

S/W Component Architectures: a 1-day class

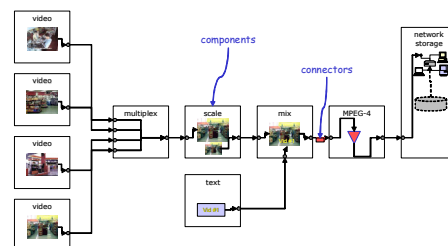
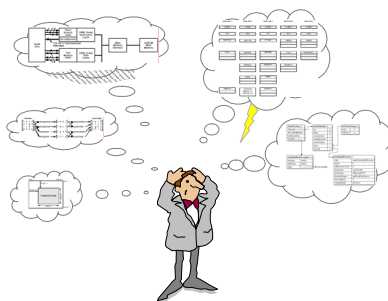


DSP Extension

Benefits

- Understand component s/w
- Use & implement COM
- Specify and design components

Learn to design, specify and use component-based software architectures for DSP and streaming media applications.



Losing your composure?

Use components.

Contents

In this class we explain the fundamental principles of software component-based architectures, especially for DSP and streaming media processing. We also introduce models for implementation including embedded COM. And we lay out guidelines for decomposing an application into components.

Component architectures

Learn the basis for software component architectures and the different models that can be applied.

- Principles of component models
- Streaming media
- Connection management
- Pipelines and filters
- Buffering streaming data
- Multitasking
- Decomposing an application
- Component API usability

Interfaces

Understand how the idea of interfaces aims to separate specification from implementation and to allow re-use of components. Know how to decompose complex interfaces into hierarchies and interface suites.

- Components
- Contracts
- Interfaces
- Interface suites
- Interface naming
- Notifications

Embedded COM

We outline a model for an embedded implementation of Microsoft's Component Object Model (COM), and compare this with other possible component models.

- Component Object Model
- Pros and cons of embedded COM
- COM function tables
- Creating components with COM
- Getting interfaces
- Standard interfaces
- Interface navigation
- Need for custom navigation
- Sub-components
- Implementing embedded COM
- Implementing interface calls
- Implementing component creation

Example implementation

An in-depth look at a example implementation of DSP/streaming media component model - the Universal Home API (UHAPI).

- UHAPI context and scope
- Connection management
- Use cases
- Sample application
- Creating components
- Interface navigation
- Standard interfaces
- Notifications
- Implementation

Time and arrangements

This class 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>

Other classes

Other relevant classes include:

- DSP Foundation
- Universal Home API
- TriMedia Foundation

Contact us for details and advice:

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Booking and questions

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About us

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

- established 17 years
- excellent reputation
- worldwide activities
- www.bores.com