SEARIS KEYNOTE PANEL
“REACHING HUNDREDS TO THOUSANDS OF LEARNERS”

BENJAMIN LOK
UNIVERSITY OF FLORIDA

SHADOW HEALTH, INC.
YOU MIGHT BE INTERESTED IN...

- Web-deployed interactive graphics
- Curricular-deployed VR
- Commercial VR
EXPERIENCES

- VR Researcher
  - Multiple medical schools
  - Focused teaching of a topic
EXPERIENCES

- Commercial developer
  - Dozens of schools and thousands of learners
  - Support course learning objectives
EXPERIENCES

- **VR Researcher**
  - Multiple schools
  - Small lessons

- **Commercial developer**
  - Dozens of schools
  - Thousands of learners
  - Semester long course
What APIs, libraries, frameworks, languages you have used in the development of VR/MR systems in your research?
- Others: Kinect API, VRPN, fmod (audio)
- Rendering: OGRE (game engine), Unity3D (multi-platform IDE)
- Distribution: Amazon S3 Cloud

How technologies have empowered and limited your work?
- Reach hundreds to thousands of users
- More support required

What are the features that you look for in the technology you used?
- Distribution
- Platform support
- IT/Firewall
DEVELOPMENT

- Curriculum
  - OGRE – Higher level code, better performance
  - Unity3D – less low level code, easier for new grad students
  - Formalized testing

- Commercial
  - Unity3D – easier for non CS-background employees
  - Amazon – Formalized posting and updating schedule
  - Formalized testing

- Changes take roughly one year.
SUPPORT

- Curriculum
  - Crashing, users don’t want to be a data-point
  - In class support (for both students and educators!)

- Commercial
  - Customer support can *improve* perception of product/company
  - Software updates
    - OGRE
    - Unity3D – browser updates
  - Dependent on others
- **Learners**
  - Tolerate
    - Some errors, if they learn
    - Some rough edges, if they don’t get in the way
  - Won’t tolerate/Concerns:
    - Grades!
    - Instructor
    - Time

- **Customers**
  - Tolerate
    - Errors, if they feel not getting in the way and if the system is improving (<- CS)
  - Won’t tolerate/Concerns:
    - Grades!
    - Instructor
    - Time
Customers need support

- **People** trumps technologies

Formalized testing (e.g. focus groups, load testing)

Architectures for web-deployable systems are quickly improving

What do you envision in systems in your future research?

- Improve distributed systems
- Improved graphics
- Standardized support (Chrome Native Clients)