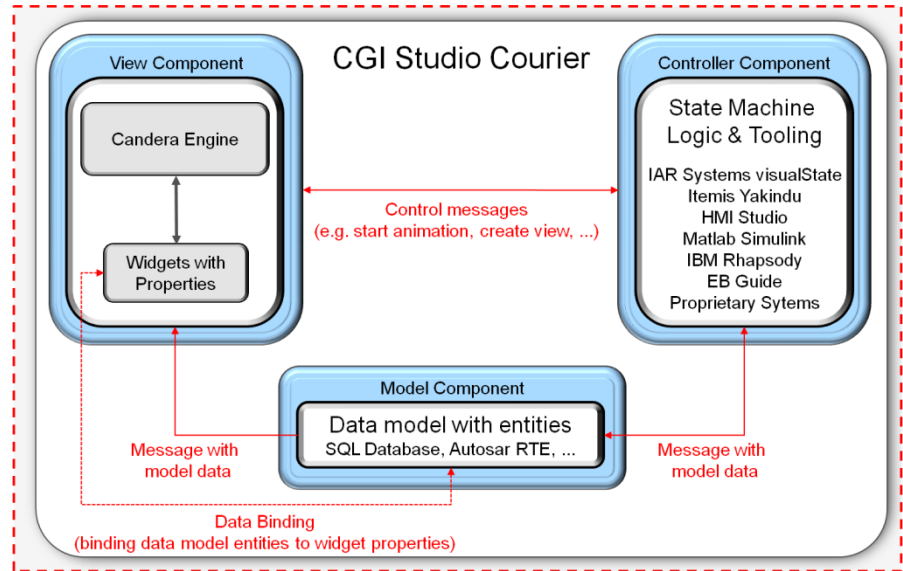


Interaction Framework for Message Handling and Data Binding



CGI Studio Courier is an Interaction Framework that supports Message Handling and Data Binding between CGI Studio and various State Machine Tools. CGI Studio Courier implements the Model-View-Control architecture pattern and has defined extension points for 3rd party state machine integration. CGI Studio Courier can be integrated into multiple environments with different operating systems and different application scenarios (single or multiple).



Beneficial return with Courier

- Rapid application prototyping
- One application implementation for multiple (host and target) platforms
- Basic platform templates for easy porting to any customer platform
- Easy change / customization of application threading setup
- Message based simulation per component possible

Feature Set of Courier

- Foundation
 - Supports single and multi-threaded application setup
 - Courier components (Model, View, Controller) are exclusively connected via messaging
 - Component set is extendable with any customer components

