

WOPANET: worst case analysis for real-time switched networks

Identifying the worst case performance is key when designing mission critical embedded networks. But traditional approaches such as simulation are often not applicable nor efficient.

COMPETITIVE ADVANTAGES

- Overcome simulation limitations
- Very fast, even for large networks
- Usage at early design stage

DESCRIPTION*

- The WOPANET software calculates worst case performance metrics for real-time switched networks
- Based on Network Calculus theory
- Network implementation details are not required
- Automatically find optimal network configuration
- Scalable and easy to extend

APPLICATIONS

- Mission critical embedded networks
- Aerospace
- Automotive
- Defence

INTELLECTUAL PROPERTY

- Software

DEVELOPMENT STAGE

- Technology validated in relevant environment



TECHNICAL SPECIFICATIONS

Inputs	- Network topology - Periodic and aperiodic flows - Service policy (FIFO, etc.) - Hardware constraints
Outputs	- Communication latencies - Bandwidth & buffer utilization - Loss rate
Supported protocols	- AFDX - SpaceWire - Others can be added
Performance	3 sec. for a 60 nodes network analysis

LABORATORY

- DISC: MARS team



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