



10 Years of

2008

# TargetLink

Milestones in  
a Success Story



Automatic production code generation is one of the decisive phases in developing electronic control units and embedded software. Since its launch in 1999, the automatic production code generator TargetLink has been an amazing success story. The automotive industry regards TargetLink as its established autocoder.

Its automotive applications cover every area of a vehicle: powertrain, chassis, driver assistance, comfort, active and passive safety systems, and so on. And for several years now, it has been used to develop safety-critical aerospace systems. In fall 2009, TargetLink will look back on ten years of market success. Come with us on a journey through time as we show the milestones since 1999!

*Safety-critical application: cabin pressure control for the A380.*

*Daimler's engine ECU development department relies on TargetLink.*

*TargetLink supports AUTOSAR software components.*



## 1999

### The Revolution: Straight from Simulink® Model to ECU

With its launch in fall 1999, TargetLink revolutionizes the development of electronic control units (ECUs): Production-ready code can be generated from the controller model and transferred directly to the ECU at the touch of a button. Handcoding is now obsolete. The first production projects begin before the year ends. With TargetLink, Daimler completes a research project for a hybrid truck in only 3 months.

## 2001

### Top Benchmark Results Impress the Entire Industry

TargetLink's excellent benchmark results cause a sensation. International automotive manufacturers and suppliers are impressed. Moreover, the production code generator now has an added attraction as the "missing link" between function model and ECU: It closes the major gap in the development process and ensures seamless integration. TargetLink is also valued in the off-highway sector: An international manufacturer of agricultural machines uses TargetLink to develop tractor transmissions and other control components.

## 2003

### Entire Departments Rely on TargetLink

TargetLink is now a valuable tool in large project teams, where it blends seamlessly into the development process. The new "programmer" is now a full team member, for example, at Daimler. The company has switched its entire engine ECU development department over to automatic production code generation with TargetLink.

```
atic Void FuelRateCalculation(Void)
```

```
/* SLLocal: Default storage class for local variables | Width: 16 */
```

```
Int16 Sa3 F A / 1999 2000 2001 2002 2003
```

```
Description: F/A
```

```
LSB: 20-17 OFF: 0 MIN/MAX: -0.25 0.2899923706055 F/:
```

## 2000

### On the Road: TargetLink Code in Production Vehicles

TargetLink attracts widespread interest in the automotive industry. OEMs and suppliers worldwide begin evaluation and pilot projects, and use the results in actual production.

Nissan launches an engine control component for the 2000 Sentra, the first TargetLink-developed product to go into production. The results of this project and others are impressive.

## 2002

### The First Safety-Critical Aviation Application

The aviation industry has particularly strict safety requirements. TargetLink has made its mark on aviation – in projects like the cabin pressure control from Nord-Micro:

- Code certified according to aviation's highest safety standard, DO178B Level A
- Development time cut by 50%

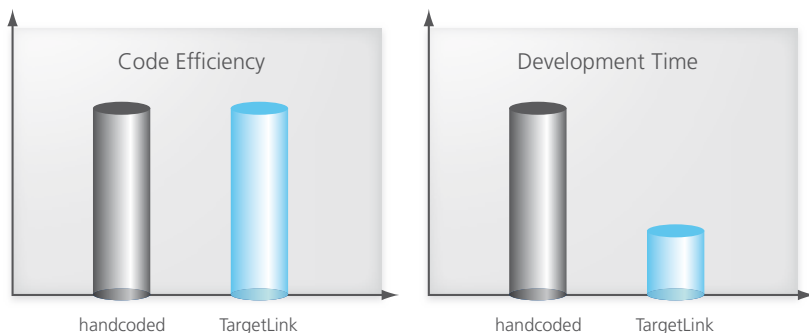
The new cabin pressure control is installed in a number of passenger planes, including the Airbus A380.

## 2004

### New Features: More Than Just a Code Generator

Now with powerful new extra functions, TargetLink is setting new standards.

- dSPACE Data Dictionary for managing the data sets of complete ECU applications
- Production-level implementation of OSEK and multirate modeling
- Code coverage analyses and incremental code generation



*Top benchmark results win over industry.*

## 2005

### The Best in Test

Model-based development is gaining ground, and so is automatic production code generation. TargetLink wins over new users and new application fields at an impressive rate. BMW is yet another major OEM who chooses TargetLink after evaluating the various production code generators on the market.

## 2007

### MISRA Modeling Guidelines for TargetLink

The Motor Industry Software Reliability Association (MISRA) publishes official modeling guidelines for TargetLink. TargetLink is the first autocoder ever to have such guidelines, reinforcing its position as the world's leading production code generator in the automotive industry. The guidelines particularly address aspects of functional safety.

## 2009

### The No. 1 for Professional Code

Ten years of success. TargetLink is being used in numerous industries all over the world. The automotive industry regards it as its established code generator. TargetLink also looks back on several successful years in developing safety-critical aerospace systems (see the customer report "Maximum Safety", dSPACE Magazine 1/2009).



## 2006

### TargetLink Supports AUTOSAR

For the first time ever, a code generator bridges the gap between model-based design and production-ready, AUTOSAR-compliant ECU software. TargetLink provides extensive support for modeling, simulating, and generating code for AUTOSAR software components.

## 2008

### TargetLink 3.0: The Winning Combination

The best of both worlds: With its newly designed blockset and its tried and tested features, TargetLink 3.0 provides even closer integration with MATLAB®/Simulink®, so that numerous Simulink third-party tools can be used for TargetLink models. TargetLink 3.0 also supports model referencing to facilitate modular, distributed development processes.

*TargetLink is also valued in the off-highway sector.*

