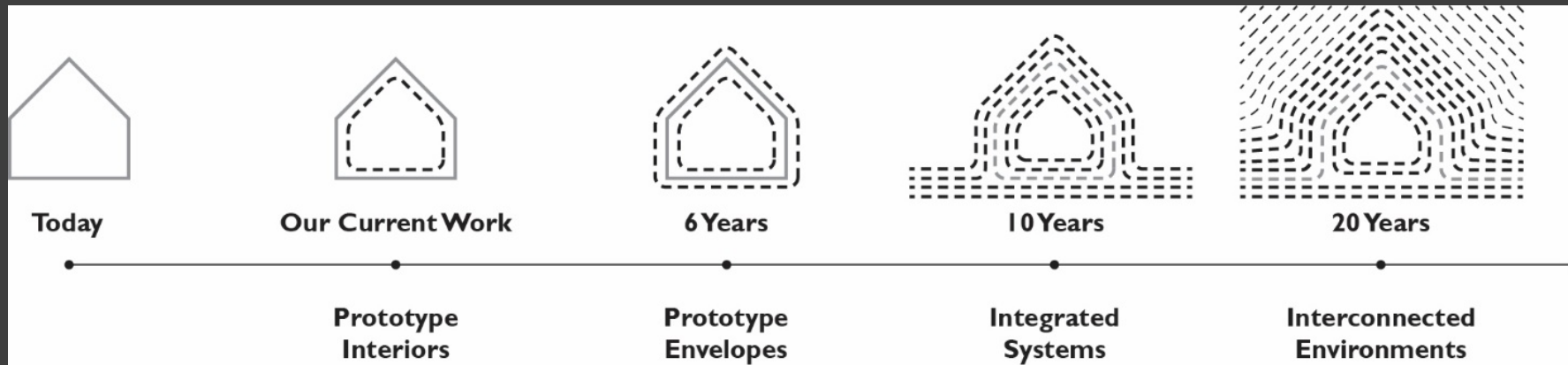


Diagram of LASG and Information Visualization Lab's long-term evolution of prototyped Living Architecture, accompanied by complex system visualizations, expanding from interiors, to exteriors, to interconnected buildings and environments.

Source: LASG presentation

SYSTEMS: Internet of Things



SOURCE: [HTTP://IMAGES.HUFFINGTONPOST.COM/2016-07-12-1468314021-5633148-INTERNETOFTHINGS.JPG](http://images.huffingtonpost.com/2016-07-12-1468314021-5633148-INTERNETOFTHINGS.JPG)

How can we help users
engage in intelligent systems
(such as the IoT) through
visualizations?

FUSION: Meet Cyclops and our Augmented Reality App!

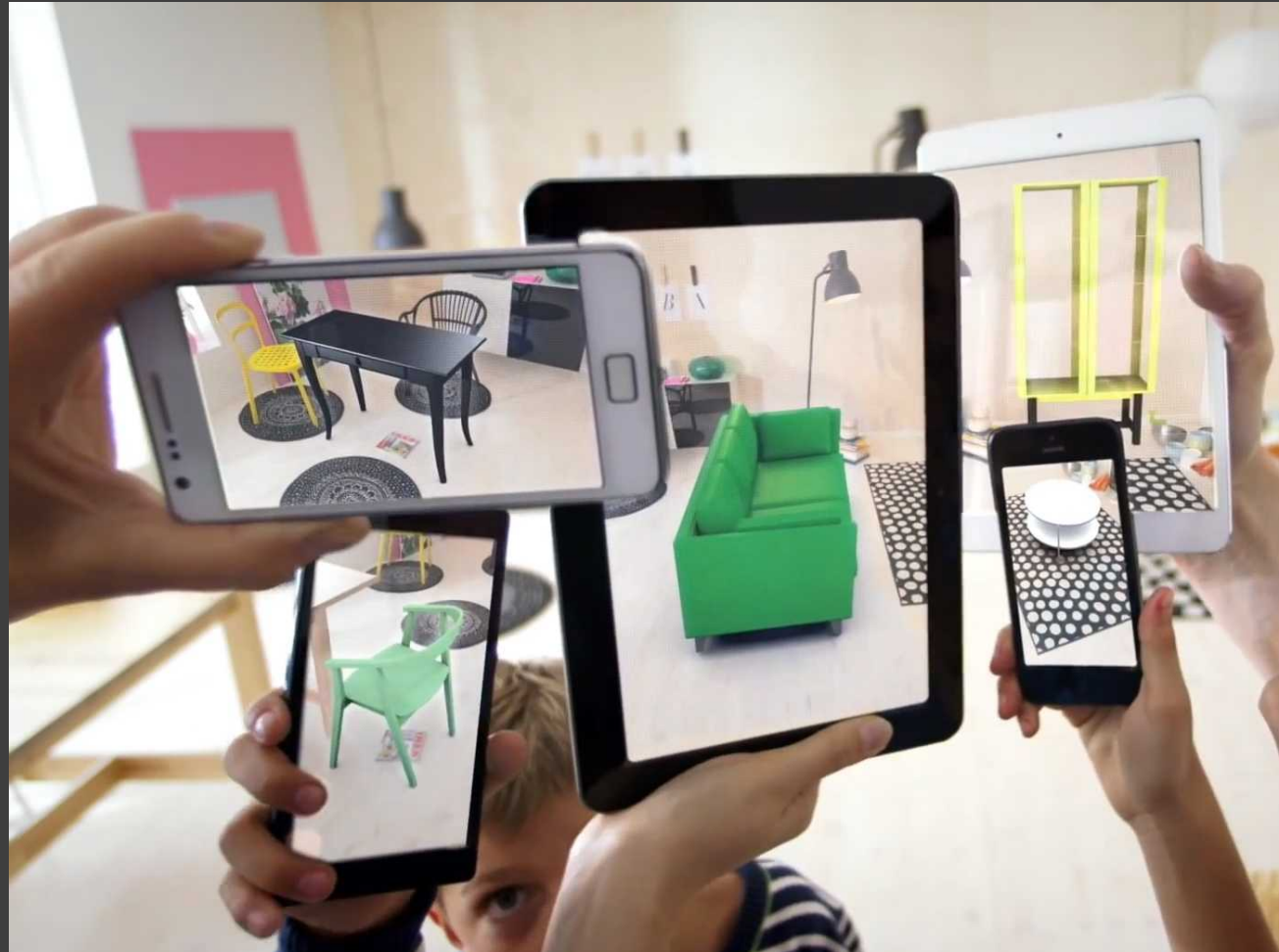
3 CRICKETS

1 SENSOR

SEVERAL MICROPROCESSORS



What is AR?



Source: <http://opticsgamer.com/wp-content/uploads/2015/03/augmented-reality-devices.jpg>

FUSION: Cyclops AR App

- ▶ Our goal:
 - ▶ Allow people to peak behind the curtain
 - ▶ Encourage visitors to ask questions
 - ▶ Educate user to read data generated from an intelligent system
 - ▶ Do research about data visualization literacy in intelligent systems