

EPRI Ultrasonic Data File Format Initiative

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In the NDE industry, there are vendor ultrasonic testing (UT) software tools that store UT data in various, proprietary formats. These different formats challenge the sharing of UT data which could be paramount for NDE research, training, and plant operations in support of internal utility and external independent reviews. Also, UT data will become an asset for developing advanced NDE 4.0 technologies such as Artificial Intelligence (AI) based analysis tools and NDE digital twins of plant components. Proprietary UT file formats will lock utilities into using a particular inspection services vendor which could increase the risk of data loss and hinder the use of UT data for NDE 4.0 technologies. To address the concerns of proprietary file formats, EPRI has recently started an initiative to collaborate on an open-source format model for UT data. In this collaboration, EPRI works with a task group to compare current open file formats being developed in the industry, and to develop a better framework of what requirements are needed for adopting a successful format. This task group is comprised of vendors and utilities within the NDE industry, as well as research groups from academia. Results of the discussions and findings within this collaboration will be presented. Benefits of an open-source UT format include easier access to NDE data without the need of using proprietary software, the ability to archive NDE data for extended periods of time with minimal possibility of data loss, and a more streamlined process for leveraging NDE data for more advanced NDE techniques currently being developed in the industry.