Simple and Secure Control of Consumer IoT Device with a Smartphone

How to securely manage and setup IoT devices using a smartphone?

Designed and implemented easy-to-use and secure procedures for setting up IoT devices into a home network, and controlling them using a smartphone.

Adapted the OMA Lightweight Machine to Machine (LwM2M) specification for home use.

PoC implementation using RPi and Android smartphone. Extensions to LwM2M open source projects:
- QR code reading
- Smooth user experience
- Bootstrapping over WiFi

LwM2M is an "Open" ecosystem, leveraging the work of 25+ member companies.

Changes to LwM2M specifications need to be standardized.