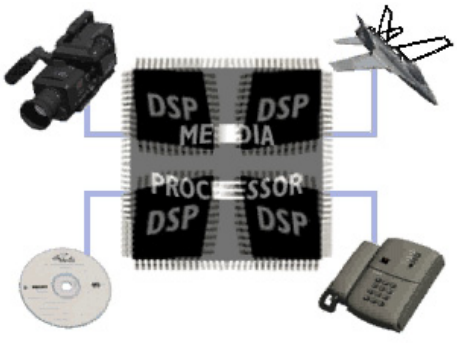
TriMedia peripheral architecture: a 1-day class

TriMedia Foundation

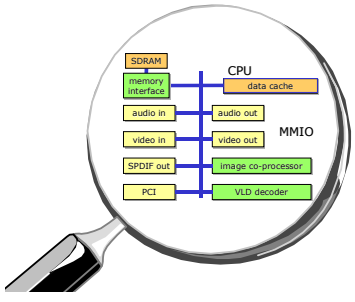
Benefits

- Use TriMedia peripherals
- Write peripheral device drivers
- Write interrupt handlers

After this seminar you will know how to use TriMedia peripherals, and how to write new device drivers including interrupt handlers.



Peripheral vision?



We give you focus

Contents

We describe and explain TriMedia peripheral architecture and show how peripherals are configured and programmed. This includes interrupt handling.

Peripheral architecture

Understand the TriMedia peripheral architecture and the basic peripheral organization of some TriMedia-based SoC devices.

- Peripheral architecture
- Pnx1300 peripherals
- Pnx1500 peripherals
- Pnx8550 peripherals

Peripheral registers

Know the memory-mapped registers through which peripheral devices are configured and controlled.

- SoC memory maps
- Peripheral MMIO registers

Software architecture

Learn how to use standard peripheral software support, including the relationship to the TriMedia Software Architecture (TSA) and software layers.

- Peripherals and TSA
- Device Layer
- Board Support Library
- Configuration structures
- Configuration functions

Interrupts

How interrupts are configured and handled. Including the connection between interrupts and scheduling 'decision trees'.

- Interrupt architecture
- Interrupt configuration
- Interrupt programming
- Interrupts and decision trees

Cache coherency

Explains the important question of synchronizing the cache with data entered directly to memory by peripherals (which bypass the cache).

- Data cache coherency and MMIO
- Data cache copyback
- Data cache invalidation
- Cache handling in ISRs

Peripheral programming

Follow a complete worked example of peripheral programming, putting into practice all the things learnt through the session.

- Overview of VO peripheral
- Video sampling formats
- File reading and cache coherency
- Device configuration structure
- Device configuration function
- Device set up
- Interrupt handling
- Video fields and frames

Time and arrangements

This session takes 1 day.

It is presented 'on-site' by arrangement - the material can be adapted if you have specific needs (at extra cost).

Sometimes we arrange 'public' classes: schedules are posted on the Internet:

http://www.bores.com/schedule.htm

Pic'N'Mix

You can design a class to suit your own specific needs. Each of the topics in this TriMedia Foundation class can be a self-contained session, from which you can "pic'n'mix" to make your own class.

Contact us:

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Booking and questions

Call us by 'phone or send email to book or to ask questions.

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Foundation class

The 'TriMedia Foundation' is a 4-day class on all aspects of the TriMedia. It includes this class.

We recommend this be part of the 4-day TriMedia Foundation class but it can stand on its own or be part of a custom class.

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