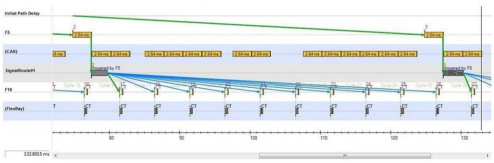
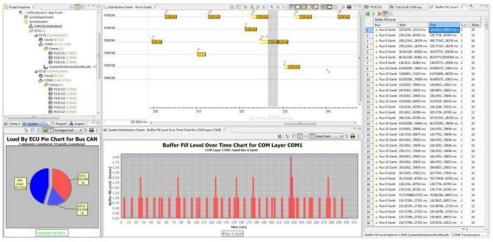
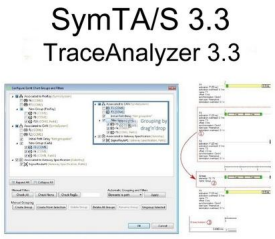
# Tool suite designed for planning, optimizing and verifying embedded real-time systems



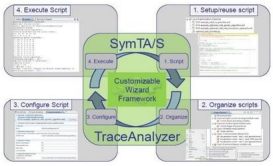
New FlexRay System Distribution Analysis



New Buffer Fill Level Analysis




New Gantt Grouping and Filter Management




New Customizable Wizard Framework

Symtavision has launched SymTA/S 3.3, a major new version of its award-winning system-level tool suite for planning, optimizing and verifying embedded real-time systems. SymTA/S 3.3 features significant new timing analyses including support for FlexRay System Distribution, the new CAN-FD standard, Buffer Fill Level analysis for COM and Gateways, as well as enhanced Gantt chart customization. Major improvements to the design features of SymTA/S 3.3 include a new Customizable Wizard Framework and improved drag-and-drop functionality providing resolution of dependencies. At the same time, Symtavision has announced TraceAnalyzer 3.3, a new version of its powerful solution for visualizing and analyzing timing data from both measurements and simulations which seamlessly integrates with SymTA/S.

With the launch of SymTA/S 3.3, the SymTA/S System Distribution analysis framework is extended with support for FlexRay covering both Static and Dynamic Segments, with the latter supporting cycle multiplexing for FlexRay 2.x frames. With the addition of this capability, users are now able to analyze end-to-end scenarios from sensors to actuators that include communication via FlexRay.

SymTA/S 3.3 also extends the existing CAN timing analysis capability with integrated support for the new CAN-FD standard. To perform CAN-FD analysis only a few scheduling-relevant parameters are required including CAN-FD bus speed, which frame is being sped up and what payload is being transmitted via the frame. Everything else is transparent to users as SymTA/S automatically handles other scheduling items such as the bits that are sped up, the correct CRC size which varies according to the payload, and inserting stuff bits.

With the new Buffer Fill Level analysis, which provides the fill level in bytes for COM-layer send buffers and the number of frames stored in them, users can get an overview of the buffer sizes required and check them against constraints. SymTA/S

error-flags buffers that exceed their maximum fill level.

New Gantt Grouping and Filter Management capabilities in SymTA/S 3.3 provide users with a significantly improved overview of Gantt charts. The Filtering option automatically hides unimportant trace lines reducing those shown in the viewer only to those that are most relevant. The visualization can be individually customized or pre-defined visualization schemes can be reused. The Grouping option supports collapsing trace lines to a single line. Multiple groups are supported and can be easily set up using drag and drop functions. Groups are also context sensitive and automatically generated depending on the selected element. In addition, pre-defined Groups can be applied.

Visitors to the Symtavision Embedded World booth (Hall 4, Stand 327) will also be able to preview SymTA/S Ethernet analysis focusing on AVB and IP Ethernet (Layer 3). The model covers entire Ethernet networks including ECUs, switches, ports, messages, PDUs and links. The analysis covers different communication priorities, MTU sizes, scheduling strategies, and transmission rates, as well as automatic end-to-end hop resolution, static routes, traffic classes, broadcast and multicast.

Both SymTA/S 3.3 and TraceAnalyzer 3.3 include a new Customizable Wizard Framework, enabling users to create a customized graphical interface through scripting, which allows automation of custom workflows consisting of individual commands for interfacing, design, analyses and results setup Simple annotations in a script file define the graphical interface elements and parameters for script execution. A variety of input parameter types are supported such as strings, integer and Boolean as well as Symtavision internal objects like tasks, frames, buses or ECUs. More complex types like the event model editors, a file chooser or even a choice type complete the portfolio.

The drag-and-drop functionality has been enhanced in SymTA/S 3.3 to enable dependencies to other elements to be resolved on re-mapping, such as moving a task from Core1 to Core 2. The capability enables all dependent objects to be considered and re-mapping suggestions to be automatically generated. It also considers different recursion levels which represent the 'deepness' of mapped children, referenced elements and even dependencies to parents.

Symtavision

http://www.symtavision.com [1]

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**Links:**
[1] http://www.symtavision.com/