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Beyond Reality: Expanding Your Library's Services to the Virtual

Varnum, Kenneth J.

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BEYOND REALITY

EXPANDING YOUR LIBRARY'S SERVICES TO THE VIRTUAL

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Sharjah Library Conference
6 November 2019

Ken Varnum (MLS, MA)
University of Michigan
varnum@umich.edu

A Bit About Me

- Senior Program Manager at the University of Michigan Library

- Previous experience at small academic, corporate, and special libraries

- Edited books focused on library technology

  - Top Technologies Every Librarian Needs to Know (2014)

  - Exploring Discovery (2016)

  - New Top Technologies Every Librarian Needs to Know (2019)

  - Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library (2019)

- Editor of *Information Technology and Libraries*

Beyond Reality:
Augmented, Virtual, and Mixed Reality in the Library

Case studies about **"Realities"** in the Library

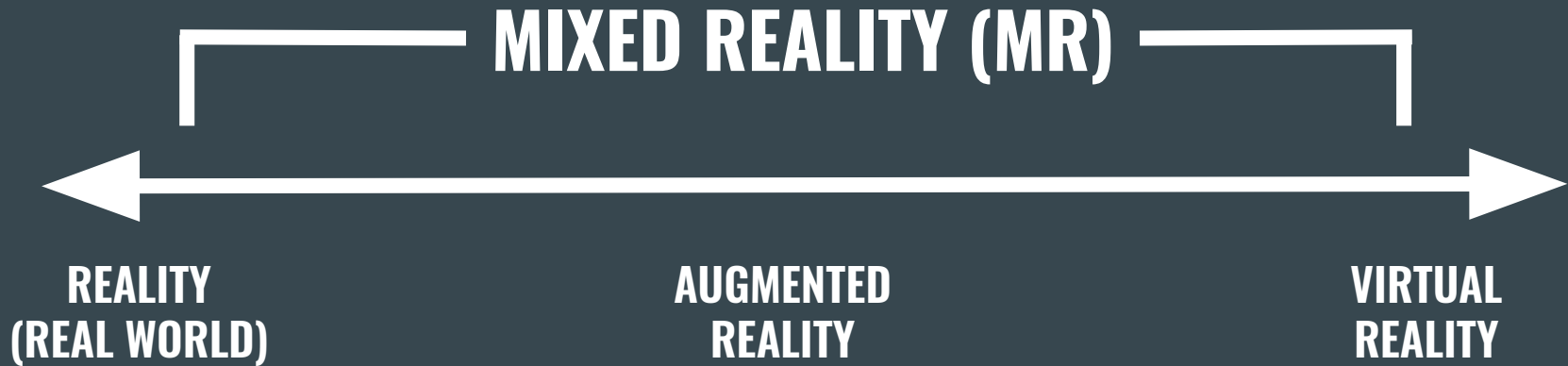Plus a chapter on legal considerations (in the U.S.A.)

Topics today

- Some definitions
- What libraries are doing today
- What should be on the 2-4 year horizon
- What we should keep in mind

BEYOND

REALITY

AUGMENTED, VIRTUAL, AND
MIXED REALITY IN THE LIBRARY

Edited by Kenneth J. Varnum

DEFINITIONS

Reality is a Continuum

MIXED REALITY (MR)

REALITY
(REAL WORLD)

AUGMENTED
REALITY

VIRTUAL
REALITY

Definition: Mixed Reality (MR)

MIXED REALITY

A continuum of experience that extends from slightly augmented experiences to something almost completely virtual.

The range of experiences that we are likely to have in the real world.

Definition: Augmented Reality (AR)

AUGMENTED REALITY

An enhanced version of reality created by the use of technology to overlay digital information on an image of something being viewed through a device (such as a smartphone camera)

EXAMPLES

Heads-up displays in cars or aircraft, popular Pokémon Go kids game, Layar, Google Translate

Definition: Virtual Reality (VR)

