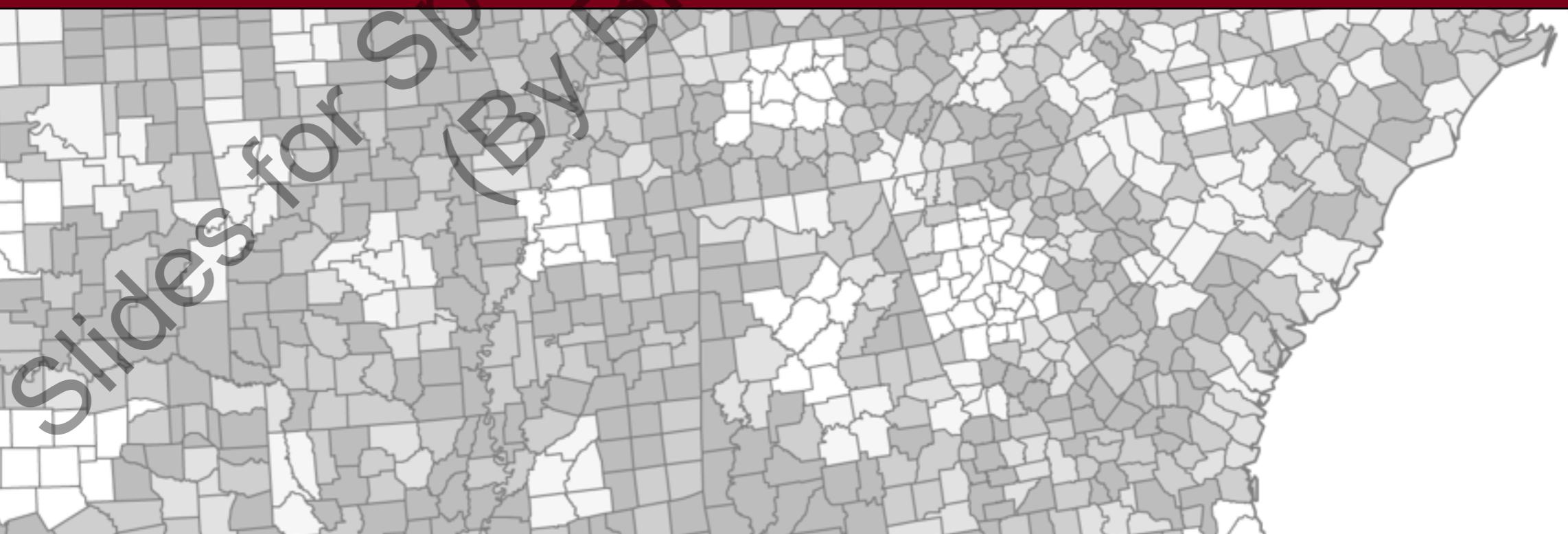




Cartography

Spatial Computing – University of Minnesota



Cartography

Spatial Computing – University of Minnesota

Learning Objectives

Slides for Spatial Computing MOOC
(By Brent Hecht)

Cartography

Spatial Computing – University of Minnesota

Learning Objectives

1. Understand the drastically **changed** (and changing) **professional context** of modern cartography.

Slides for Spatial Computing MOOC
(By Brent Hingtgen)

Cartography

Spatial Computing – University of Minnesota

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1. Understand the drastically **changed** (and changing) **professional context** of modern cartography.
2. Be able to distinguish between and understand the purpose of the two major types of maps: **reference and thematic**.

Slides for Spatial Computing MOOC
(BY-Bretschneider)

