

# **From the Multi-Processor System on Chip to the Real-Time Operating System**

A Real-Time Operating System (RTOS) is an Operating System (OS) intended to serve Real-Time applications that process data as it comes in, typically without buffer delays. Processing time requirements (including any OS delay) are measured in tenths of seconds or shorter increments of time. A real-time system is a time bound system which has well defined fixed time constraints.

## **OVERVIEW**

### **1. INTRODUCTION**

### **2. PROJECTS**

#### **2.1. Multi-Processor System on Chip**

##### **2.1.1. RISC-V MPSoC**

##### **2.1.2. OpenRISC MPSoC**

##### **2.1.3. MSP430 MPSoC**

#### **2.2. Real Time Operating System**

##### **2.2.1. GNU Mach Kernel RTOS**

##### **2.2.2. GNU Hurd Operating System RTOS**

##### **2.2.3. GNU Debian Distribution RTOS**

### **3. WORKFLOW**

#### **3.1. Front-End Tool**

#### **3.2. Back-End Tool**

### **4. CONCLUSION**