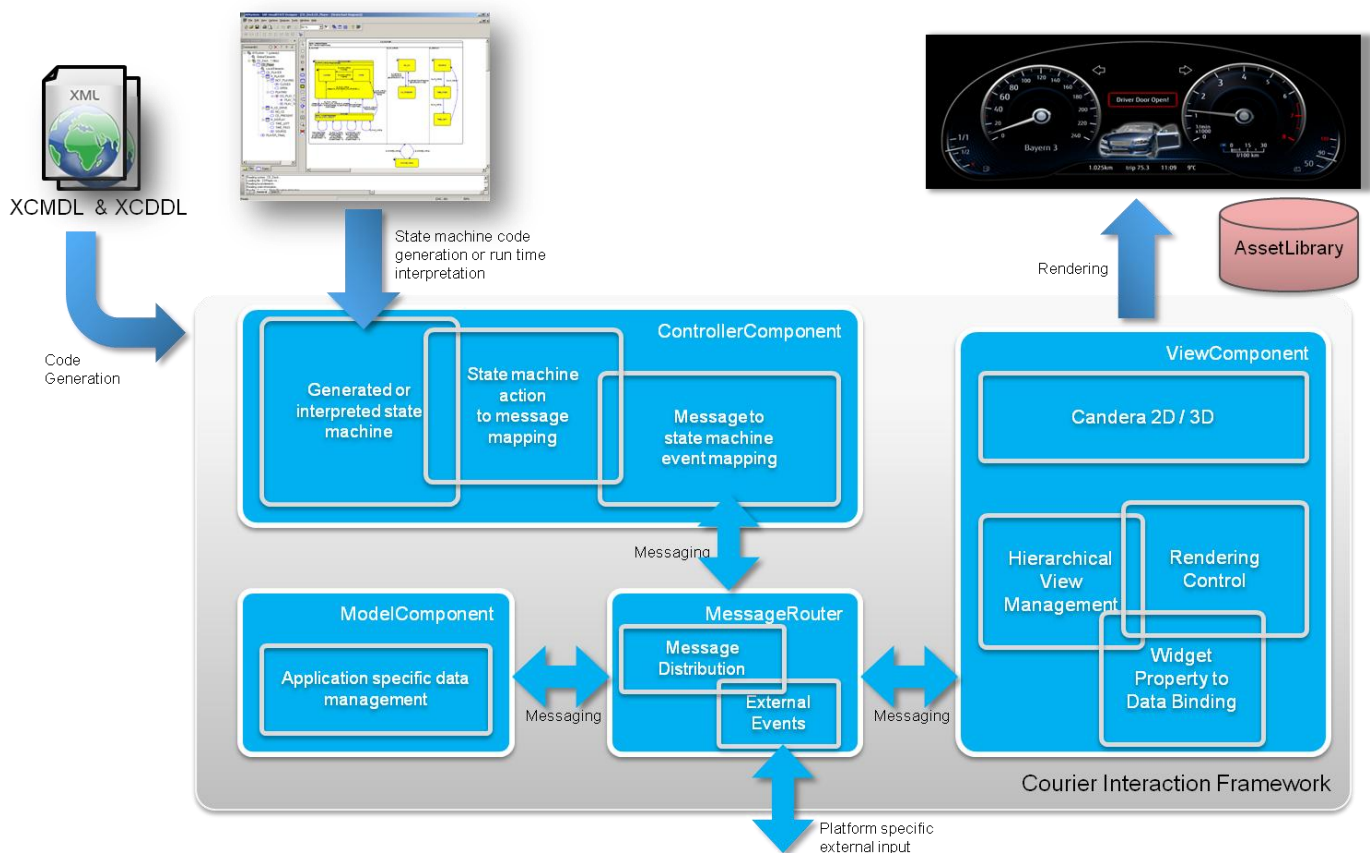
■ Diagnostics

- Extensive logging functionality (based on log4j concepts) for development phase
- Tracing interface to attach any customer specific trace facility

■ Platform

- Well defined and lean C++ interfaces for platform ports
- Templates for various platforms





- ports (host-simulation on win32, generic, integrity-based, ...)
- Message factory interface and templates for dynamic and static message factory implementation
- Visualization
 - Integration of Candra graphics engine into Couriers view component
 - Rendering
 - Animations
 - Theme support
 - Scene / View management
 - Focus handling
 - Hierarchical view structure
 - Transition management support
 - Invalidation concept
- Messaging
 - Automatic message generation based on XML-based message description language (XCMDL)
- Wide possibility to configure message routing
 - Broadcast and component subscription (per message class)
 - Static and dynamic (modifiable subscriber list) subscription
 - Parallel and sequential (even in multi-threaded environment) message distribution
 - Special message group tags (focus, external and data binding messages)
 - Message scope mask for message filtering beyond component level
- Message factory support
- Generic external input and output handling
- Data binding
 - Widget properties can be linked to any data source for automatic data updates (without additional coding)
 - Data binding description based on XML-based description language (XCDDL)
 - Elementary, compound, and list data support
 - Bulk data update (multiple data changes based in a single message)
- Tooling:
 - Scene composer integration of Courier instrumented widgets (Courier specific SHost.dll)
 - Data binding property definition