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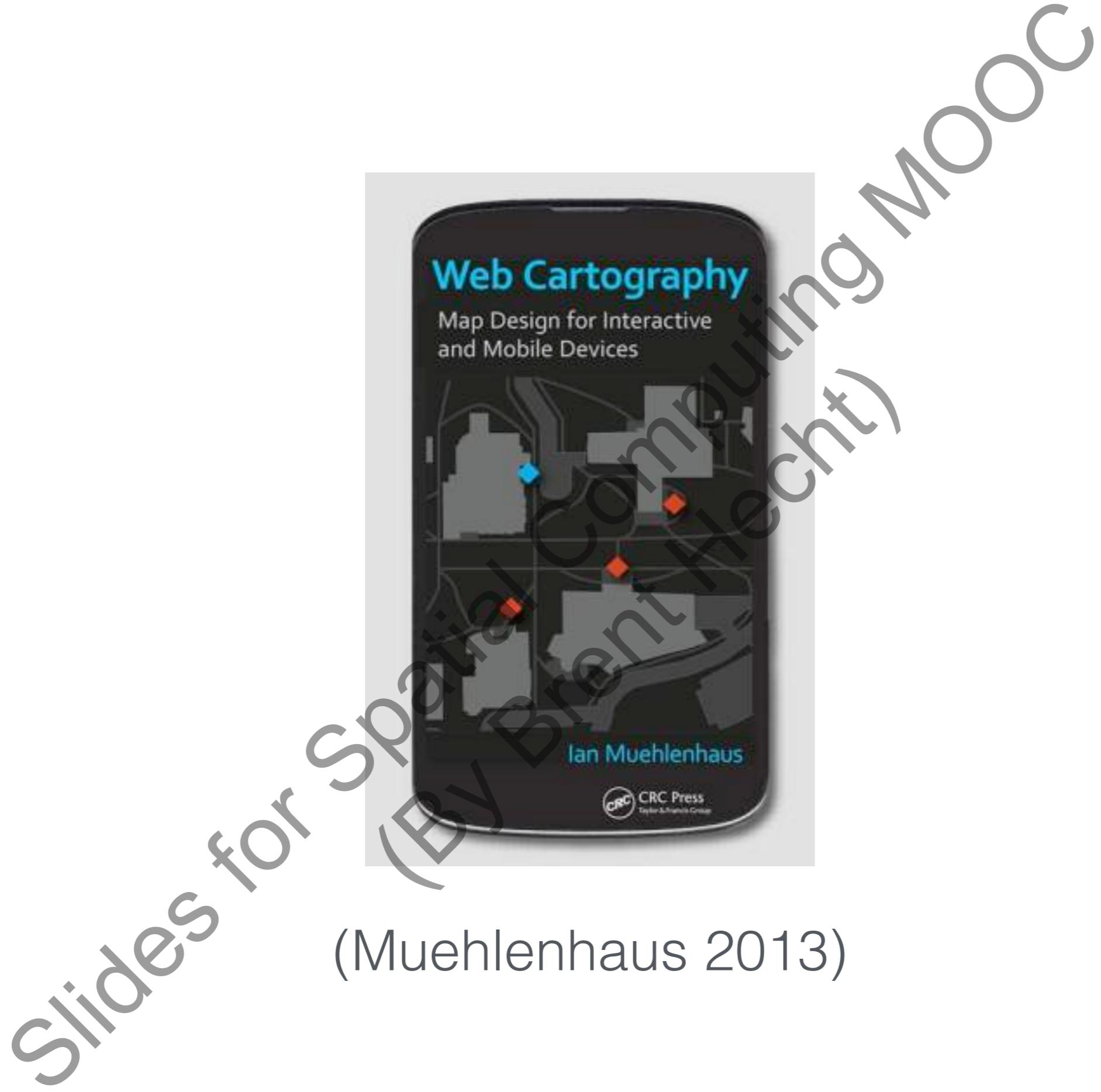
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(Muehlenhaus 2013)



“All maps are a form of geo-communication. They are designed to **communicate something** about our **spatial environment** to a **map reader or user**... Geo-communication is at the core of defining what a map is because it exemplifies what a map does.”

(Muehlenhaus 2013)



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“Excellent maps are designed with a communicative purpose [in mind]. A map that merely represents data is no more useful than an encyclopedia.”

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www.telegraph.co.uk/news/worldnews/europe/spain/5978900/Worlds-oldest-map-Sp

Google

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World's oldest map: Spanish cave has landscape from 14,000 years ago

Archaeologists have discovered what they believe is man's earliest map, dating from almost 14,000 years ago.

"mountain"
"cave"
"access" to cave
"pass": ford or bridge?
"relief" design
ibex herd
schematic ibex
river
red deer

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Slides for Spatial Computing by Brent

Google Maps – from: 602 townsend street, san francisco, ca to: 345 park avenue, san jose, ca

<http://maps.google.com/>

Google Maps™ BETA

[Maps](#) [Local Search](#) [Directions](#)

602 townsend street, san francisco, ca ↳ 345 park avenue, san jose, ca

Start address End address

Search

Maps

Map - [Satellite](#) New!

