

Chris M.W. Daft

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PROFESSIONAL OBJECTIVES

- Consulting to achieve client success in technical areas and business strategy
- Persist in attempts to benefit humanity through technology

RECENT PROJECTS include:

- IP analysis of wearable physiological monitors
- System and transducer design of wearable devices for cancer treatment monitoring
- Low-cost matrix transducer arrays and electronics for high-volume point-of-care imaging
- Application of Graphic Processing Units (GPUs) to new image reconstruction algorithms
- Transducer design and vendor management for ultrasonic surgical-assistance tool
- Design, testing and sourcing of MEMS transducers for otitis media diagnosis
- Due-diligence for potential start-up acquisitions on behalf of multinational medical device manufacturer.
- SBIR funded by NIH's *National Heart, Lung and Blood Institute* through their program, "Onsite Tools and Technologies for Heart, Lung, and Blood Clinical Research Point-of-Care."

SUMMARY OF CAPABILITIES

Consultant with passion for innovating in ultrasound, imaging and electronics, while making trade-offs which get a product to market. Wide experience in:

- IP development at major imaging company
- Beam formation
- Acoustics and transducer design, including Finite Element Analysis
- Statistical product design for six-sigma quality
- Real-time signal processing
- Application-specific integrated circuit (ASIC) and micro-electro-mechanical systems (MEMS) development
- Effective communication with customers

PATENTS AND PUBLICATIONS

- 21 patents issued
- 23 articles published in journals and conference proceedings

- Active in IEEE UFFC society, serving on Technical Program Committee for IEEE Ultrasonics Symposium.

EMPLOYMENT EXPERIENCE

RIVER SONIC SOLUTIONS, LLC

Consultant, Dublin, CA: 2012-present

CEPHASONICS, INC. (previously Simplify)

Chief Scientist, Santa Clara, CA: 2011-2013

- Responsible for technical direction of a start-up seeking to commoditize front-end and beam formation electronics.
- Advised CEO on all technical matters, deeply involved in angel and VC fund-raising.
- Extensive customer interaction: marketed products to imaging and non-traditional customers.

SIEMENS HEALTHCARE, ULTRASOUND DIVISION

Senior Manager, Engineering, Mountain View, CA: 2005-2011

- Delivered 3 ASICs on tight schedule to support new Silicon Ultrasound product line.
- Managed team of eight engineers to design, test and manufacture all electronics needed for introduction of Silicon Ultrasound transducers.
- Technology evangelist presenting weekly to customers at Siemens' Innovation Center.

SENSANT CORPORATION

Manager, Research and Development, San Leandro, CA: 2003-2005

- Managed group which created electronics for first 2D and 3D images using silicon ultrasound transducer.
- Co-authored successful grant proposal to DARPA on battlefield ultrasound imaging and surgery. \$7.5 M was awarded to Sensant and its collaborator.

Senior Staff Engineer, San Leandro, CA: 2000-2003

- Design of new types of imaging systems using capacitive microfabricated ultrasound transducers (cMUTs, also known as Silicon Ultrasound.)
- Co-authored several successful SBIR grant proposals.

GENERAL ELECTRIC COMPANY

Physicist, Corporate R&D, Niskayuna, NY: 1990-2000

- Designed algorithms for IC implementation; the resulting beamforming IC was the heart of GE's successful entry into the premium ultrasound market.
- 1994 Dushman Award for chip design and system verification.
- Developed statistical methods (now patented) for robust simultaneous design of transducer and imaging system to six-sigma quality standards.
- GE Six-Sigma Green Belt certification in 1998.
- Much transducer design, acoustic field simulation and measurement.
- Research in signal processing for improved image quality and blood flow estimation. Several of these signal processing innovations are used in current GE products.

UNIVERSITY OF ILLINOIS

Assistant Professor of Electrical and Computer Engineering, Urbana, IL: 1987-1990

- Research in scanning laser acoustic microscopy to characterize tissue, and applications of neural networks to ultrasonic imaging.
- Taught courses in circuit theory, medical imaging and acoustics.

EDUCATION

- Ph.D. in Materials, Oxford University, UK: 1984-1987.
- B.A. and M.A. in Physics with 1st class honors, Oxford University: 1981-1984.