

Request for Proposal RFP_2019_0141: Seeking Experts to Commercialize a Nondestructive Examination Simulator

RFP Title	Seeking Experts to Commercialize a Nondestructive Examination Simulator
Due Date	08/30/2019
Opportunity	Consulting, contract research (for product refinement or for collaboration/partnership), joint development, supply agreement, to be negotiated Call for experts to aid in commercialization of a virtual simulator to train operators in the nondestructive evaluation (NDE) technique known as ultrasonic testing (UT)
Timeline	Simulator commercialization in up to 6-9 months
Financials	Funding to be negotiated
RFP Description	Call for experts to participate in commercialization of a virtual simulator for training operators to conduct NDE measurements using ultrasonic testing (UT). NineSigma, on behalf of The Electric Power Research Institute , invites qualified candidates to submit capabilities surveys in response to this call for experts.
Background	<p>The Electric Power Research Institute (EPRI) has developed a prototype virtual nondestructive examination (VNDE) simulator to enable hands-on training and practice using ultrasonic testing (UT). Ultrasonic testing techniques enable nondestructive examination (NDE) of vital structures constructed of metal or concrete. In the power generation industry, periodic examination of assemblies including dams, containment structures, pressure vessels, piping, reactor housings, and heat exchangers is necessary to assure safe, continued operation of these systems.</p> <p>Technicians who perform NDE measurements must train to use the NDE technique and practice on mock-up structures that represent real structures. Routine practice is also necessary to maintain proficiency. Traditionally, this work requires measurements on physical mock-ups which are expensive to produce and maintain and costly to ship. EPRI's VNDE simulator allow NDE technicians to gain experience performing manual inspections without requiring access to field ultrasonic instruments or physical mock-ups.</p> <p>The simulator combines commercially available, off-the-shelf computer and electronics components with lightweight, plastic models of physical mock-ups and calibration blocks (See Figure 1). The electronics simulate the UT measurement system and track position as an operator moves a model probe on the simulated mock-up. EPRI has previously measured the real physical mock-up using UT and has cataloged that data. The VNDE system plays back the cataloged data as the operator makes measurements on the model, simulating a manual UT examination.</p>

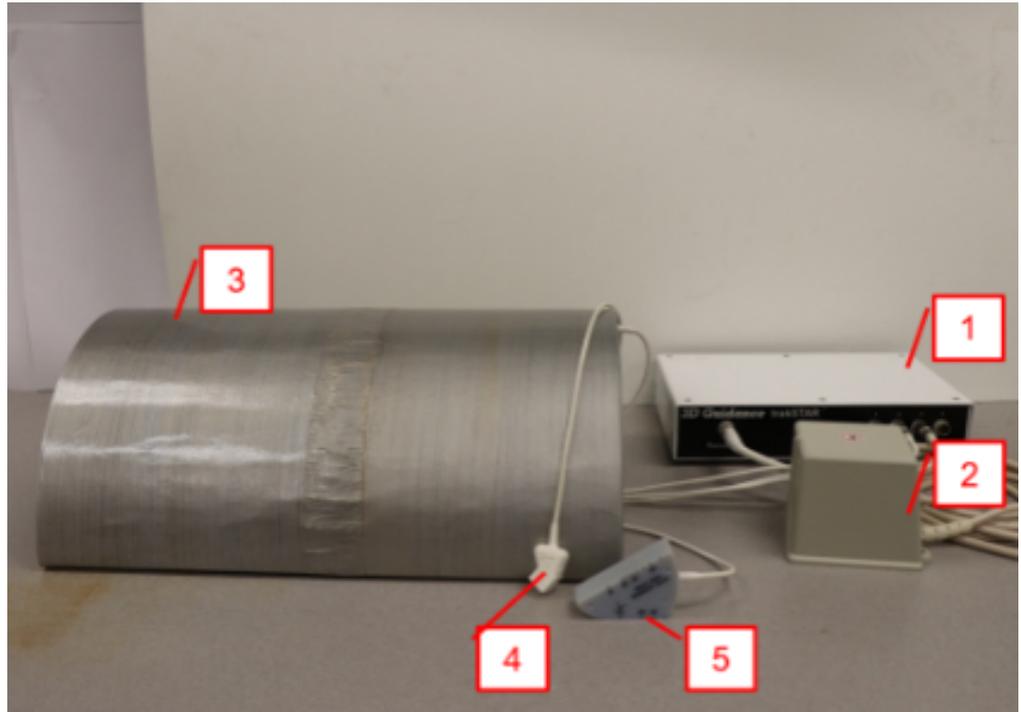


Figure 1. VNDE simulator hardware. Labeled components:

1. 3D position tracking system (trakSTAR™)
2. Transmitter
3. Plastic model of a physical mock-up
4. Model probe
5. Plastic model of a calibration block

EPRI seeks experts in NDE commercialization to partner with EPRI to replicate the VNDE system at commercial scale to enable more cost-effective training and practice. EPRI plans to expand the system by offering additional plastic models and corresponding data.

Key Success Criteria

The successful candidate will have demonstrated expertise in one or more of the following:

- Test instrument commercialization, manufacturing, sales, marketing, and support
- Test equipment product design activities including:
 - Design for manufacturing
 - Component integration
 - Product kitting and packaging
 - Use documentation and training
- Training simulator design, integration, testing, and manufacture
- Enhancing training simulation using augmented or virtual reality
- Provide counsel on pricing and licensing models

Candidates will have demonstrable knowledge and experience with design, manufacture, packaging, marketing, sales, and service of NDE testing equipment, equipment simulators, or similar products. Ideal candidates will have marketing capabilities with a global footprint.

Area of Interest

Physics-Acoustics > Ultrasonics, Quantum Acoustics, Physical Effects of Sound Transportation and Distribution > Support activities-Distribution > Virtual, online, mobile distribution

Possible Approaches

Approaches not of Interest

EPRI is not interested in selling technology to venture capitalist

Preferred Collaboration Types

Consulting
Contract Research
Joint Development
Supply Agreement
To Be Negotiated

Items to be Submitted

Your response should not contain any confidential information. NineSigma's client will evaluate all responses and choose those of greatest interest for direct discussions that could lead to contractual engagement or other commercial arrangements with selected respondent, to develop or adapt promising technologies or approaches. To respond to this Expert opportunity, please follow the link below to access and complete our

Expert Capabilities Survey

Note that you will need to attach a copy of your CV or resumé (or similar description of your organization and team) to complete the form. You are also welcome and encouraged to provide additional supplemental information highlighting your expertise in this field.

Award Amount

Attachments

No Files Selected

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Picture

