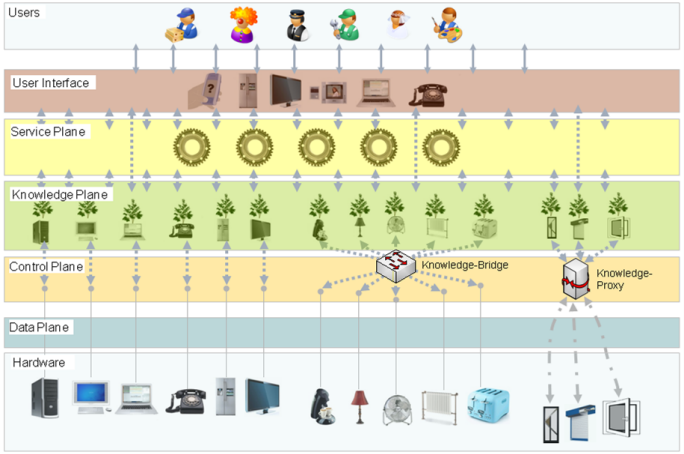
Chair for Network Architectures and Services
Computer Science
Technische Universität München

Autonomous Control and Management Platform



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AUTHONE

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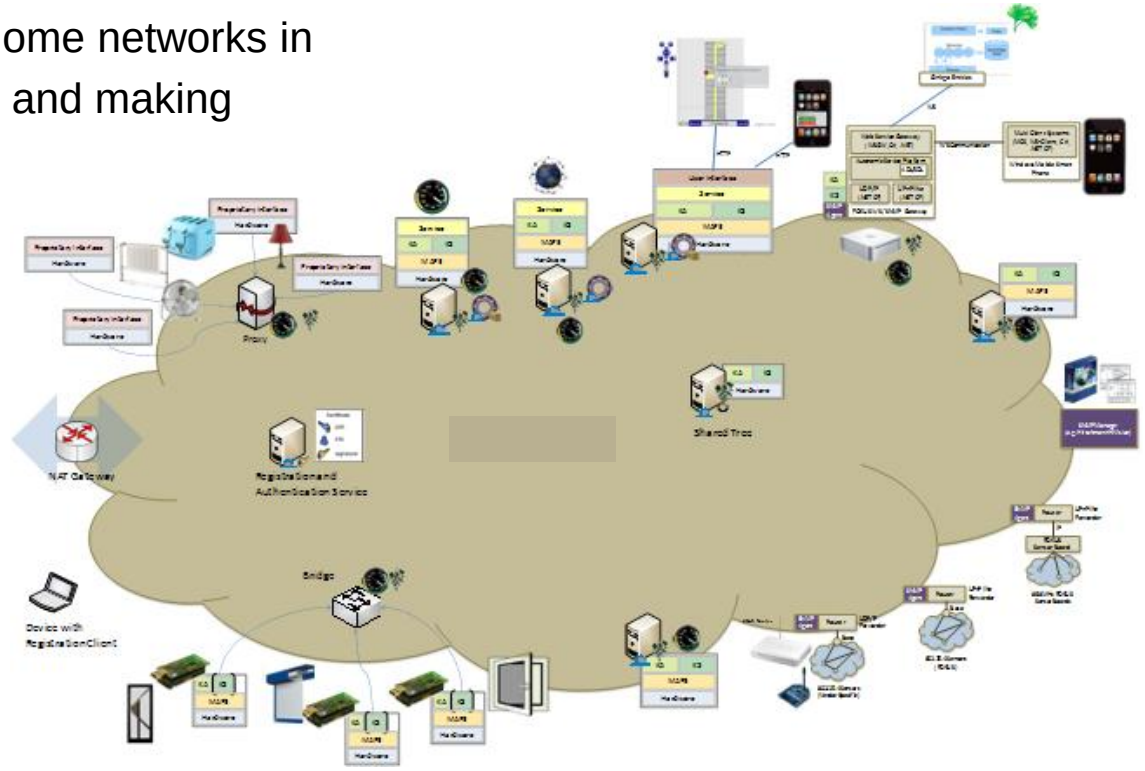
Problem

The **amount of technical devices in our environment increases rapidly.**

The **complexity and dependency of the devices grows as well.**

We need **unified autonomous control and management functionality** inside our future home networks in order to keep them manageable and making them more comfortable!