[Print](#) [Email](#) [Link to this page](#)

Start address: 602 Townsend St
San Francisco, CA 94103,
USA

End address: 345 Park Ave
San Jose, CA 95110, USA

Distance: 47 mi (about 43 mins)

[Reverse directions](#)

0. Head **northeast** from Townsend St - go 0.0 mi

1. Turn **right** at 7th St - go 0.5 mi

2. Bear **left** at Mississippi St - go 0.2 mi

3. Turn **left** at Mariposa St - go 0.1 mi

4. Turn **right** into the I-280 S entry ramp to Daly City/San Jose - go 2.1 mi

5. Take the US-101 S ramp to San Jose - go 40 mi

...

6. Bear **right** onto the CA-87 ramp - go 0.3 mi

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Map data ©2005 NAVTEQ™ Tele Atlas

Slides for Spatial BY Present Tech

(Jackson 2005)

NACIS 2011

madison, wisconsin

October 12-14, 2011

The Madison Concourse Hotel



photo courtesy of ann althouse

CARTOGRAPHY & INFORMATION DESIGN

TECHNIQUE • PUBLIC SERVICE • GEOHACKING • MAP COLLECTION • ART • RESEARCH • GEODESIGN

Google Maps: There are very few cartographers involved



(Muehlenhaus 2013)

Slides for Spatial Computing Mooc
(By Brent Hecht)



“Today, a majority of online and mobile maps are created by computer scientists, Web designers, or self-taught coders...In essence, it seems the craft of online mapmaking has developed without too much input from the discipline of cartography itself.”

(Muehlenhaus 2013)



The dominance of computer science in cartography will persist unless “academic programs can **synthesize** the massive amount of **new knowledge** dealing with online and interactive maps and **contribute back to those actually designing maps**”.

(Muehlenhaus 2013)

