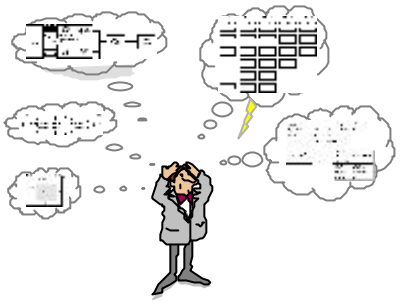
TriMedia Foundation: four 1-day classes

TriMedia foundation series

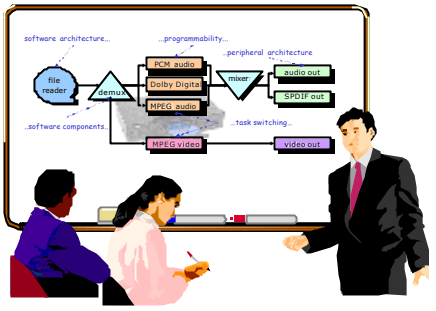
Benefits

Get started quicker and work more productively, with clarity and understanding, thanks to the insights offered by this 'foundation' seminar series.

TriMedia lets you build powerful and complex systems: but there is a lot to learn and it is easy to misunderstand or to gain a narrow vision that restricts team productivity. In this seminar we clarify and explain so that engineers and programmers gain a correct and clear understanding that leads to efficient and productive design work.



Thinking ahead?



Get a head start.

Contents

In this series of four 1-day classes we explain and clarify all aspects of TriMedia including its implementation in the pnx1300 and pnx1500 System on Chip devices: the 'TriMedia' CPU core, optimization, peripherals and the TriMedia Software Architecture. The classes may be taken individually to build a 'custom' program, or all together as the 'TriMedia Foundation' package.

TriMedia CPU core

This class describes the 'TriMedia' CPU core and the associated software compilation and debugging tools. It includes explanations of the background to and characteristics of VLIW, the instruction design, functional units, and the role of the special internally-parallel Single Instruction Multiple Data (SIMD) units.

- Core architecture overview
- Instruction set
- Registers and data formats
- Functional units
- Software tools
- Internally-parallel units
- Cache
- Interrupts

TriMedia peripherals

This class describes the TriMedia peripheral architecture, and its implementation in the pnx1300 and pnx1500 System on Chip Media Processors. It also deals with the important question of 'cache coherency'. pnx1500 peripherals are covered in depth.

- Peripheral architecture
- Peripheral registers
- Configuration structures
- Interrupts
- Cache coherency
- Peripheral simulation
- Peripheral worked example
- pnx1300 peripherals
- pnx1500 peripherals

Optimizing TriMedia programs

This class outlines and explains methods to optimize TriMedia software application programs. It includes the often-complex interaction between the demands of cache efficiency and of overall global scheduling optimization., and the use of special Custom Operations and internally-parallel Single Instruction Multiple Data (SIMD) units.

- Optimization strategies
- Software tools
- Profile driven optimization
- Decision trees and scheduling
- Cache architecture
- Cache mapping and management
- Cache hits and misses
- Cache profiling and optimization
- Custom Operations and SIMD
- Internally-parallel units (SIMD)
- Examples using Custom Operations

TriMedia Software Architecture

This class describes and explains the TriMedia Software Architecture including the concepts of self-contained software components, of data packets that pass between components, and of configuration and control through a standard API. It also covers the basics of the pSOS+ operating System and its use in TriMedia, as well as the general concepts of the Operating System Abstraction Layer that permit porting to other operating systems.

- TSA principles
- Layers and modes
- TSA software components
- Connecting TSA components
- Component connection
- TSA data packets
- TSA and peripherals
- Step-by-step OL and AL examples
- pSOS Operating System
- Operating System Abstraction Layer
- pSOS level optimization

Time and arrangements

The 'TriMedia foundation' seminar series gives a thorough grounding in TriMedia core, optimization, peripherals and software architecture. It is presented 'on-site' by arrangement - the material can be adapted if you have specific needs (at extra cost). We recommend it be followed as a series, but individual 1-day seminars can be taken by arrangement if desired. Class schedules are posted on the Internet from time to time:

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

TriMedia 'foundation' series

- 4-day class presentation
- £1,320 (€2,200: $ 2,640) per person
- on-site by arrangement

Individual foundation classes

- 1-day class presentation
- £330 (€550, $660) per person
- on-site by arrangement

To book or find out more

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

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TriMedia foundation seminars

The 'TriMedia foundation' is a series of four 1-day classes designed to give a thorough understanding of all aspects of the TriMedia. The series can be followed as a single series of four 1-day classes or by taking separate 1-day classes.

- TriMedia CPU cores
- Nexperia peripheral architectures
- TriMedia software optimization
- TriMedia Software Architecture