

Course B: *Some Thoughts on Designing and Understanding Visual Systems*

Course Level: Intermediate

Instructor: Bob Clodfelter, Director of Engineering, Barco, Inc.

COURSE CONTENT: Many concepts of display system design are taken for granted or are based on “ancient lore” creating an opportunity for fundamental misunderstandings in the nature and operation of these systems. This course will address several such topics to shine the light of truth into the dark shadows of our collective knowledge. Through the use of examples, visual aids, and experimentation Mr. Clodfelter will attempt to illustrate and interpret several such topics in an interesting and novel way.

The course will cover:

- Resolution and the Kell Factor
- Gamma – Not just a Greek letter?
- System Modulation Transfer Function – Is Fourier analysis appropriate?
- Image Anti-Aliasing and Eye-Limiting systems – A thought experiment
- Contrast and Luminance - Are brighter systems necessarily lower contrast?
- Retinal Smearing – An illustrative example
- Other topics as time permits.

WHO SHOULD ATTEND: Professionals involved in the use, management, specification, design and/or maintenance of visual systems.

KNOWLEDGE & SKILLS TO BE ATTAINED: This course gives the participants a deeper understanding of several key display system concepts and to update their knowledge about visual systems concepts.

TUTOR'S VITA:

Robert M. Clodfelter is a Director of Engineering at Barco, Inc. where he leads the design and development of visualization systems for the military, civil, commercial, and academic markets. Mr. Clodfelter has over 25 years of experience in visual simulation including projector design, visual system design, system metrology and analysis. Mr. Clodfelter has authored over a dozen papers in the field of visual system analysis and multiple channel display systems. Mr. Clodfelter holds a Bachelors degree from Case Western Reserve University and a Masters degree from the University of Dayton. He is a member of the IMAGE Society, SID, and is a licensed professional engineer in the State of Ohio.