

2019-06-06

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

Varnum, Kenneth J.

<https://hdl.handle.net/2027.42/149452>

<http://creativecommons.org/licenses/by-nc-nd/4.0/>

Downloaded from Deep Blue, University of Michigan's institutional repository

BEYOND REALITY

EXPANDING YOUR LIBRARY'S SERVICES TO THE VIRTUAL



2019 Emerging Tech Symposium: AR/VR - Immersive Realities

Ken Varnum

<https://www.varnum.org/>

@varnum / kvarnum@mac.com

A Bit About Me

- Senior Program Manager at U-M Library
- Previous experience at small academic, corporate, and special libraries
- Editor of *Information Technology and Libraries*
- Wrote a book on Drupal
- Edited 5 library technology-focused books

Beyond Reality:

Augmented, Virtual, and Mixed Reality in the Library

A series of case studies about **VR** in the Library

Plus a chapter on legal considerations

Topics today

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



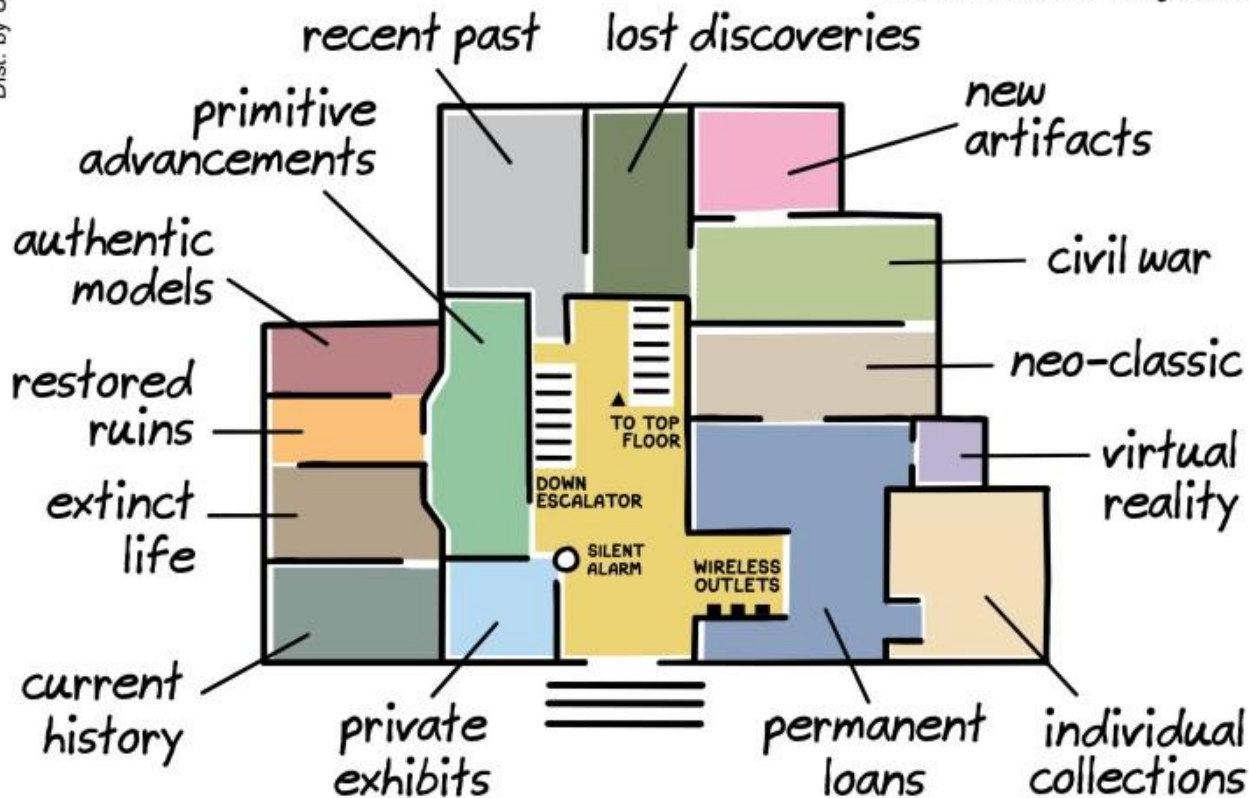
DEFINITIONS

Some Definitions

Dist. by Universal Uclick

at the oxymoron museum

©John Atkinson, Wrong Hands



©John Atkinson, Wrong Hands • gocomics.com/wrong-hands • wronghands1.com

Definition: Augmented Reality

AR AUGMENTED REALITY

VR

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)

MR

EXAMPLES

XR

Pokémon Go, heads-up displays in jets or cars, Layar, Google Translate

Definition: Virtual Reality

AR VIRTUAL REALITY

VR *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*

MR

EXAMPLES

XR Oculus Rift, Google Cardboard, what was at the core of *Ready Player One*

Definition: Mixed Reality

AR **MIXED REALITY**

VR *A continuum of experience extended from slightly augmented to everything nearly virtual.*

MR

XR



Definition: Extended Reality

AR EXTENDED REALITY

VR *XR is a superset which includes the entire spectrum from “the complete real” to “the complete virtual.”*

MR

XR

STARTING POINTS

Quiver Coloring Books

Quiver AR coloring books

Implemented at White Plains
Public Library (NY)