VIRTUAL REALITY

An artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment

EXAMPLES

Oculus Rift, Google Cardboard

Popular movies -- *Ready Player One*, for example

STARTING POINTS
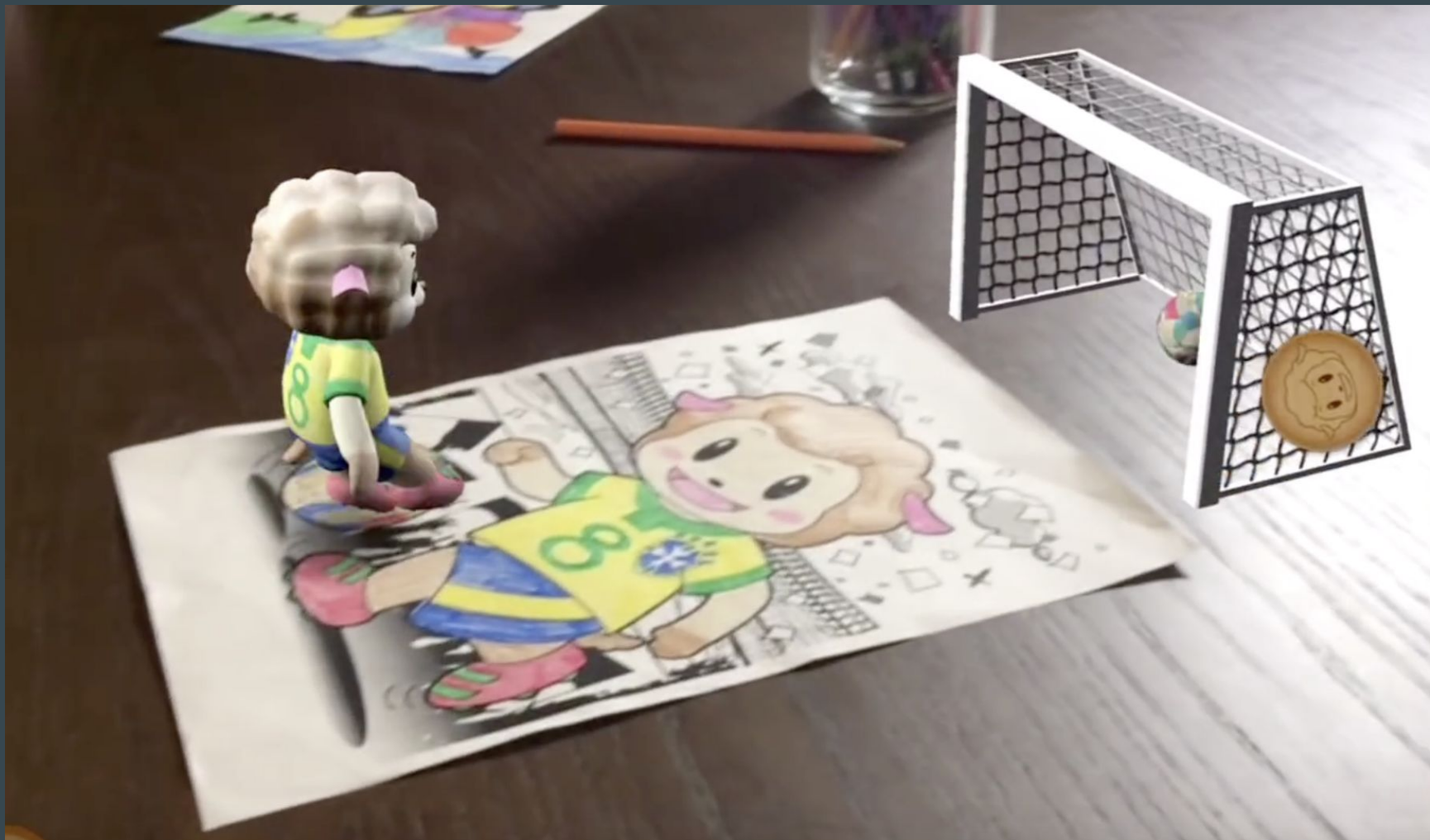
Quiver Coloring Books

Quiver AR coloring books

Implemented at White Plains
Public Library (NY)

