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# Worst-Case Execution Time and Reactive Systems

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## Résumé

### Worst-case execution time Estimation

#### **A guaranteed bound on the execution time**

Static estimation:

Based on static analysis

At the binary level

Measurement to assess the WCET estimation

Reactive systems

A periodic step function

#### **Bounded memory**

From input values (and memory state) computes output value  
(and memory update)

Lustre/SCADE code and tools

#### **How a better knowledge on reactive systems helps timing analysis?**

Infeasible path: Semantic analysis

WCET assessment: Environment simulator

Multi-core timing analysis

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