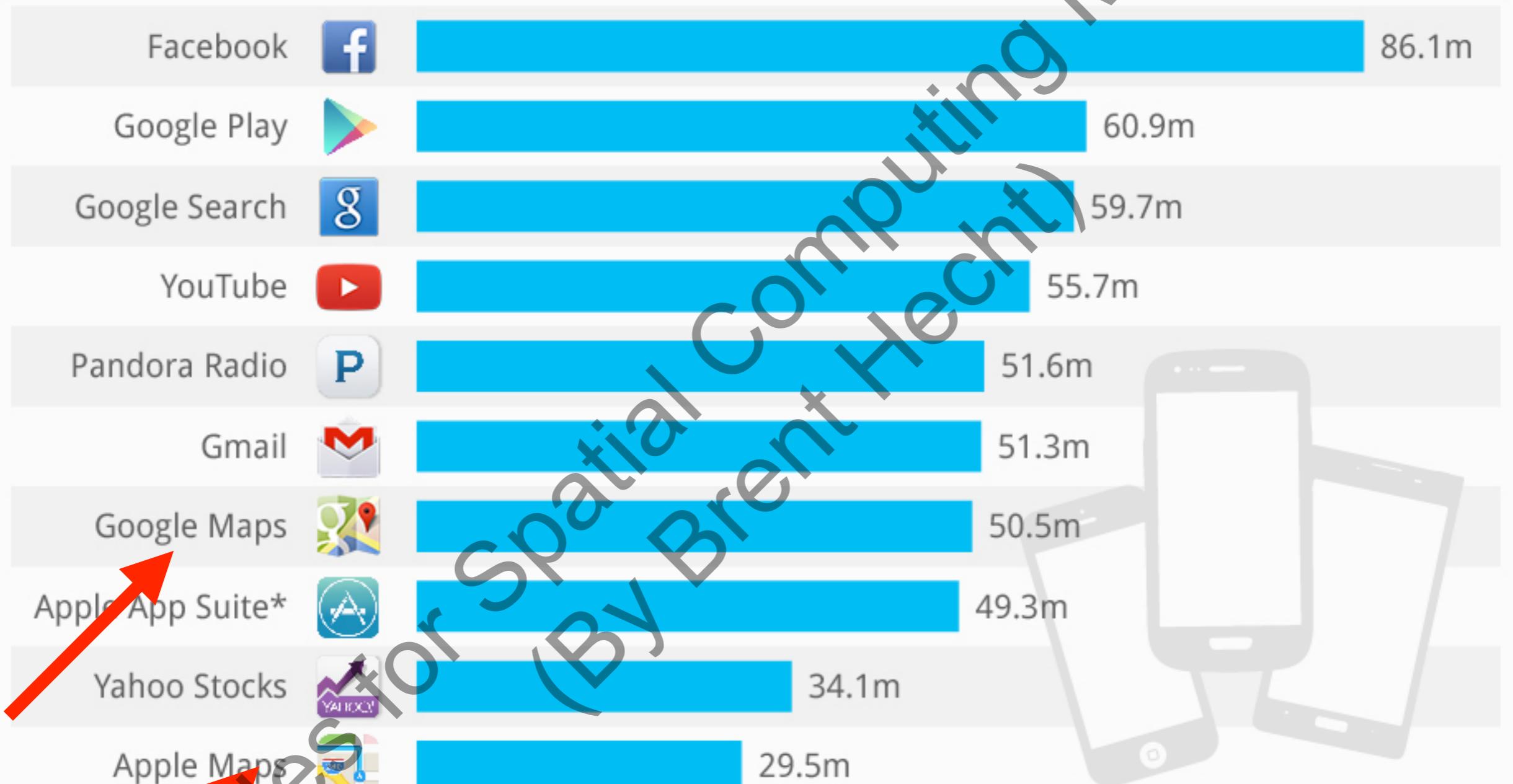


Slides for Spatial Computing
Brent Hecht

WOOOC

The 10 Most Popular Apps in the U.S.

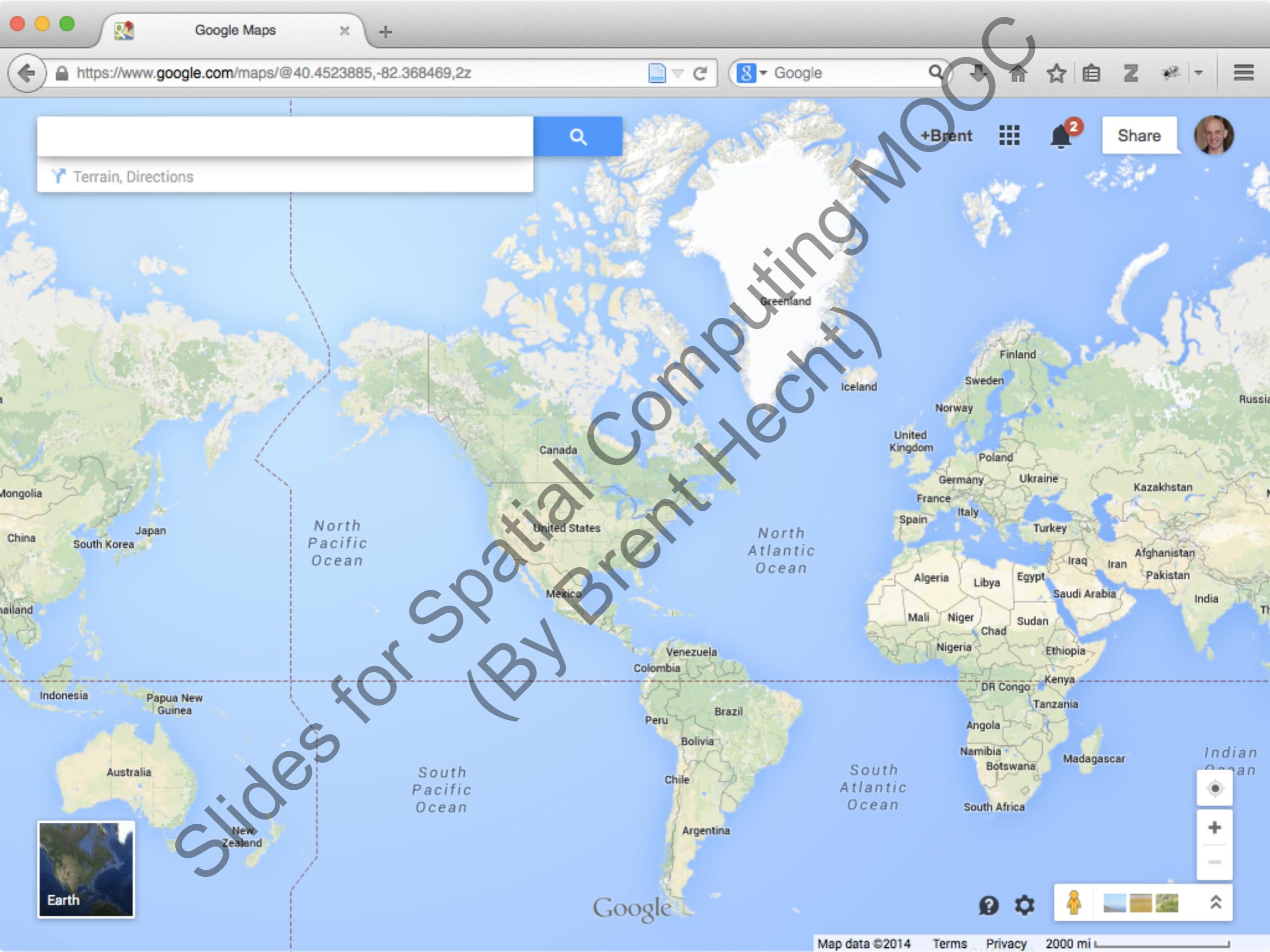
Average monthly users (18+) of the most popular smartphone apps in the United States in 2013



