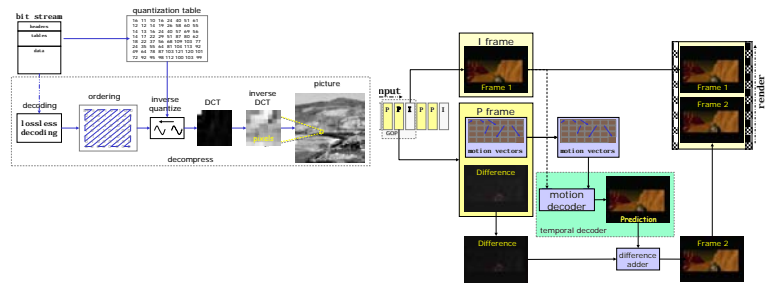# Video Mixing

Image Processing training

Benefits

- Understand video mixing concepts
- Relate mixing relates to optical models
- Know about layers, windows & surfaces
- Know the algebra of video mixing
- Use alpha blending & color keying

Video Mixing

We explain how Video Mixing is a simple logical algebra and how you can use this view to design better and more compelling visual compositions and visual user interfaces. We explain how Video Mixing is implemented in practice on hardware platforms, the limitations this imposes, and how to use them.

Class aims

The end result of this class is that you will better understand what video mixing does, how it relates to real optical models of vieweing, and how to use it to enhance the viewer's visual experience.

Class topics

The class covers video mixing, alpha blending, color keying, BitBlatting, and their hardware implementations and programming.

- Video Composition
- Layers, windows & surfaces
- Hardware mixers
- Software mixing APIs
- Alpha blending
- Porter Duff mixing algebra
- Scenes and GUI overlays
- Color keying
- BitBlatting

Video Composition

Video composition concepts

- Video composition
- Layers, windows & surfaces
- Multi-layer mixing

Hardware mixers

How hardware video mixers are implemented, their limitations, and how to use them.

- Hardware video mixers
- 2-layer mixing
- Cascading 2-lay mixers

Software APIs

Basic concepts of software to control video mixing hardware.

- API as a hardware platform
- DirectFB and UHAPI

Alpha blending

- Alpha overlays
- Blending algebra
- Porter Duff blending rules
- Optical models of blending
- Scenes and GUIs

Color keying

Color and chroma keying.

- Color keying
- Color key applications
- Color keying for depth

BitBlat

Bit Blatting and its implementation in hardware.

- BitBlat
- Tiles and scaling

Target audience

This class is aimed at programmers, engineers and managers who need to specify or design video mixing and who wish to fully understand what they are doing so they can produce more compelling visual experiences for viewers.

Time and arrangements

This class takes 3 days. Check our schedule at:

www.bores.com/index_schedule.htm

It can also be presented 'on site by special arrangement and the material can be adapted if you have specific needs.

Booking and questions

Call us by phone or send an email to book or to ask questions:

- contact Dr Chris Bore
- mobile +44 7921 153219
- email: chris@bores.com

About Us

BORES Signal Processing train managers, engineers and programmers to understand and use DSP and streaming media processing.

- established 24 years
- excellent reputation
- worldwide activities
- • www.bores.com