IMPLEMENTATION OF GAMING TECHNOLOGY IN EXHIBITION DEVELOPMENT

GIVING YOUR EXHIBITS VIRTUAL LIFE
PRESENTATION OUTLINE

• Project Background
• Exhibit Creation
  • Physical
  • Virtual
• Missteps & Next Steps
• Q&A
EASTERN MICHIGAN UNIVERSITY

- One main library on campus
- Faculty librarians
- Support more than 200 majors, minors and concentrations
- 23,000 students

Image courtesy of the Eastern Michigan University Archives
PROJECT BACKGROUND
EXHIBIT CREATION

PHYSICAL
RESEARCH

- Student Assistance
  - Graduate Student in History, volunteer
  - Graduate Student in Historic Preservation, paid

Image courtesy of the Eastern Michigan University Archives
CURATING & WRITING

- Space Constraints
- Content Structure
- Write, edit, rewrite... repeat
- Material selection

Image courtesy of the Eastern Michigan University Archives
The tradition of Track and Field at Eastern Michigan University has a history spanning more than 125 years. The sport of Track and Field on campus began as early as 1882 and has grown into one of the most successful athletic programs at EMU. This exhibit documents the success that was made possible by the dedicated athletes, talented coaches, and a supportive school.
HISTORY OF THE SPORT @ EMU

On the sport of Track and Field began to expand at Michigan State Normal College, as did its alumni following. Track and Field created a family among the athletes and their continuation was found after graduation through the Alumni Club. Photographed is a Track and Field Alumni Club event in 1946, junior team members from 1936-1947 were in attendance. The tradition continues through the efforts of Track and Field fans alumni and former track athletes with their annual alumni events to hundreds of Track and Field alumni.
COACHING
ATHLETES

2014 March 19
LibTech 2014--Barnes and Braun Marks on behalf of EMU
TIMELINE JS

Embedded timeline created utilizing content (text and images) from the cased exhibit
CREATING TIMELINE

Spreadsheet

Flickr

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CREATING TIMELINE

Publish to the Web with Timeline JS

Embed Media & Widget

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RESOURCES

• Human
  • Paid and Unpaid
    ~200 hours

• Materials
  • Foam core
  • Craft paper
  • Specialty printing
  • Adhesives
    ~$120-140
NOW WHAT?

Image courtesy of the Eastern Michigan University Archives
EXHIBIT CREATION

VIRTUAL
IN THE BEGINNING...

• Ready Player One
  • By Ernest Cline
OBSESSED WITH TECHNOLOGY

- Kinect for Xbox 360
- Oculus Rift
- Razer Hydra
- Speech-to-Text Software
OBSESSED WITH TECHNOLOGY

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What platform can bring all this together???
PICKING A PRODUCT

Unity3D

• Specs:
  • Windows XP with SP2 or later; Windows 7 with SP1 or later; Windows 8; Mac OS X Snow Leopard 10.6 or later. Note that Unity was not tested on server versions of Windows and OS X. Windows Vista is not supported.
  • Graphics card with DirectX 9 level capabilities. Any card made since 2004 should work.
  • Using Occlusion Culling requires GPU with Occlusion Query support (some Intel GPUs do not support that).

Unreal Engine (UDK)

• Specs:
  • Windows 7 64-bit
  • 2.0+ GHz multi-core processor
  • 8 GB System RAM
  • NVIDIA 8000 series or higher graphics card
  • Plenty of HDD space
What’s cool, new and made with Unity?

The games in our gallery. Meet a young woman trapped within a shadowy totalitarian state, a depressed and destructive cat, a ravaging horde of zombies and more...

Great Unity games
WHY UNITY3D?

• Lower computer specs (for my work computer)
• Works well with all the peripherals
• Has plenty of training documentation
• Mentioned to me by Faculty
UNITY COSTS
(aka: I’ve got my mind on my money
and my money on my mind.)

• Free… sorta
  • Standalone, webplayer, iOS, Android, all included
  • Xbox and Playstation not included
• Special Functions available on the developer’s version ($1500)
• Assets
ADDITIONAL PROJECT RESOURCES

Staff Time

• Initially, there is a steep time commitment
• New things to learn
  • Unity3D software
  • C# and JavaScript (MonoDevelop is supplied with Unity)
  • Photoshop
  • Blender for 3D modeling
• Remembering High School Math

eFellows

EMU sponsored grant that paid for the purchase of:

• Oculus Rift VR display
• Razer Hydra Game Controller
• Dragon Naturally Speaking speech to text software
• $300 in Unity3D assets

LibTech 2014--Barnes and Braun Marks on behalf of EMU
ASSETS

- Asset Store comes free with Unity
- Some have associated costs
- Plenty of free assets
- Some extravagant scenes are available for free
FREE ENVIRONMENT EXAMPLE
PUTTING IT ALL TOGETHER

Image courtesy of the Eastern Michigan University Archives
BUILDING AN OBJECT - THE BASICS
BUILDING AN OBJECT – THE BASICS
BUILDING AN OBJECT – THE BASICS
BUILDING AN OBJECT – THE BASICS
THE TRACK SCENE
THE TRACK SCENE

2014 March 19

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THE TRACK SCENE
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GRAND IDEAS THAT FAILED (so far…)

- 3D scan of objects
- Imbedding DynamicWeb Pages like TimelineJS
- Interactive ‘hands-on’ activities
- Streaming Video (available in the enhanced version of Unity)
- Library Display Virtual Reality
OTHER CONSIDERATIONS

• Don’t recreate a photo or existing environment (at least initially)
• Don’t be a perfectionist
• Manage your time wisely
• Remember your non-gamer friends
NEXT STEPS

**Curation**
- Historic Gallery at EMU
- Partnership with Art Department
- Partnership with Historic Preservation Program
- Campus Tour/ Interactive Campus Map

**Technology**
- iOS or Android Development
- Partnership with Gaming Technology Students
- Partnership with GIS Lab and Students
QUESTIONS?

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LibGuide:
http://guides.emich.edu/unity3D

Image courtesy of the Eastern Michigan University Archives