Project Proposal

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Objective: Project proposal

1 PROTOCOL LIBRARIES CONCEPT

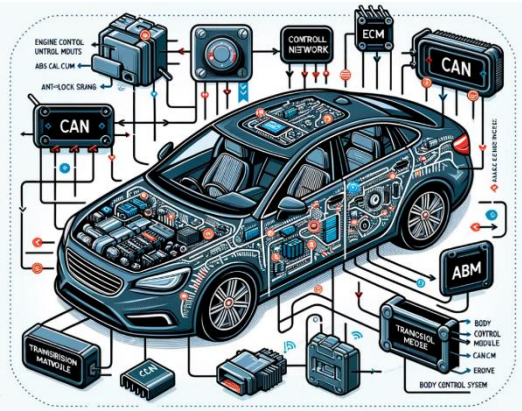
SCADE (Safety Critical Application Development Environment) is a model-based development suite designed for creating and verifying safety-critical software in industries such as aerospace, rail, and automotive. It provides tools for graphical modelling, simulation, and automatic code generation, ensuring compliance with standards like DO-178C and ISO 26262. SCADE is widely used for its ability to produce highly reliable, certified software with reduced development time and cost.

Critical Systems are often communicating with other critical systems, for example, automotive systems usually communicate using CAN (Controller Area Network), Aerospace systems communicate using ARINC 492, ARINC 661, MIL 1553, etc.

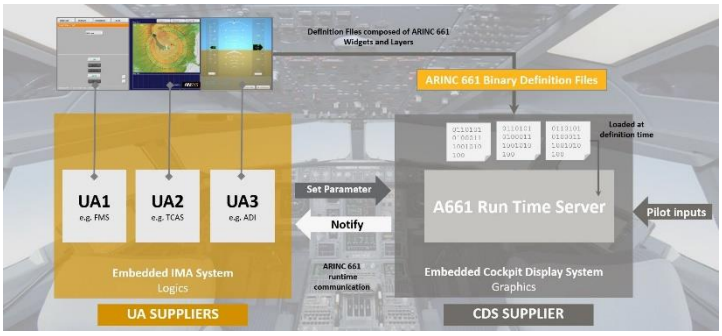
This project consists of developing the libraries of the CAN and ARINC 661 protocols in Scade One, as well as a course to be published in the Ansys public platform AIC. Scade One.

CAN (Controller Area Network) is a real-time communication protocol designed for microcontrollers and devices to exchange data without a central computer, commonly used in automotive and industrial applications.

ARINC 661 is a standard that defines the interface between avionics systems and their cockpit displays, enabling modular and customizable graphical user interfaces for aircraft.



Automotive CAN bus network



ARINC 661 Cockpit network