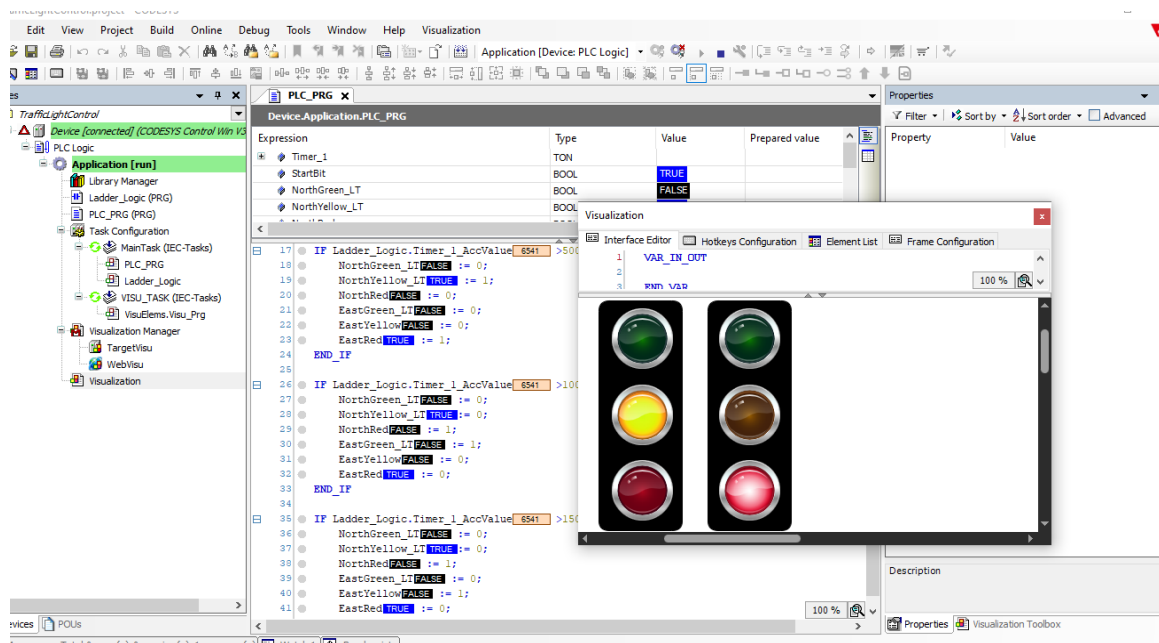


Traffic Light Simulation Portfolio

This project demonstrates a basic traffic light simulation using CoDeSys, combining PLC logic and HMI visualization. The system alternates between two directions (North and East) with traffic lights (Red, Yellow, Green) managed by a timer. The control logic is implemented in Structured Text using timer conditions.

Main Logic: - A TON timer (Timer_1) is used with a preset time of 20 seconds. - Depending on the accumulated time (AccValue), different light signals are turned ON for North and East directions.
Code Snippets: 1. 0s - 5s: North = Green, East = Red 2. 5s - 10s: North = Yellow, East = Red 3. 10s - 15s: North = Red, East = Green 4. 15s - 20s: North = Red, East = Yellow The logic cycles continuously by resetting the start bit when the timer reaches the preset time.



This simulation is visualized in the CoDeSys HMI with realistic traffic light indicators, providing intuitive feedback on the system's logic states.