Olingua Franca

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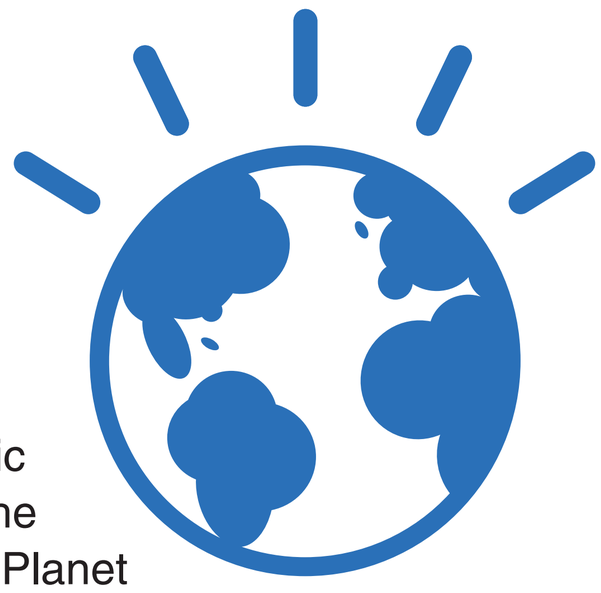
IBM

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**

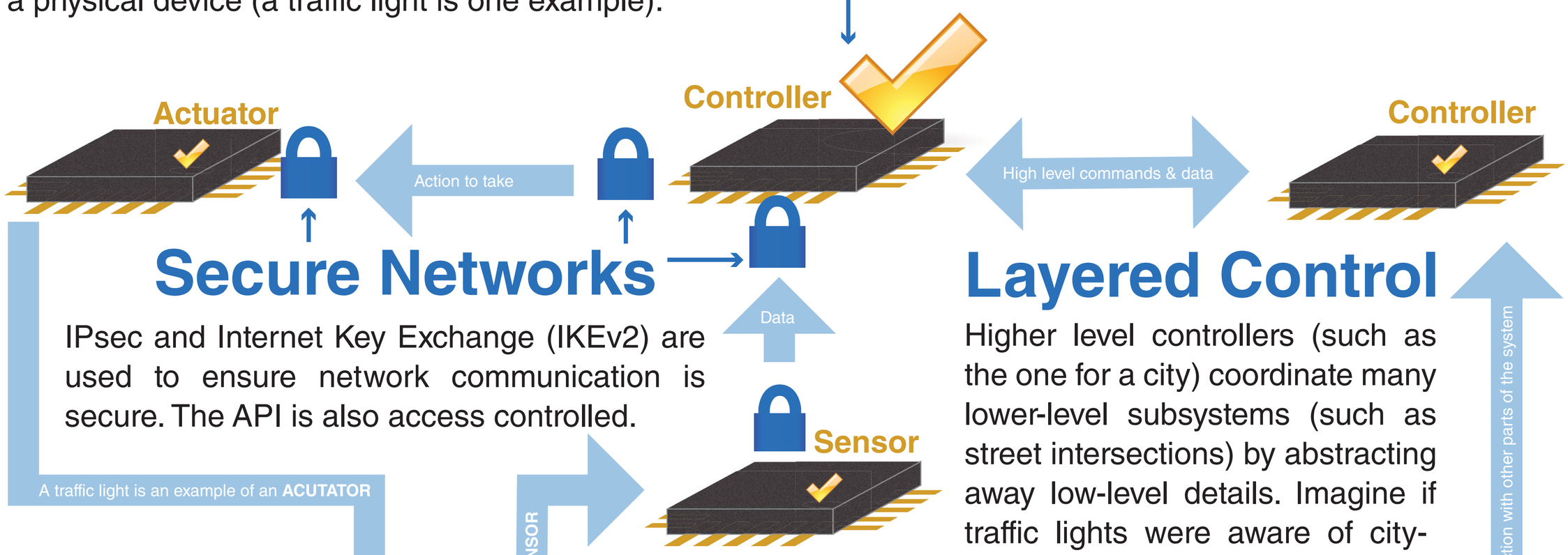
Olingua Franca embodies these trends and creates a developer-friendly platform to securely interconnect control system components, bring high-order logic to low level systems, and create the virtual environment for a Smarter Planet

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.

Broad Applicability

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.

Resilient Systems

If components fail, Olingua Franca can automatically correct

The combined work of:

John Cohn | Lindsay Kaye | Jon McKay | Ryan Mitchell | Evan Morikawa | Alexander Morrow | Karl Schults | Kate Swift-Spong | John Watson

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