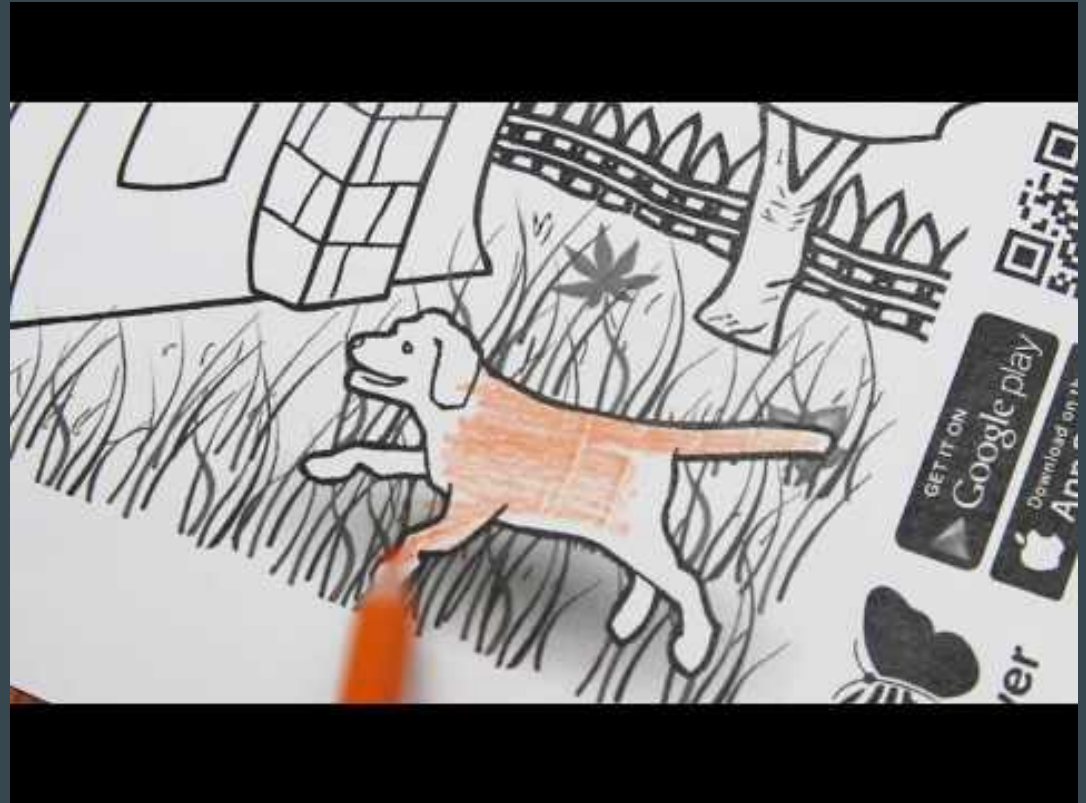Special coloring books

Tablet/phone app

Austin Olney, "Augmented Reality: All about Holograms," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

Quiver Coloring Books

Quiver AR coloring books

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Special coloring books

Tablet/phone app

https://www.youtube.com/watch?v=6NVo0Mcoi18

Austin Olney, "Augmented Reality: All about Holograms," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

Minecraft

Visualize Minecraft constructions

Export as .OBJ files

Uses Microsoft Hololens VR goggles

See the model projected in space

Chad Clark, "Extended Reality in Informal Learning Environments," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

