SENSOR®
NETWORKS, INC
Inspection, Testing & Asset-Integrity Solutions

Ultrasonics Applications Engineering & Custom Transducers

Conventional & Phased-array
Ultrasonic Transducers & Accessories

In-situ tooling, fixtures and integrated UT solutions for composite materials, rotating equipment, heat exchangers, pressure vessels and piping welds.

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Who We Are: Sensor Networks is a Pennsylvania-based technology company specializing in the design and fabrication of industrial ultrasonic transducers and tooling for demanding in-situ test and inspection applications. Engineered for precision, ease-of-use and maximum durability, our offering includes ultrasonic transducers, fixtures, couplant-delivery systems, qualification/calibration standards, procedure development, personnel training and instrumentation.

Successful Ultrasonic Applications Engineering

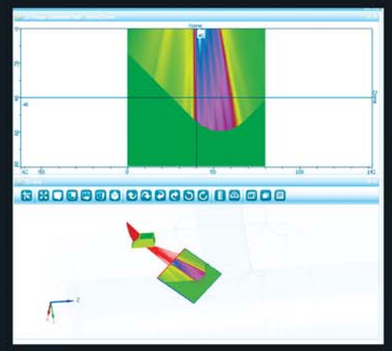
is the result of 3 major elements:

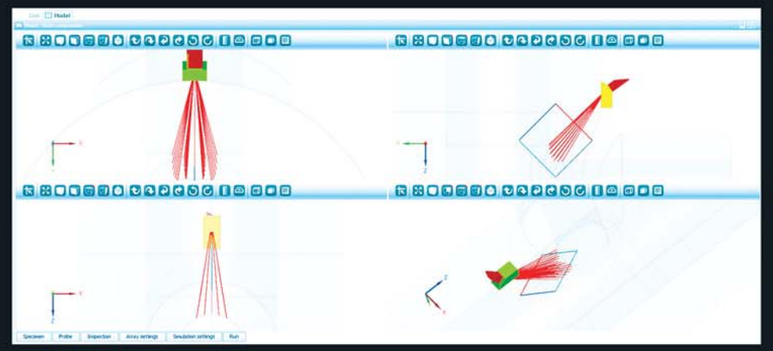
- **Experience**
- **Capabilities**
- **Process**

Our experienced team of engineers, technicians, assemblers and general management has an extremely deep level of knowledge and background in solving unusual, demanding and complicated NDT projects with an average and aggregate of 20 and 250 years, respectively, of experience. Industries served over this time include aerospace engines and airframes, nuclear vessels and heat exchangers, large gas turbines and others.

SNI 's deep domain expertise enhances NDT solutions through the selection, design and optimization of the ultrasonic technique. The transducer's efficiency is paramount for converting electrical energy into sound, then coupling and directing that acoustic energy into the test piece to maximize its signal-to-noise ratio.

Left to right: *Guy Roszel, BSME: Transducer Designer (4 years) • Dr. James Barshinger, BSME, MSME, PhD (15 years) • Tom Jenkins, BSEE: Transducer Designer (19 years) • Mark Feydo, BSEE: Instrument Designer (25 years) • Dane Hackenberger: Transducer Designer (38 years) • Jim Shimp: Transducer Designer (38 years) • Jeff Anderson, BSEE: General Manager (29 years) • Tina Hall: Transducer Assembler (20 years) • Shelley Miller: Office Manager (31 years) • Suzanne Hackenberry: Transducer Assembler (17 years) • Jeremy Cirota, BSCE: Transducer Designer (4 years) • Bob Shaffer, BSME: Transducer Designer (10 years) • not shown: Les Fultz and Jim Fultz*





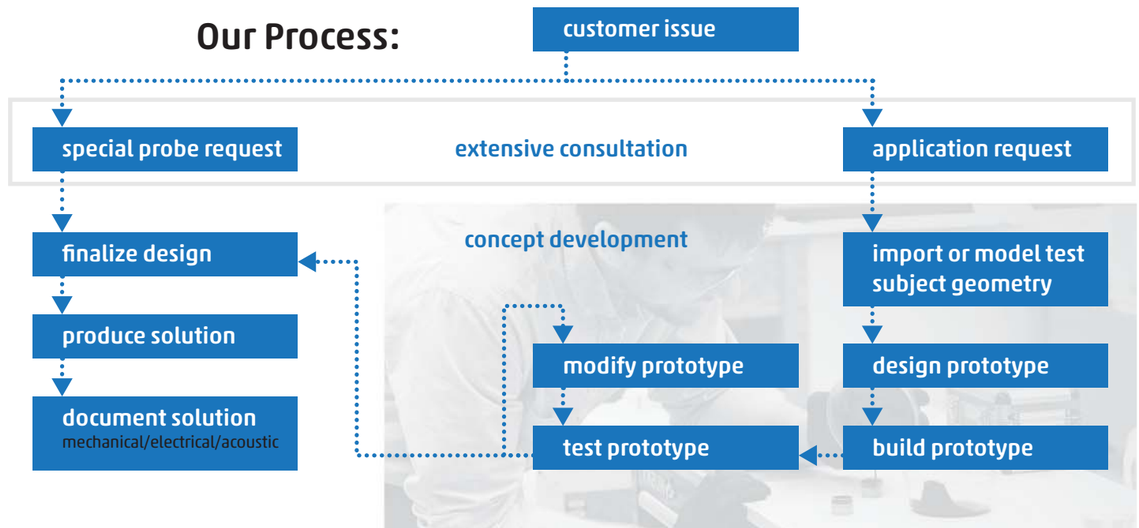
Sensor Networks uses industry-preferred design and simulation tools to create an optimized mechanical, electrical and ultrasonic model of the inspection task, including its scan plan.

- **SolidWorks:** Parametric 3D CAD and Mechanical Properties Modeling
- **AutoCad:** 2D CAD and Ray-Tracing
- **CIVA:** Acoustic Beam Modeling and Delay Law Calculation for Conventional and Phased Arrays
- **PiezoCad:** Transducer Construction & Performance Modeling
- **Field II:** Transducer Construction & Performance Modeling
- **UltraVision 3D:** NDT Data Imaging and Analysis Software for Conventional and Phased Arrays
- **ES Beam Tool:** Ultrasonic Inspection Plan Design and Validation Software.

SNI has UT Level II & III-qualified Engineers capable of assisting clients with the tools, techniques and training for demanding inspection applications.

In-house machine shop capabilities, including Mr. Lee Wagner's 25-plus years' NDT experience, allow faster prototyping and turn-around times.

Our Process:



Optimized Solutions for Cost-effective Productivity

Sensor Netwoks offers transducer solutions in a variety of styles, compatible with any major manufacturer's conventional or phased-array instruments.

In-situ: self-aligning wand transducers for hard-to-access rotating equipment

O.D. Transducers: for tubing weld or braze joints

7 MHz Ultra-high-temp Delay-line: transducer and mounting clamp for continuous 500°C (932°F)

Phased-array: linear & matrix • annular, daisy & circular • contact & immersion • single & dual • flat & curved

ASME Section XI: compound-radius wedges • refracted longitudinal • phased-array duals • contact or immersion • TOFD • complex wedges & delays

SensorScan™ QS: conventional transducers for quick swapping onto delay lines or wedges

2 MHz PAUT Dual: with 2×16 elements per probe and detachable wedge

Small-diameter (< 0.25"/6 mm) ID Bore Probes: shear-wave, L-wave, duals and tandem types

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