OTIF: Open Tool Integration Framework
Tools for Building Open Tool Integration Solutions
Summary of Features

Development of large-scale engineering systems (including the software development for distributed, real-time embedded systems) often necessitates the integration of various engineering tools. OTIF provides a reusable software framework and integration technology for composing toolchains to form specific tool integration solutions.

OTIF provides a set of reusable components and libraries, as well as a process to construct integrated tool chains. OTIF is based on a backplane-based architecture where tools can interchange data with each other. During interchange, the OTIF backplane schedules and executes appropriate transformations on the data (using translator elements), in a manner that is compliant with a modeled workflow across the tools.

The generic elements of OTIF are:
- Backplane: a generic server component that includes the workflow engine, hosts tool metadata, and orchestrates the execution of the toolchain. The workflow engine enacts a workflow specified in visual model.
- Manager: a generic component for configuring the backplane.

The toolchain-specific elements of OTIF are:
- Tool adaptors: specific client components that reads and writes tool specific data, convert that data into/from a generic “OTIF” format (typically built from library components)
- Semantic translators: specific client components that perform semantic translation on the data received from the backplane and send the result back to the backplane.

Elements of the OTIF architecture for a simple, 3-tool integration solution are illustrated below.

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