Special coloring books

Tablet/phone app



<https://youtu.be/B09Mj6tLrx8>

Minecraft

Visualize Minecraft constructions

Export as .OBJ files

Uses Microsoft Hololens VR goggles

See the model projected in space

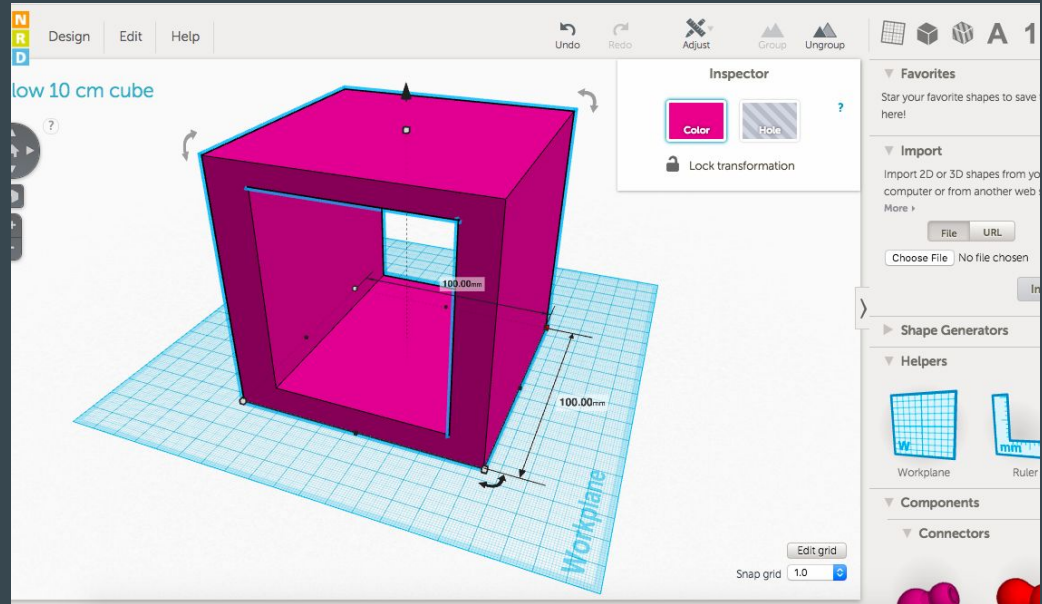


Verify Shapes before 3D Printing

What someone designs may not be printable

Build a shape, and visualize it

Find the problems



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



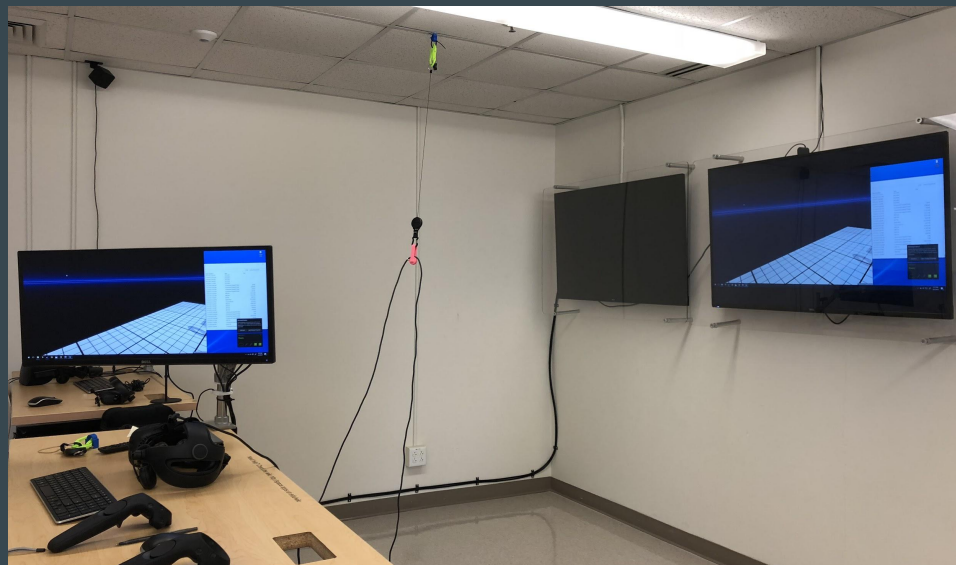
https://www.vice.com/en_us/article/539epa/google-cardboard-mars-vr

Provide the Experience — High End

Headset: HTC Vive, Oculus Rift, etc.

Dedicated space (6' x 5')

Dedicated hardware



Virtual Meeting Space — “Future End”

Anybody recognize this virtual world?

Way for library patrons to meet
virtually -- job interviews, education

So many social norms to figure out



https://upload.wikimedia.org/wikipedia/commons/c/c6/Second_Life_11th_Birthday_Live_Drax_Files_Radio_Hour.jpg
HyacintheLuynes [CC BY-SA 3.0 (<https://creativecommons.org/licenses/by-sa/3.0/>)]

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

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”?

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*

We're very good at taking a technology to extremes

Anything good (or bad) we do in the real world WILL happen in the virtual

OUR ~~{ DYSTOPIAN
UTOPIAN }~~ VIRTUAL FUTURE

Extended Reality Is Here — It's Just Not Evenly Distributed

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 footprint
(without a building permit)

Thank You

Ken Varnum

<https://www.varnum.org/>

@varnum / kvarnum@mac.com