Olingua Franca
A secure software architecture used to develop robust and smart distributed control systems

Our world is becoming **INSTRUMENTED**

Our world is becoming **INTERCONNECTED**

Virtually all things, processes and ways of working are becoming **INTELLIGENT**

Olingua Franca embodies these trends and creates a developer-friendly platform to securely interconnect control system components, bring high-order logic to low level systems, and create the virtual environment for a Smarter Planet.

Controls Architecture
Olingua Franca breaks down all control systems into Controllers, Sensors, and Actuators. Each virtual component (represented by microchip icons) is connected to a physical device (a traffic light is one example).

Certified Components
All components within Olingua Franca must present cryptographically secure certificates to ensure a strong chain of trust.

Secure Networks
IPsec and Internet Key Exchange (IKEv2) are used to ensure network communication is secure. The API is also access controlled.

Layered Control
Higher level controllers (such as the one for a city) coordinate many lower-level subsystems (such as street intersections) by abstracting away low-level details. Imagine if traffic lights were aware of city-wide trends such as rush hour.

Resilient Systems
If components fail, Olingua Franca can automatically correct.

Traffic is only one example of an application of Olingua Franca. The architecture applies to the smart control of power, water, heating, or any similar system.

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