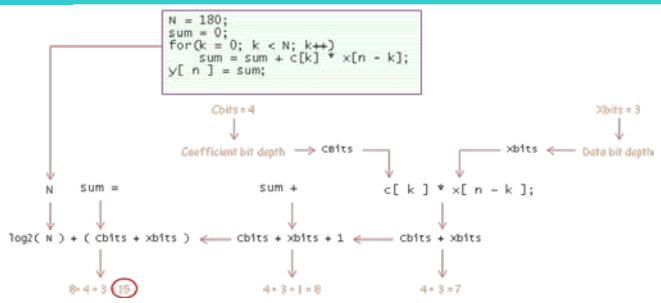
DSP Foundation

DSP training

Benefits

- Analyze DSP system requirements
- Understand filters and DFT
- Specify, design and apply DSP
- Analyze required arithmetic precision
- Estimate computational requirements
- Implement DSP cost effectively



DSP Foundation

To use DSP effectively you must understand the nature of signals, the effects and use of DSP processes, how to analyze signals and the processing required for given applications, how to estimate computational requirements, and how to implement the processing cost effectively.

Class aims

We show how you can analyze the signal and noise characteristics to guide the choice and design of suitable processing for an application goal, decide clear quantitative design specifications and choose design parameters, and estimate hardware requirements

Class topics

The class covers analyzing expected signal and noise and using these to guide specification and design of the processing, as well as the actual DSP design.

- Signals and Noise
- Processing Gain
- Designing DSP specifications
- Frequency domain
- Sampling
- Sizing
- Discrete Fourier Transforms
- Resolution and accuracy
- Filtering
- FIR filter design
- Correlation

Signals and Noise

How to estimate, measure and analyze signal and noise characteristics to guide the required DSP specification.

- Signal and Noise
- Processing Gain
- Equivalent Noise Band Width

Frequency domain

Viewing DSP as operations in the frequency domain.

- Frequency domain analysis
- Window functions

Sampling

Sampling, its effects and the consequences for designing DSP systems.

- Sampling
- Aliasing
- Resolution

Sizing

How to specify DSP based on signal and noise characteristics and the application goal, and to estimate computational requirements.

- Filter length
- Arithmetic precision
- Computational complexity

Fourier Transforms

Understanding the DFT and FFT.

- DFT and FFT implementations
- DFT Figures of Merit

Filters

How to design, implement and analyze FIR filters.

- FIR filter applications
- FIR filter design

Target audience

This class is aimed at programmers. engineers and managers designing products which will use DSP, and who wish to fully understand and be able to apply the techniques of specifying, designing and implementing DSP systems.

Time and arrangements

This class takes 5 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

Bores Signal Processing Fordwater Pond Road Woking Surrey GU22 0JZ UK
Tel: +44 1483 740138 Email: chris@bores.com Web: www.bores.com