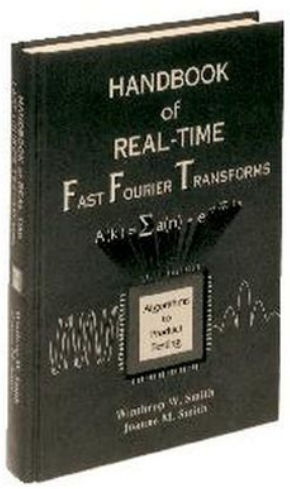

Handbook of Real-Time Fast Fourier Transforms: Algorithms to Product Testing

Winthrop W. Smith

Paperback	978-0-780-31091-9	May 1995	**$215.25**

DESCRIPTION

"This useful, logical, unbiased, FFT compendium allows the user to quickly and accurately obtain practical information to implement a solution or simply acquire a general overview without spending months gathering this information elsewhere."
— **Jay Perry**, Executive Vice President, Technology, Catalina Research, Inc.

"This is a practical guide for understanding and using FFTs. Win’s (Winthrop Smith, author) years of experience using FFTs to solve real-world problems comes through on page after page. If you’re building an FFT processor, you’ll find this book indispensable."
— **Tony Agnello**, President, Ariel Corp.

FFTs are at the heart of ADSL, the new telecom standard (T1.413), which allows phones to transfer digital data 200 times faster and simultaneously transmit speech. Fast Fourier Transforms (FFTs) synthesize, recognize, enhance, compress, modify, or analyze signals in products such as Doppler weather radar, CT and MRI scans, AWACS radar, and satellite imaging radar. In this book, you will get the foundation and facts you need to implement FFT algorithms for many diverse applications. Key features you will put to immediate use include:

• Comparison matrices and performance measures for objective selection of weighting functions, algorithm building blocks, algorithms, algorithm mappings, arithmetic formats, and DSP chips

• Extensive algorithm examples with instructions for memory mapping and conversion to code

• An unbiased listing of the FFT features of 51 fixed-point DSP chips, including ASIC and multiprocessor chips, 13 floating-point DSP chips, and six dedicated FFT chips

• Test signals with instructions and examples on how to detect and isolate errors during: FFT algorithm/code development and debugging, and end-product operation

• Design examples for products that use frequency analysis, power spectrum estimation, linear filtering, and two-dimensional processing

• Questions and answers for selecting commercial-off-the-shelf DSP boards

An all-in-one-source for implementing real-time FFT algorithms of any length, this book will be essential to engineers and other technical innovators who want to stay on the cutting edge of FFT technology.

✍ ABOUT THE AUTHOR

Winthrop W. Smith is the author of Handbook of Real-Time Fast Fourier Transforms: Algorithms to Product Testing, published by Wiley.
