

**Dateiname:** DA060\_Breustedt\_P

**Titel:**

Analyse und Behandlung von Datenhazards in der Pipeline eines VHDL-Mikro-controllers

**Bearbeiter:**

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**Text der Kurzfassung:**

This diploma thesis analyses data hazards in a PIC compatible microcontroller with pipeline. The processor was developed in the Labor für Datentechnik at the University of Applied Sciences Braunschweig/Wolfenbüttel. Its pipeline architecture causes data hazards while processing software programs. This document describes how these hazards can be recognized and handled by a hardware unit, controlling the pipeline. The hazard detection unit is implemented using VHDL and simulated with ModelSim from Mentor Graphics Corporation.