Internet

Techniques et protocoles de communication

Internet est de plus en plus omniprésent; il est maintenant inévitable dans les systèmes embarqués.

Main Courses

STS1 - LwIP Implementation This course explains the implementation of the LwIP stack on STM32 MCUs

Additional Courses

IOT1 - Internet of Things (IOT) on Microcontrollers Building low-power IOT devices using standard microcontrollers Th is course introduce the IoT ecosystem, describe the most used IoT Edge to Cloud Protocols (MQTT, MQTT-SN and CoAP), explore particularly heinous IoT focused attacks and security provisions at each level of stack (physical devices, communication systems and networks) . This course explains how to configure the LwIP (with MQTT), FreeRTOS and MbedTLS for a microcontroller-based IoT application; it requires previous knowledge of FreeRTOS.

N1 - Ethernet and switching This course covers both IEEE802.3 (10, 100, 1000 Mbps) and IEEE802.1D/802.1Q

N2 - IEEE1588 - Precise Time Protocol This course describes the PTP protocol and provides implementation examples

N3 - Ethernet 10 Gigabit This course covers IEEE802.3 Ethernet 10 gigabit and SFP+

STG - STM32 + FreeRTOS + LwIP This course covers the STM32 ARM-based MCU family, the FreeRTOS Real Time OS, the LWIP TCP/IP Stack and/or the EmWin GUI Stack