Automated Post Simulation Analysis, Mining, Reporting and Collaboration with d3VIEW

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Abstract

Data management, mining, comparison and presentation play vital roles in utilization of Finite Element Analysis for product design and decision making. Post simulation interpretation of results is largely a manual process and interpretation of data points is limited to only a handful of data points. The capability to perform such tasks seamlessly will reduce workload for an engineer and help focus his attention more on engineering rather than spend time generating reports. d3VIEW is a simulation data management and collaboration software that is tightly integrated with LS-DYNA to automate post-simulation analysis. This paper will discuss the evaluation of d3VIEW. Publicly available LS-DYNA finite element models are used to showcase d3VIEW's capability. d3VIEW's ability to extract LS-Dyna results, store and compare data, generate reports using templates, visualization and collaboration are highlighted. Collaboration of reports generated automatically with peers and management would give instant access to qualitative and quantitative post processing of simulation results.