Draft

Vision Performance Institute

Pacific University Oregon

6th Annual VPI Research Conference

June 6-7, 2012
Pacific University Campus
Forest Grove, Oregon

Opening Session

This year's conference provides the latest studies and results concerning stereoscopic 3D (S3D) and the visual system. A goal of S3D is to create a high quality immersive experience that is also comfortable for the viewer: 2 objectives that can be at odds with one another. At the VPI we specialize in understanding the viewer visual experience. This conference explores how we can optimize the S3D experience and stay within human comfort ranges. We also will explore the impact of S3D on children in the classroom and its potential positive effects on public health. We also provide a first report on what we have learned from our 3D Performance Vision Clinic.

Wednesday Morning – June 6

Vision Ergonomics and S3D

Featuring keynote speaker Peter Howarth

*Peter Howarth, MSc, PhD
            Lecturer in Vision and Lighting
            Environmental Ergonomics Research Centre
            Loughborough Design School
            Loughborough University

Joining Peter in this session are Jim Sheedy and Shun-nan Yang from the Vision Performance Institute. Session moderated by Philip Corriveau from Intel

- ***Moderator: Phil Corriveau, Intel**
- What eye doctors know about visual discomfort
    - James Sheedy, VPI
- Conflict? What Conflict?
    - Peter Howarth, Loughborough University
- How the eyes work in viewing S3D
    - James Sheedy, VPI
- Visually-Induced Motion Sensitivity (VIMS) in 3D

- o Peter Howarth, Loughborough University
- What is the source of discomfort in 3D viewing - Accommodation, convergence, or immersion?
    - o Shun-nan Yang, VPI
- Panel discussion, moderated by Phil Corriveau

Wednesday Afternoon – June 6

Defining 3D Content Quality
- **Moderator: *Chris Haws, 3D Film Maker/Psychologist**
- Measuring Levels of Perceived Depth
    - o Sowjanya Gowrisankaran, VPI
- Comparing 3D Quality - 3D@Home procedure
    - o John Hayes, VPI
- 3D Quality - 3D@Home study
    - o Jim Sheedy, VPI

Defining Visual Quality
- **Moderator: *Rick Dean, THX**
- Introduction (10)
    - o Rick Dean, THX
- Comparison of symptoms and performance on hand held displays (20)
    - o Shun-nan Yang, VPI
- Comparing resolution
- LCDs and light levels
    - o Yu-Chi Tai, VPI
- Viewer Symptoms and Preferences - Comparing 3D TV displays
    - o Yu-Chi Tai, VPI
- Certifying Visually Comfortable 3D Content
    - o Discussion, Moderated by Phil Corriveau

Thursday Morning – June 7

Vision Care
- **Moderators: Jim Sheedy and James Kundart, VPI**
- Eyecare for the high tech viewer
    - o Jim Sheedy,
- What are the symptoms?
    - o Scott Cooper
- Diagnostic strength of optometric measures
    - o Yu-Chi Tai, VPI
- The 3D Vision Clinic – 6 month report
    - o James Kundart, VPI
- Optometric Vision Therapy: Intervention Strategies for Improving the 3D Viewing Audience (30-45)
    - o *Dominick M. Maino, Illinois College of Optometry
- Panel discussion - Optimizing care for 3D patients
    - o Discussion moderated by James Sheedy

Draft

Thursday Afternoon – June 7

S3D, the Classroom, and Public Health
- **Moderators:**
  - ***Michael Duenas, American Optometric Association**
  - ***Len Scrogan, Boulder, CO School System**
- Is S3D viewing safe for children? (20-60)
  - *Maureen Powers, Gemstone
- What do we know about the effects of S3D on learning? (30 min)
  - Len Scrogan, Boulder, CO School System
- Can S3D be used for Primary, Secondary or Tertiary Health Promotion?
  - Using S3D as a vision screening tool
    - Yu-Chi Tai, VPI
  - Considerations in validating a 3D screening program
    - John Hayes, VPI

High Tech Glasses
- **Moderators:**
  - **Bret Andre, VPI**
  - **Mijeong Kwon, VPI**
- 3D Glasses
  - Active and Passive 3D Glasses – Introduction
    - Jim Sheedy, VPI
  - Wearer responses to Active and Passive 3D Glasses
    - Shun-nan Yang, VPI
    - Mijeong Kwon, VPI
  - Certifying 3D Glasses
    - Bret Andre, VPI
    - Mijeong Kwon, VPI