Real-Time Execution of SIMPACK Models under Simulation Workbench
AGENDA

- Concurrent Real-Time –Who we are
- Simulation Workbench
  - Real-Time Simulation - The Right Way
  - SIMPACK Support
  - Driving Simulator
Concurrent is a global software and solutions company. We serve markets requiring uncompromising performance.

- Aerospace
- Defense
- Automotive
- Energy
- Space
- Financial
- Healthcare
- Manufacturing

Every Concurrent application is built on our core foundation of Linux and real-time technology.

One stop solution provider with a global presence.

- HQ: Florida
- Offices: Michigan, South Carolina, California, UK, Germany, France, Japan, China/HK

Founded 1966

51 Year Heritage in high performance solutions.
APPLICATIONS & CUSTOMERS

WE SERVE APPLICATIONS REQUIRING UNCOMPROMISING PERFORMANCE

HARDWARE IN THE LOOP
SOFTWARE IN THE LOOP
DATA ACQUISITION
PROCESS CONTROL
SIGNAL CONDITIONING
IMAGE GENERATION
FINANCIAL MODELING

OUR CUSTOMERS INCLUDE MANY OF THE WORLD’S LEADING COMPANIES

[Logos of various companies]
SIMULATION WORKBENCH

Introduction

Built on top of our own real-time OS and tools
SIMULATION WORKBENCH

Introduction

Framework to simulate models in real-time

- Chassis Design
- Engine Model
- Transmission
- Electronics
Where do we fit-in in MBD

* SIMulation Workbench is used in these phases of Model-Based Design

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SIMULATION WORKBENCH
Real-Time Simulation - The Right Way

- **COTS Hardware**
  - Immediate support for latest hardware
  - Multi-core support
  - Avoid vendor lock-in
  - Wide offering of I/O Cards
  - Extensive support for third-party modeling packages
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SIMULATION WORKBENCH

SIMPACK Support

- Easy point-and-click interface to import SIMPACK models into SimWB
- SIMPACK leverages SimWB’s Multi-Core support to the fullest extent
- >200 DoF models
SIMULATION WORKBENCH
Driving Simulator

- CAN Bus
- H-Bridge
- Motor +
- Throttle Ctrl.
- PID
- Trig. Cam
- Veh. Speed Sensor
- Ignition 1-4
- Injection 1-4
- Dedicated Ethernet
- Dedicated Ethernet
- Accel. Ped. Pos.
- Crank Cam
- Tooth wheel
- FPGA Eng. Board

ECU

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SIMULATION WORKBENCH
Driving Simulator
THANK YOU!