* includes iTunes, App Store and Game Center

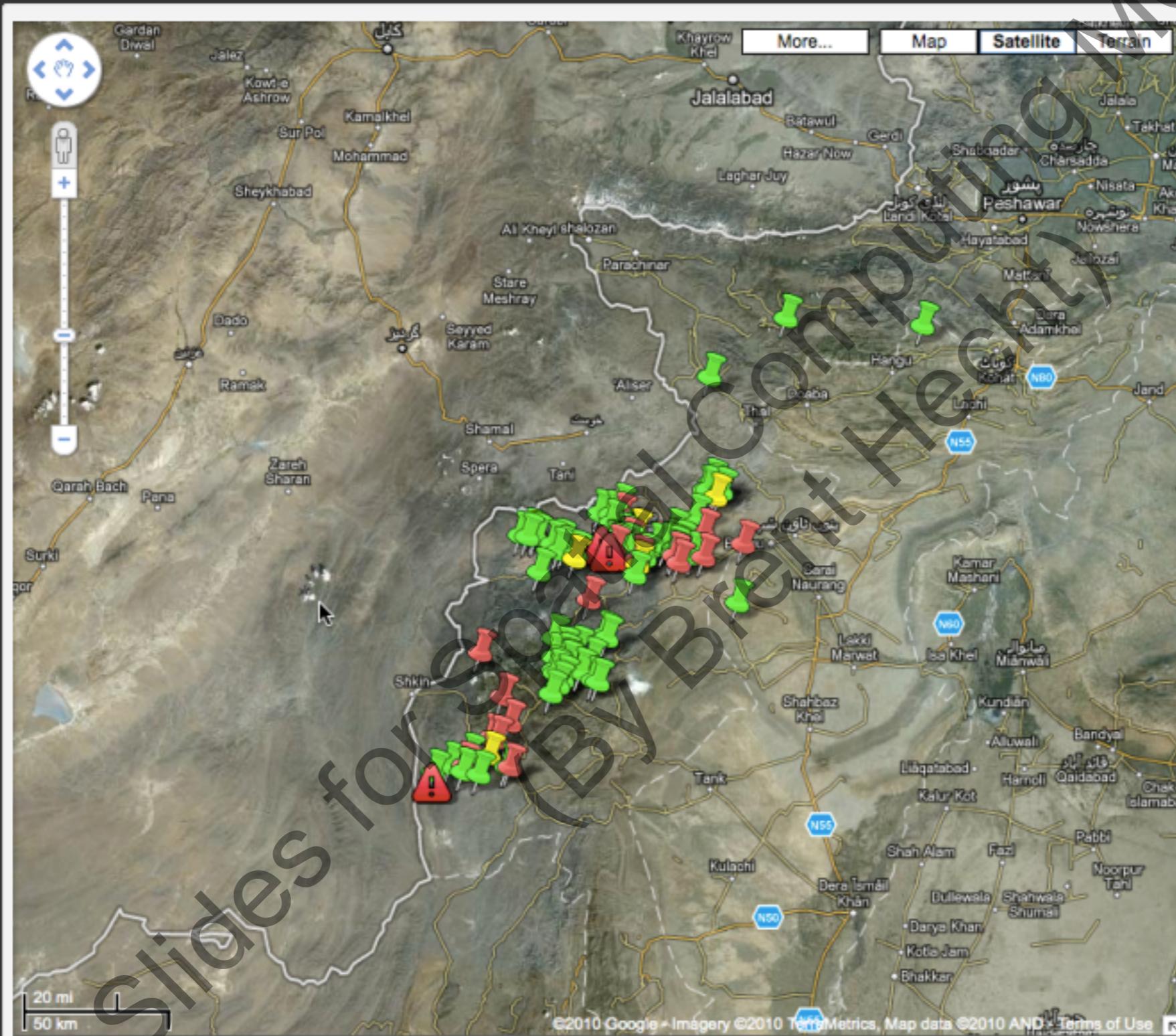
Source: comScore

Mashable statista





A colleague of mine, Tim Wallace, recently alerted his classmates to the existence of this Google MyMaps mashup of US drone attacks in Pakistan:



time machine

- August 2014
- October 2012
- June 2012
- April 2012
- January 2012
- September 2011
- February 2011
- January 2011
- December 2010
- October 2010
- September 2010
- June 2010
- May 2010
- March 2010
- February 2010
- November 2009
- October 2009
- September 2009
- August 2009
- July 2009
- June 2009

other things about maps

- [Andy Woodruff](#)
- [Atlas of Design](#)
- [Axis Maps blog](#)
- [indiemaps](#)
- [Making Maps](#)
- [Strange Maps](#)

other things in general

- [FlowingData](#)
- [I Love Typography](#)

categories

- [Animated \(1\)](#)
- [Author Criticism \(5\)](#)
- [Choropleth \(9\)](#)

<http://cartastrophe.wordpress.com/2010/03/22/a-war-without-humans/>



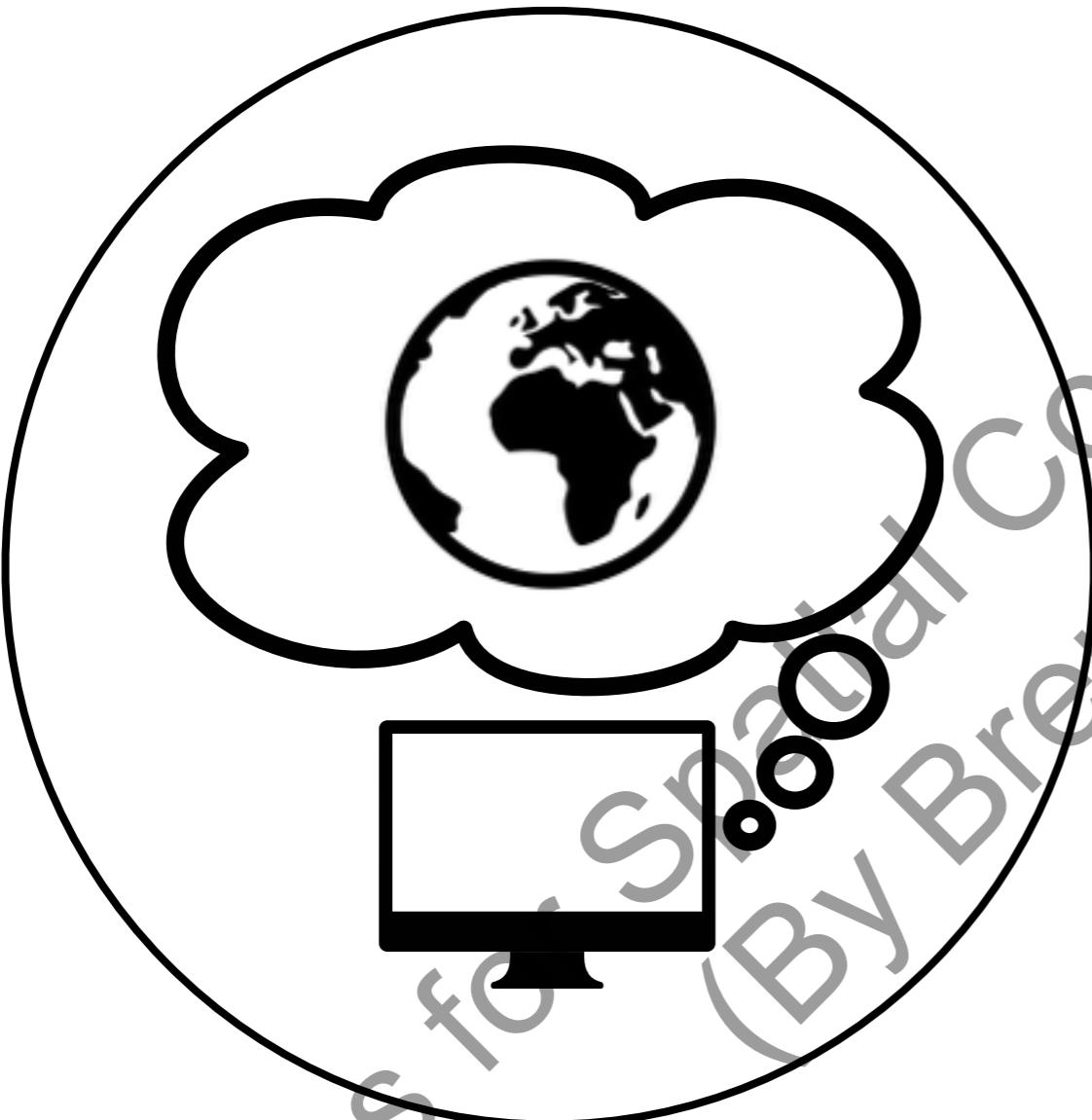
(Muehlenhaus 2013)

