



Planetary Gearbox modeled with ClassCAD by Kissoft,
transferred as a solid

ClassCAD Client-Server Environment in the Browser

Architecture

Because the entire CAD application would have been too large for a web browser, it was split into a visualization component that runs in the browser and a computation component that runs on an internet server. Both software components communicate with each other via the HTTP protocol (the standard protocol for internet applications).

A new ClassCAD internet application can now embed and configure a specialized 3D component so that it can visualize and modify models loaded on the server. Thanks to the numerous standard and special interfaces for CAD formats built into ClassCAD (e.g., STEP AP 203), the most common models can be visualized.

Specialized applications previously developed with ClassCAD can run in the browser, although 3D interactions with the model have not yet been implemented. However, parametric model modifications, as well as rotating, zooming, and panning the view, are already possible.

Advantages of the Solution

With the chosen architecture, it can be ensured that end users are offered only current and available products from the server. On the client side, input forms with adjustable parameters are generated at runtime according to the model specifications. Users can enter desired values and generate the model.

The application loads in the browser without requiring any additional installation. Firefox, Chrome, and IE are supported. Silverlight is used in the browser for 3D visualization. The web page can be hosted on any server, whether Unix or Windows. Thanks to the integration of converters, parametric CAD models from various CAD systems can be imported into ClassCAD. With the implemented solution, these models can be offered on the internet for user-specific configuration. On the server side, various output formats (e.g., STEP, DXF, SAT, ...) can be generated for the model. Thanks to the application knowledge, information for data sheets, diagrams, calculations, or quotations can also be made available.

Implemented Use Cases

The first use of ClassCAD as a browser application took place as part of an evaluation for product configuration with a large, mid-sized company in the furniture industry, as well as in prototype development for two FP7 EU projects.

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