Makerspaces and 3D Labs

What someone designs may not be printable
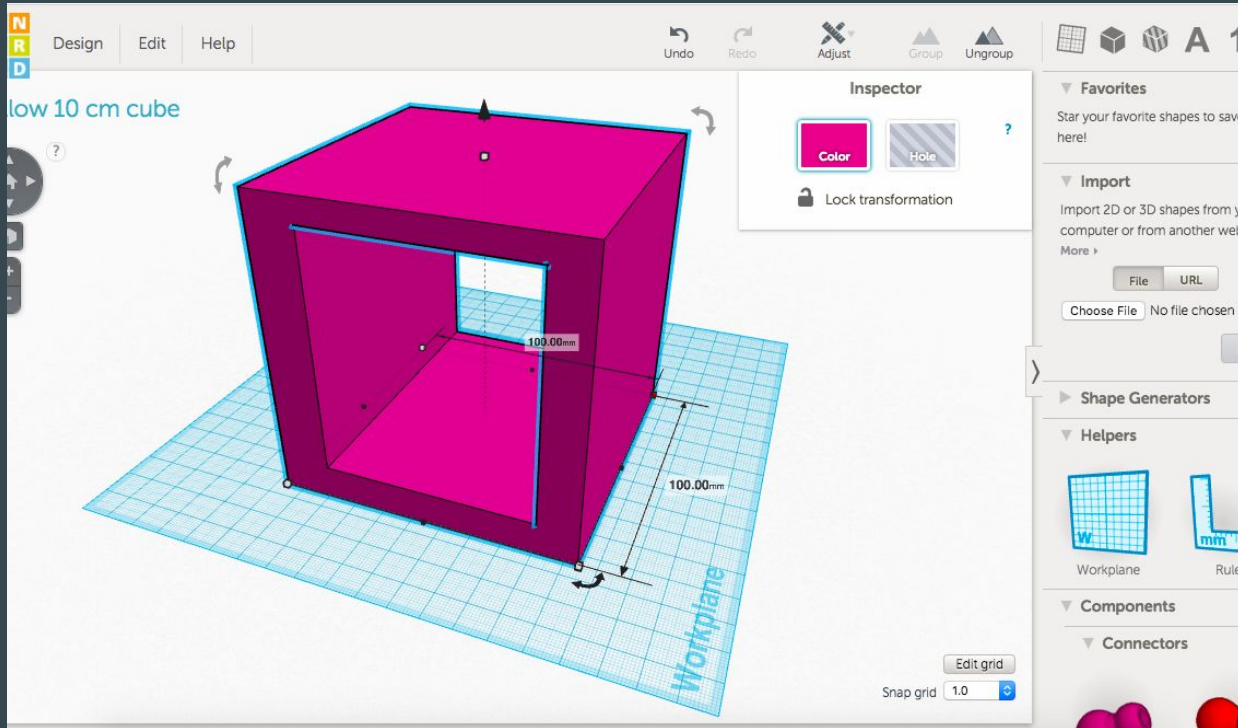
Build a shape, and visualize it

Or, use VR tools to build the object first

Find the problems

Verify Shapes before 3D Printing

Bohyun Kim, "Virtual Reality for 3D Modeling," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

Provide the Experience — Entry Level

Headset:
Google Cardboard & a smartphone

Content from lots of sources

I like the *NY Times* VR experiences, but there are many.

https://www.vice.com/en_us/article/539epa/google-cardboard-mars-vr

Provide the Experience — Virtual Library in the Community

Put your library's local history into the community

Have a historical image collection? Geotag it so that users can see what the street looked like "back then"

Add information about historical figures to places they lived, worked

https://www.vice.com/en_us/article/539epa/google-cardboard-mars-vr

William Denton, "Libraries and Archives Augmenting the Virtual World," *Top Technologies Every Librarian Needs to Know*, ALA TechSource 2014.

Provide the Experience — High End

Headset: HTC Vive, Oculus Rift, etc.
Dedicated space (6' x 5')
Dedicated hardware

Bohyun Kim, "Virtual Reality for 3D Modeling," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

Virtual Meeting Space — "Future End"

You may remember "Second Life" from 10 years ago

Virtual meetings are likely the next step after "telepresence"

It's a way for library patrons to meet virtually -- job interviews, education, etc.

In academic libraries -- imaging hosting virtual conferences for academic departments

CONSIDERATIONS

Practical Considerations

Budget

Space

Training (library staff & library users)

Security

Staying up to date

VR can make some users motion sick; hasn't been completely solved

Social Considerations

Augmented, Virtual, Mixed Reality - this is all new

Digital divide could grow even greater

Common sense a great guide

So many social norms to figure out

Legal Considerations

A great deal about intellectual property law and virtual reality not yet decided (legally)

Many parallels to 2D image and print world

Who owns rights to one's digital avatar, digital creations?

What can be included in a created virtual space?

How do legal considerations change if the library is "publisher"?

Michael Riesen, "Augmented Reality and Virtual Reality and their Legal Implications for Libraries," *Beyond Reality: Augmented, Virtual, and Mixed Reality in the Library*, ALA Editions 2019.

OUR { DYSTOPIAN
UTOPIAN } VIRTUAL FUTURE

Dystopian or Utopian?

We've seen movie examples of virtual reality used for better and/or worse.

- *The Matrix*
- *Avatar*
- *Ready Player One*

People are people: any challenges you might have with library users in the real world will have analogs in the virtual

OUR ~~DYSTOPIAN~~ **UTOPIAN** VIRTUAL FUTURE

Extended Reality Is Here — It's Just Not Everywhere. Yet.

However it shapes up, augmented & virtual reality are that: reality

A lot to figure out

But so many opportunities to take part and expand the library's presence

Thank You

Ken Varnum
varnum@umich.edu