“The forthcoming pages demonstrate just how **different Web cartography is from paper mapping**, but they will also impress on you the fact that, for all of the differences, **many of the core tenets of cartography remain intact**”.

Two groups of people are essential to the future of online/mobile maps:

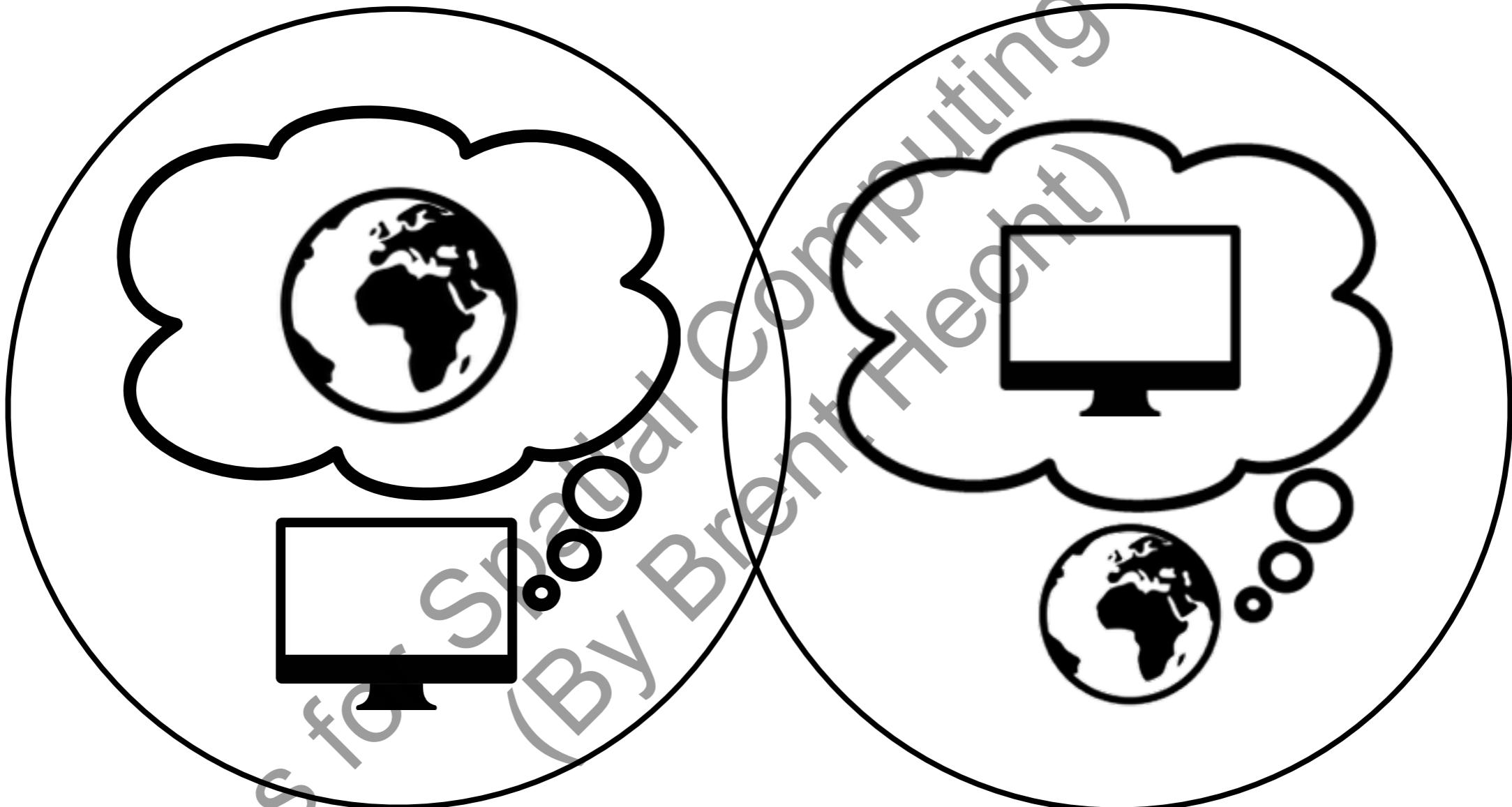
Slides for Spatial Computing MOOC
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Two groups of people are essential to the future of online/mobile maps:



Computing-oriented folks
who lack a formal
cartography background

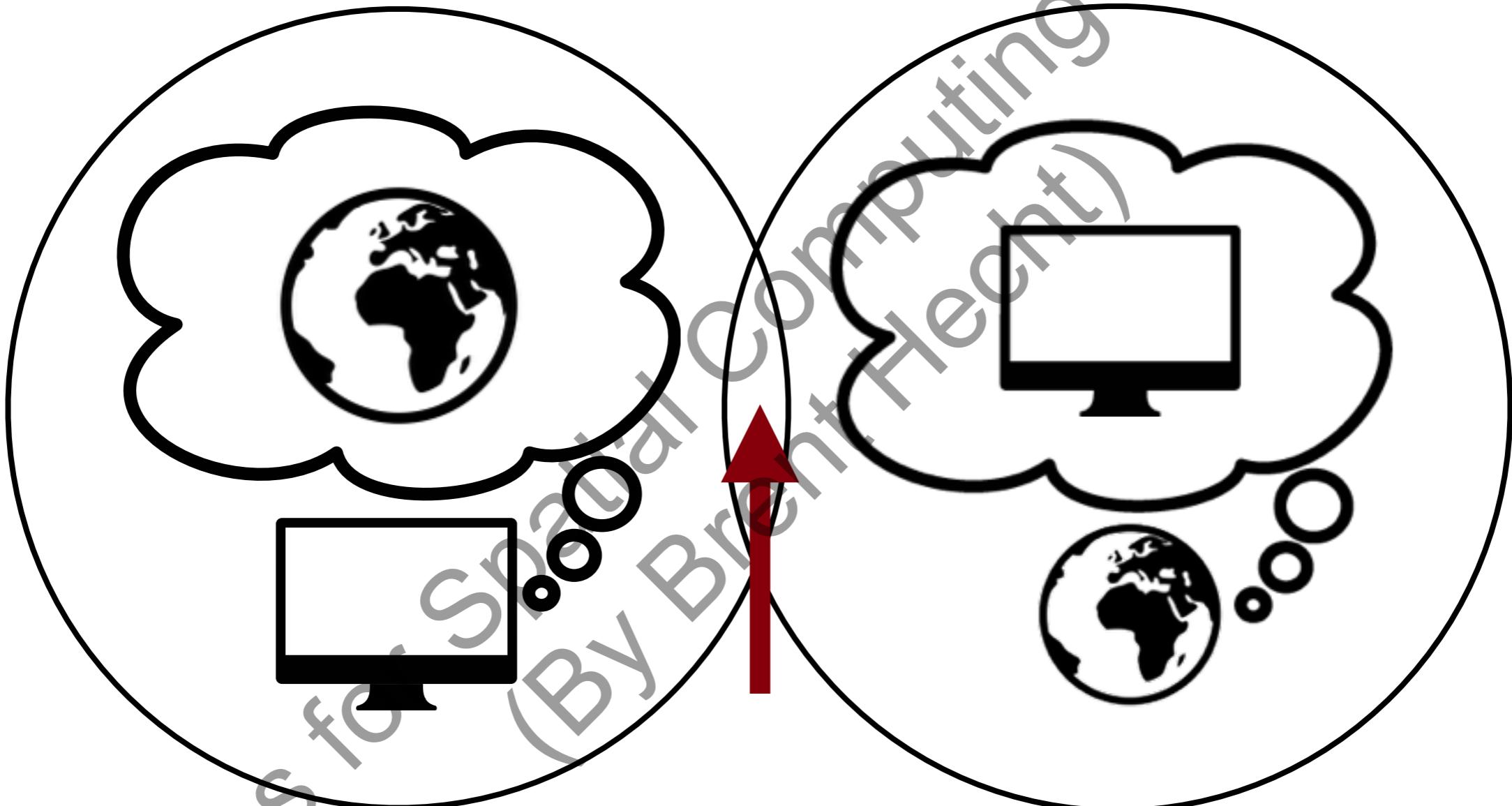
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