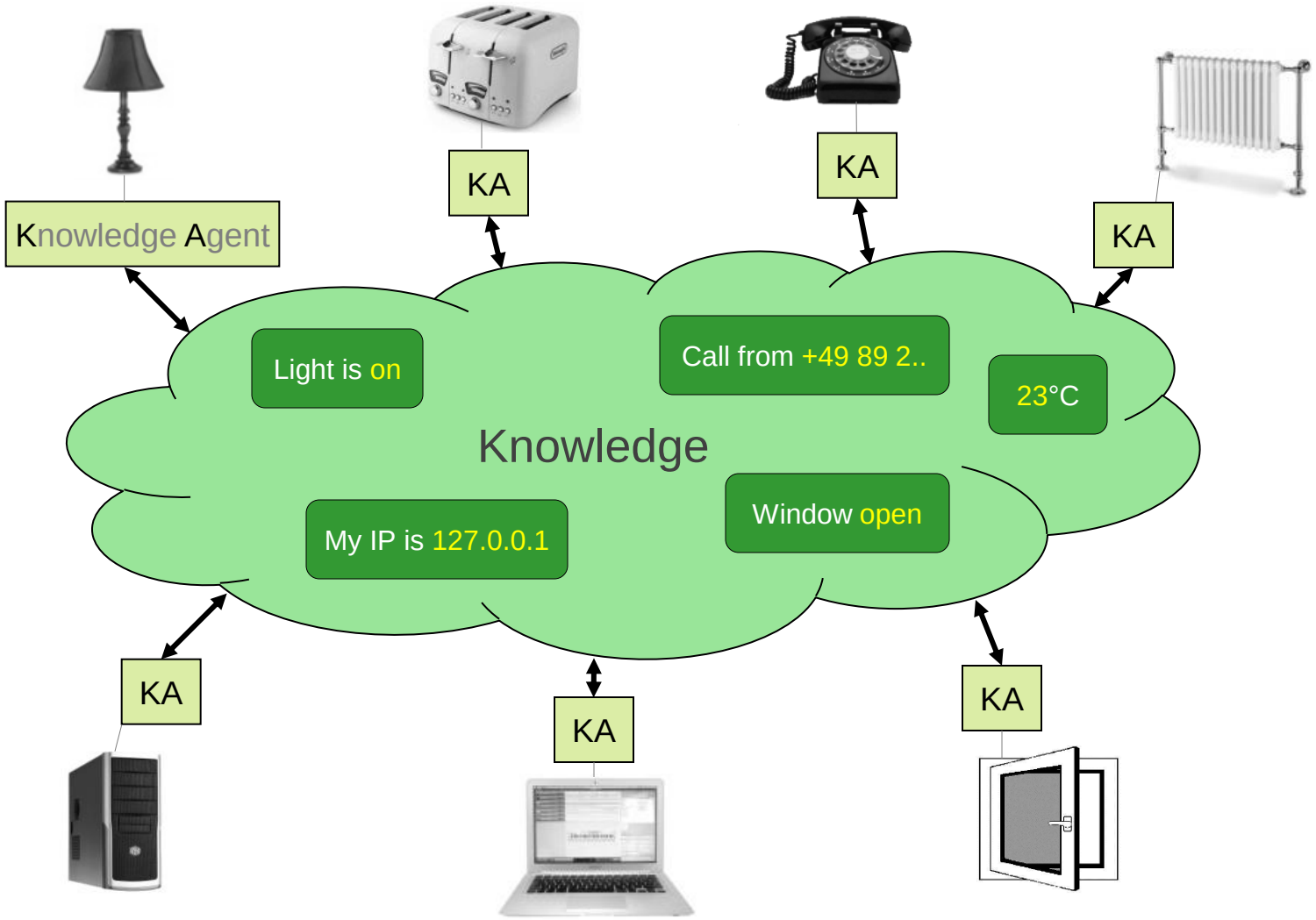
Having such functionality provides space for new applications that let the user experience his daily environment in a new way opening a market for new products using the platform as base.



