

Name: Sanjeev N. Trika, *email: sanjeev.trika@intel.com*

Affiliation: Intel® Corp.

Fields of expertise: Web3D, modeling, CAD/CAM, VR, real-time simulations, software development

Key opportunities for Web-based Modeling and Simulation?

- Faster systems: desktops, servers, handhelds, networks.
- Dedicated inexpensive 3d hw
- Standards emerging for various components.
- Consumer, industry and military applications can rely on this combination of power.
- Many apps!
 - Consumers –E.g., games, home layout, sprinkler system layouts, etc.
 - Industry –E.g., providing tools to consumers for the above, simulating processes for research, e-training on tools, simulating network layouts, etc.
 - Military –E.g., scenarios listed in the whitepaper.

What are the key open problems?

- Time management. Implicit and explicit simulations, plus strategies.
- Distributed computing and user environment
 - Scheduling tasks and simulation steps
 - Synchronizing
 - Scalability – varying performances and network characteristics
- Autonomous intelligent characters.
- Compressed streaming file formats.
- Authoring scenarios/content is almost always hard and laborious.
- Finding a common framework:
 - Functionality and quality are common requirements among all three “customers”:
 - Consumers – ease of use and cost are also primary concerns.
 - Industry – return on investment is also a primary concerns.
 - Military – security, large scale deployment are also primary concerns

Specific recommendations re workshop issues and challenges?

- Personally very happy that open cross-platform standards are being adopted for various components wherever applicable.
- This is a *huge* project, with a very broad goal. Glad to see that we are breaking it up.
- Example demonstrative authoring tools must be provided that provide easy editing for the framework.
- Co-educating each other (e.g., TLAs).
 - E.g., expand on the acronym list in the whitepaper by providing 1-2 sentence definition/description, and a reference.
- Need a big picture diagram showing how all these components may fit together

- Sum of parts > bucket of parts
- Proposals must address the criteria of all the 3 markets (consumers, industry, military) to get good rallying + acceptance.
 - Identify sample scenarios (“exemplars”) to address the three.
- Assign folks to look at the key open problems listed above, and others identified at the session.