OPEN SOURCE: AFSIM PERSPECTIVE

Thomas B. Talbot, MAJ, USA, MC
Telemedicine and Advanced Technology Research Center (TATRC)
United States Army Medical Research & Materiel Command (USAMRMC)

R&D Perspective: Business as Usual

- Redundant Development
  - Most money for R&D software goes into making the same assets over and over
  - Graphics are inferior to games from 10-15 years ago
  - Encourage use of inexpensive commercial game engines
- Other assets: Physiology, sounds, radiographs, etc hard to come by
- Less money goes to novel content under current model
- Limited number of developers have access to appropriate technology

An Example: Simulation Open Framework Architecture (SOFA)

Eye model (left external, right internal) rendered within SOFA

Why TOPS?

- Tri-Service Open Platform for Simulation
  - Reduce redundancy
  - Lower purchase costs
  - Enable a standard interface that scenario and software product makers can write to

Courtesy CMIT SimGroup.
PI: Dr. Stephane Cotin, research supported by USAMRMC / TATRC, award # W81XWH-07-1-0042
Developer Tools for Medical Education

Patient Focused Initiative

AFSIM

Combat Casualty Training Initiative

Medical Practice Initiative

Open Source Developer Tools

- Speech & Motion Recognition
- OS Medical Asset Library
- OS VR Anatomy & Haptic Platform
- OS Practical Physiology Engine
- OS Natural Language Processing
- OS NPC AI & Behavior
- OS Tests System Analysis
- OS Tests Clinical Performance
- OS Tests Technical Performance
- OS Tests Clinical Practice
- OS Tests Technical Practice
- OS Tests Clinical Innovation
- OS Tests Technical Innovation

OS Tools Delivery Portal

Affordable Training Content

OS Tools Creation

Patient Focused Initiative