SimVR – Simulations & Virtual Reality Emerging Technology & Outsourcing - Few Thoughts

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USA, India & China – International Collaborative Co.

(Formation in Progress)

Dynamically Changing Engineering & Sotware World of 21st Century

- Sustainability
- Innovation
- Interdisciplinary
- Global
  - ❖ Economy
  - ❖ Market
  - ❖ International Collaboration
    - ➢ Win-Win (Give & Take - Leverage)
    - ➢ Mutually Beneficial with Mutual Respect
    - ➢ Chemistry Between Developers
  - ❖ Communication & Culture

Engineering: 14 Grand Challenges Outlined in Special NAE Report

The National Academy of Engineering (NAE) this year issued a report in which it attempts to identify the greatest engineering challenges humanity will face in this century. With input from people around the world, an international group of leading technological thinkers were asked to identify the Grand Challenges for Engineering in the 21st Century http://www.engineeringchallenges.org/.

1. Make Solar energy Economical
2. Manage the Nitrogen Cycle
3. **Advance Health Informatics**
4. Prevent Nuclear Terror
5. **Advanced Personalized Learning**
6. Provide Energy From Fusion
7. Provide Access to Clean Water
8. Engineer Better Medicine (Engineer Health Care Practice!!!)
9. Secure Cyberspace
10. Engineer the tools for Scientific Discovery
11. Develop Carbon Sequestration Methods
12. Restore and Improve Urban Infrastructure
13. **Enhance Virtual Reality**
14. Reverse Engineer Human Brain

SimVR – Simulations & Virtual Reality

Key Emerging Technology for Game Design Applicable to wide-spectrum of Areas:

Training & Education

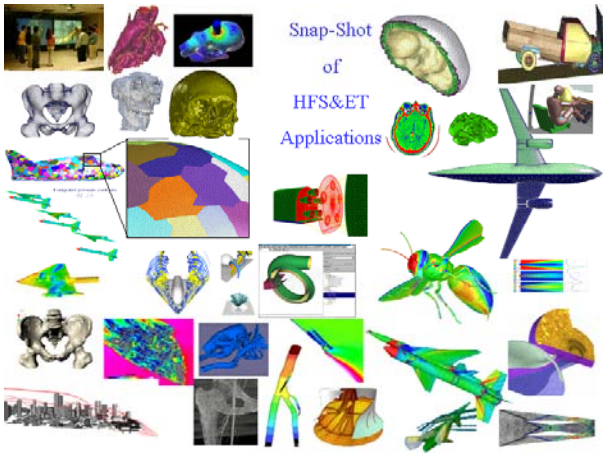
Military, Health-Care, First Responders, Sports, Construction, Manufacturing

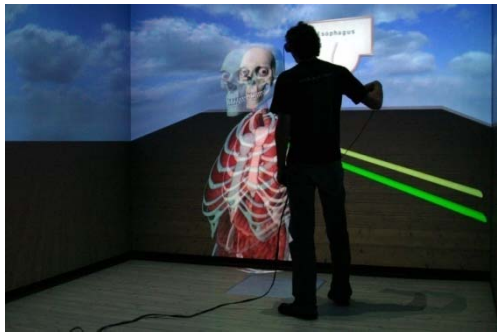
Design, Marketing, Fashion, Architecture, Media, Telecommunication, Heritage

Visualization & VR Framework
Key Technology For Game Design
For
Science Based Visual Learning/Training

3D >>> Multimedia : 2D, .pdf, .ppt, DVD, WEB-html, HMDS, wireless palm holder

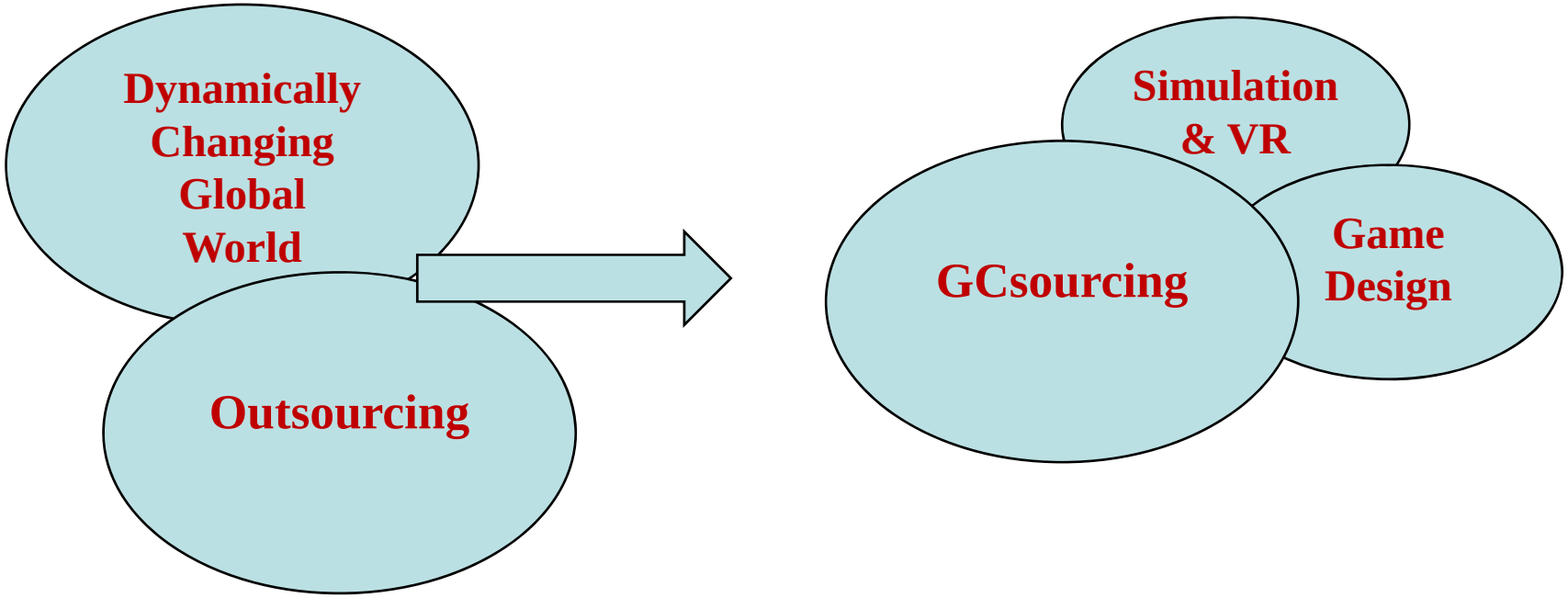
- CAVE – Immersive Visualization Environment (Large-Scale Show Case)
- In next 2/3 years
  - 3D TV with Tracking ($300-500 cost)
  - HMDS (Head Mounted Display System) with 3-DoF Tracking ($300-400)
  - 3D Screen Option available in most computers and Palm Communication Devices
  - High Resolution 3D Video devices ($100-$1000)
- Computational Simulations (With advent of high performance computers available today!)





Example – Health Care Training

Global Collaboration – A Key to Success Especially in Driving Game Design to Wide Spectrum of Applications



GCSourcing – Global Collaborative Sourcing