

Cloud-Based Multi-User Finite Element Pre-/Post-Processors

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Executive Statement:

A cutting-edge architecture designed to revolutionize finite element modeling by enabling efficient, cloud-based, multi-user collaboration.

Technology Overview:

This invention from Brigham Young University introduces a novel architecture for cloud-based, multi-user finite element (FE) pre-/post-processors. It is engineered to enhance the efficiency of FE modeling by leveraging cloud computing, allowing multiple users to simultaneously work on complex models. This approach facilitates a significant reduction in processing time and fosters improved collaboration through a centralized server that executes commands and distributes results to clients.

Key Advantages:

- Enables collaborative work in a scalable, cloud-based environment
- Significantly reduces the time required for complex FE problem-solving
- Supports dynamic scalability and parallel processing of load cases
- Improves productivity by reducing time to market

Problems Addressed:

- Overcomes the limitations of serial processing in current FE modeling systems
- Addresses the lack of cloud-based, multi-user capabilities in existing technologies
- Eliminates inefficiencies in FE modeling and analysis workflows

Market Applications:

- Product design and analysis for companies and individuals
- Engineering software solutions requiring high-performance, multi-user access
- Cloud computing services tailored for engineering and architectural firms