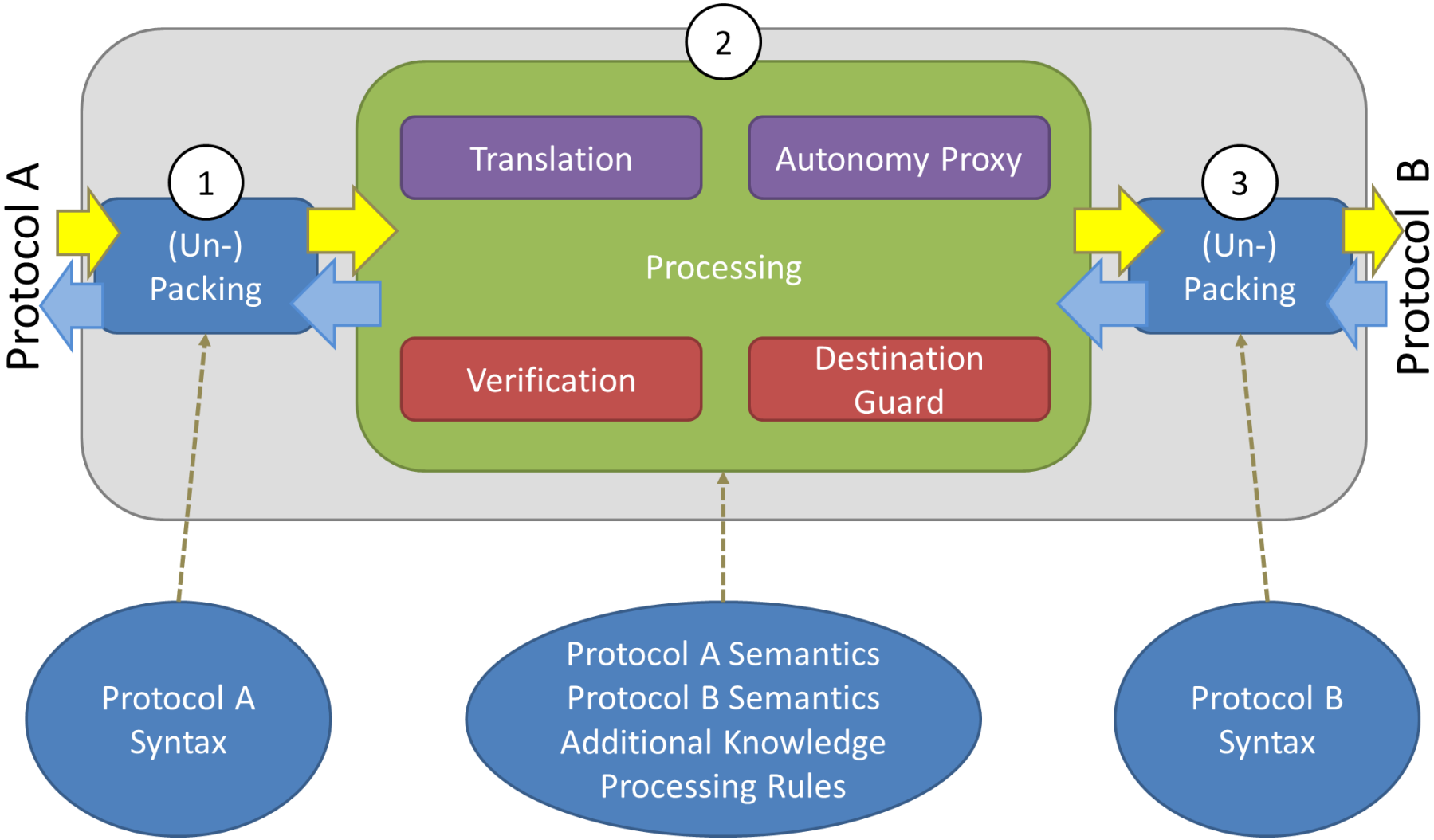
What we need…

- Universal
  - Global repositories for **unified** models
- Small
  - Very limited **unified** interface (Get/ Set | Pub/ Sub)
- Distributed
  - Knowledge is distributed to reach fast and high availability and resilience
  - Control decisions are taken locally (→Autonomic Manager)
- Hierarchical
  - **Control locally, manage anywhere** (distributed)
    - Unified data models and content-centric unified data fetching
- Autonomic
  - Self-Organizing Knowledge Agents
  - →Autonomic Manager

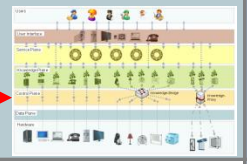
Knowledge Agent: Content Centric Management

