PANEL DISCUSSION: LONG-TERM ARCHIVING AND RETRIEVAL (LOTAR) OF ENGINEERING ANALYSIS AND SIMULATION DATA

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KEYWORDS

Long-term Archiving and Retrieval (LOTAR), Finite Element Analysis (FEA), Finite Element Model (FEM),Computer-Aided Engineering (CAE), International Standards Organization (ISO), Simulation Data Management (SDM), quasi-linear static analysis, vehicle-level FEM, Aircraft Certification, Regulatory Compliance, Product Support, Derivative Aircraft, Knowledge Capture and Retention

ABSTRACT

The LOTAR International consortium combines the efforts of Aerospace and Defense manufacturers to create and promote standards for long-term archiving and retrieval, (LOTAR), of digital product and technical data, based on standardized approaches and solutions, mainly relying on ISO 10303 STEP standards. During the 4th quarter of 2014, the domain of Engineering Analysis and Simulation (EAS) was added to the scope of its activities and the LOTAR EAS Working Group (EAS WG), was created in December 2014.

Although the of scope analysis and simulation spans across all of the technical disciplines, the LOTAR EAS Working Group's initial focus is on **Structural Analysis: quasi-static linear internal loads finite element analysis** (FEA) **for total vehicles** (metallic and composite structures). The LOTAR Parts (documents) to be developed, will be published as EN/NAS 9300 – 6xx standards, and will be based on the ISO STEP AP209 edition 2 standard "Multidisciplinary analysis and design."

NAFEMS is the international association for the Engineering Analysis community and seeks to create awareness of current and evolving techniques in numerical simulation of physical processes, to deliver appropriate education and training for them, and to encourage standards in their use. Its membership is drawn from industry, software suppliers, government, and academia from

around the world and continues to grow at an encouraging rate. Much of its technical work is conducted through a number of specialist working groups and one of these, the Simulation Data Management Working Group, has worked to establish best practices for capturing simulation context and pedigree along with the analysis - which is essential to LOTAR.

The panel discussion will allow participants to describe their own needs for LOTAR of engineering analysis and simulation, the challenges they've experienced and an opportunity to identify common concerns. Using prompts to guide discussion, a variety of topics will be covered related to LOTAR of engineering analysis and simulation data; metadata; knowledge captured during product development and the ability to make use of this data and product knowledge many years from now.