TargetLink: Positive Feedback by Mannesmann VDO

CUSTOMERS

Mannesmann VDO is a well recognized systems partner to motor-vehicle manufacturers all over the world. And Mannesmann VDO is one of the first companies who opted for TargetLink as their tool for automatic code generation. As dSPACE constantly strives for enhanced products, we highly appreciate feedback from the automotive industry. Therefore, it was a pleasure to interview Stefan Hohrein at Mannesmann VDO on his experience with TargetLink.

Stefan Hohrein is General Manager of the electronic design department for engine ECUs at Mannesmann VDO.

Has TargetLink-generated code already been used in series production ECUs?

Yes, although it is a rather new tool, we're already using TargetLink code in our series products. But we still carefully check the code since it takes some time to have the same level of confidence as in our current C compiler.

Did you find any errors in the code?

We have built up several hundred bytes of code and have found no errors. The code looks handwritten, sometimes better, sometimes worse.

Sample controller consisting of TargetLink blocks.

What do you think of the code quality in terms of documentation?

The code is well documented, but requires some effort to understand. We prefer to have only one instruction per line. This requirement is not fully supported by TargetLink.

And the tool handling?

Positive all the way. It takes minimal training to get the first usable results. TargetLink is ideally integrated into the MATLAB/Simulink environment. Even our automated tool chain is supported, comprising of C compiler, linker, and version, variant and configuration management, for example.

Did you encounter any problems caused by tool instability?

Not at all. TargetLink is very stable under our featured Windows NT system. Error messages were easy to understand and helpful. We encountered no crashes; however, we did not investigate TargetLink's performance on other platforms.

What would you like to see improved?

The cooperation with Stateflow must be enhanced since it's hard to understand when TargetLink uses FOR or WHILE instructions. We encountered some incompatibility problems as our systems department has upgraded to the latest Simulink version. Here we expect a massive improvement with the release of TargetLink1.2.
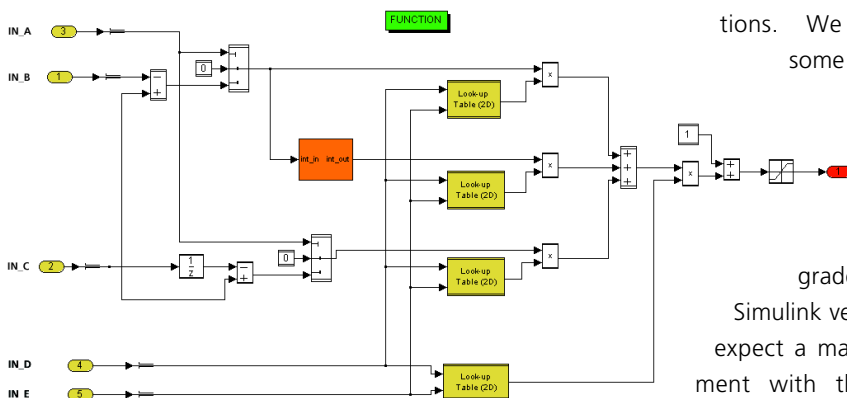
So, Mannesmann VDO continues to rely on TargetLink?

Most definitely. Thanks to TargetLink, software engineers can focus on system modeling and designing, rather than doing manual coding. We will certainly be using TargetLink more and more.