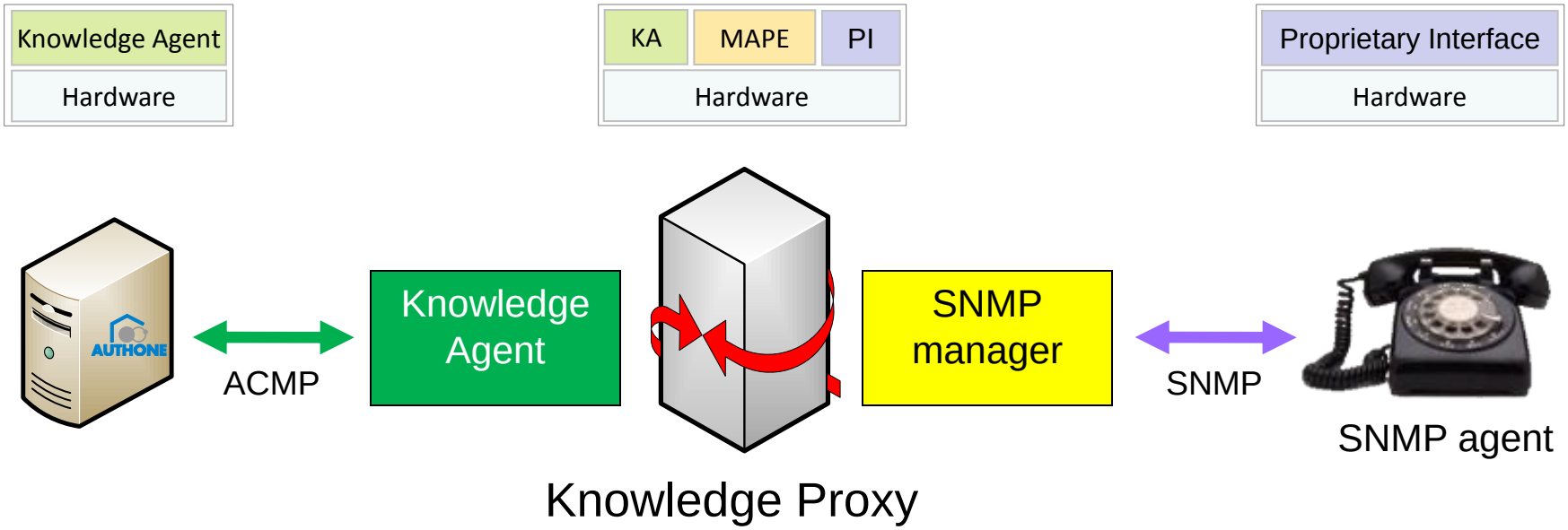


Generic Proxy Concept



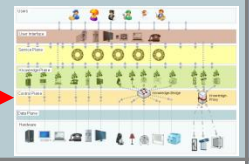
SNMP Proxy



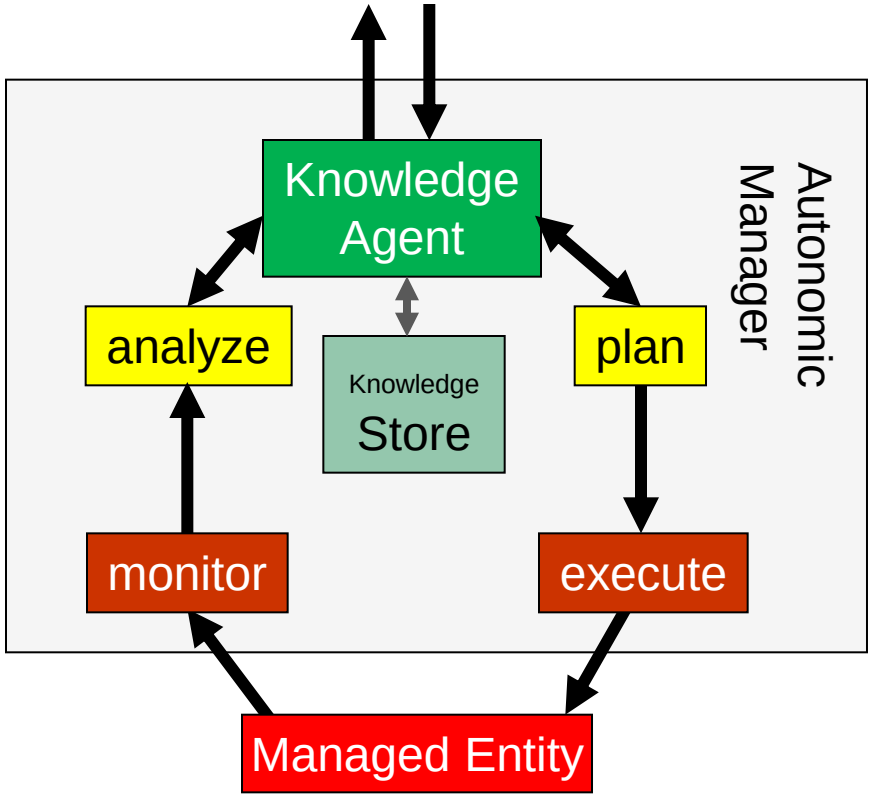


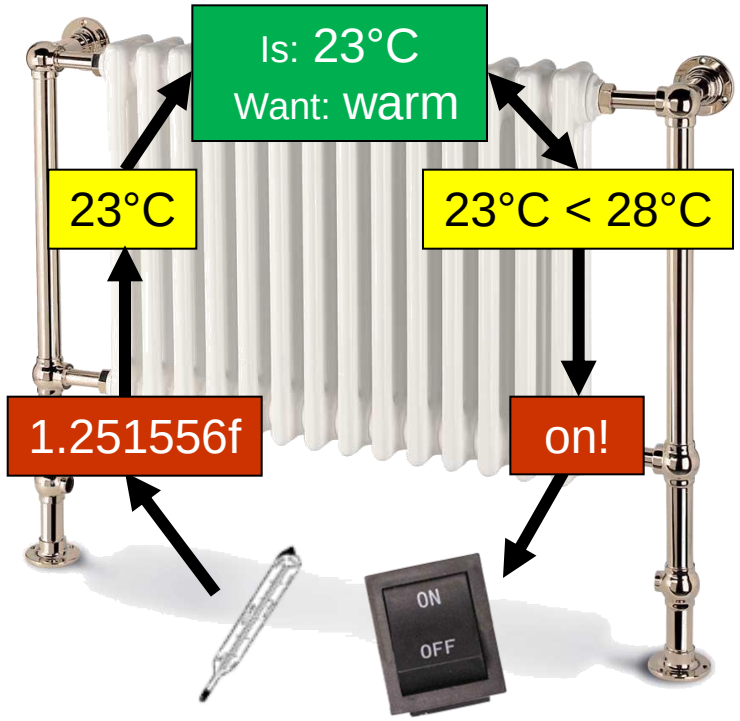
- Transform data (proprietary ⇔ ACMP)
- Provide autonomous functionality as proxy

Autonomic Manager



abstraction





Web Based Control Interface

http

TCP-Socket

KA

Browser

http communication

Web Server

http & Socket communication

TCP-Socket

Knowledge Agent

Socket communication

Clicking on a button control