WebMathematica 3

Wolfram Research has launched webMathematica 3, a new version of its technology for adding dynamic content to the web. webMathematica 3 features innovative new performance and development capabilities, which allow users to build and deploy websites with interactive calculations and visualisations at a faster pace and lower cost than before.

The new version integrates the capabilities of both Mathematica 6 and 7 with the latest web server technology--making it the ultimate tool for creating websites where users can compute and visualize results directly in a web browser.

WebMathematica 3 is the chosen deployment technology for Wolfram|Alpha, the web's only computational knowledge engine. The application makes the calculations performed by Wolfram|Alpha possible by allowing users to tap into Mathematica's computational and graphic abilities without having Mathematica experience or installing it locally.

Performance and development features of webMathematica 3 include:

- Expression language and custom tags.
- Queuing system.
- Support for Wolfram Workbench, providing a significant number of features that help to accelerate the development of webMathematica content.
- WebMathematica 3 enables users to write REST and SOAP web services that use Mathematica.
- A new, configurable logging system helps to track different types of errors and to identify problems so that they can be resolved easily.
- Improved kernel monitor. The kernel monitor has new code for monitoring memory usage, running time, concurrent requests, and Java objects, which helps to improve the reliability of the server. It allows starting and stopping of individual kernel pools, canceling individual computations, and monitoring of queued jobs for progress and errors.
- Improved kernel interaction. webMathematica 3 launches kernels as soon as the server starts and launches all kernels in parallel, which helps to improve the startup time for the server. It also has a number of new configuration tools, which limit the use of time and memory by the kernel; this helps to improve the reliability of the server. Kernels are automatically restarted in the background, so service remains uninterrupted.

WebMathematica is based on proven Java Servlet technology, making installation simple and enabling seamless integration to standard server applications.

In addition to Wolfram|Alpha, webMathematica is the deployment technology for web-based education tools and online calculators and serves as the publishing tool for interactive courseware and textbooks on the web.