

# Web(-like) Protocols for the Internet of Things

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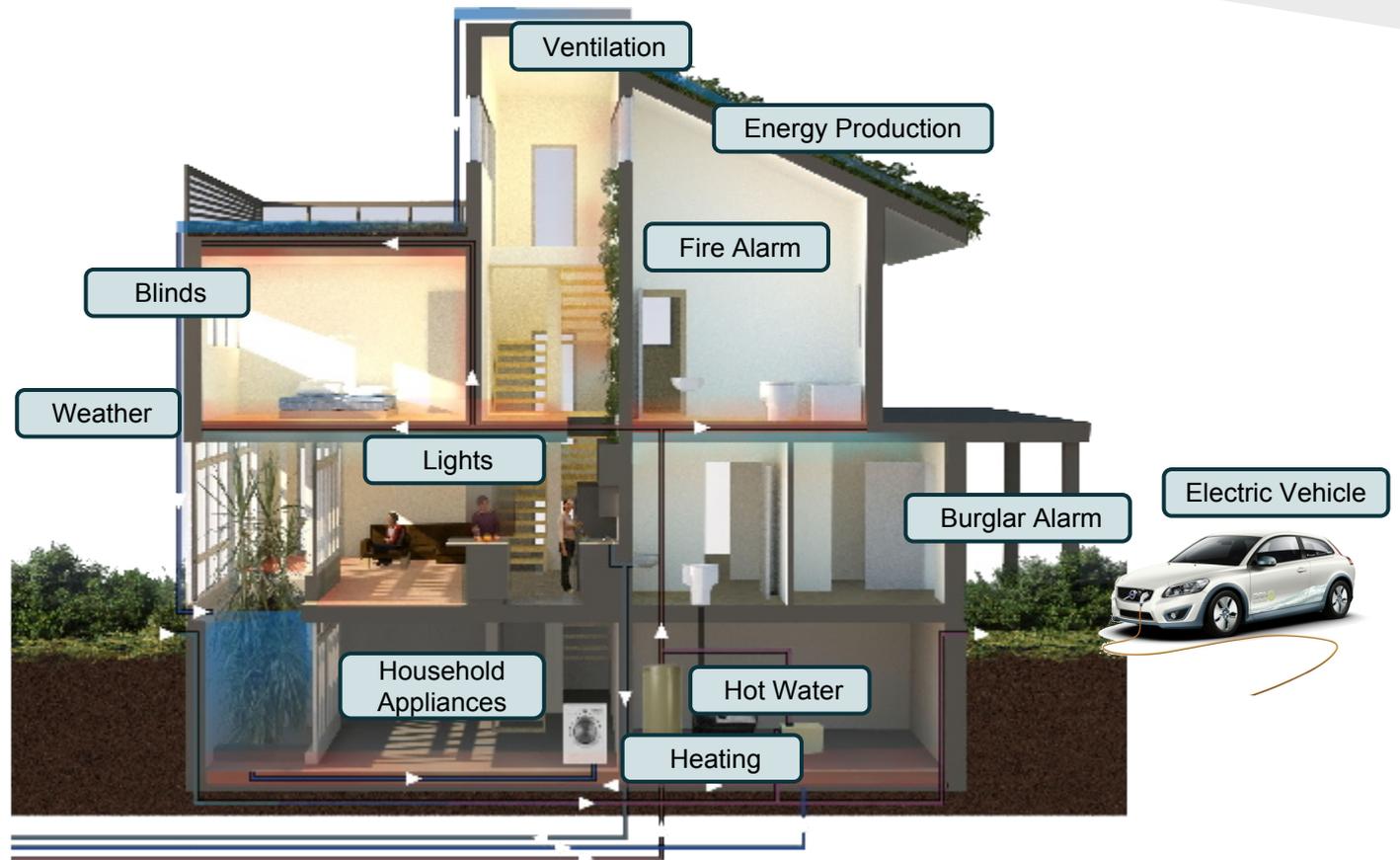
# IoT in (Future) Homes

Weather Predictions

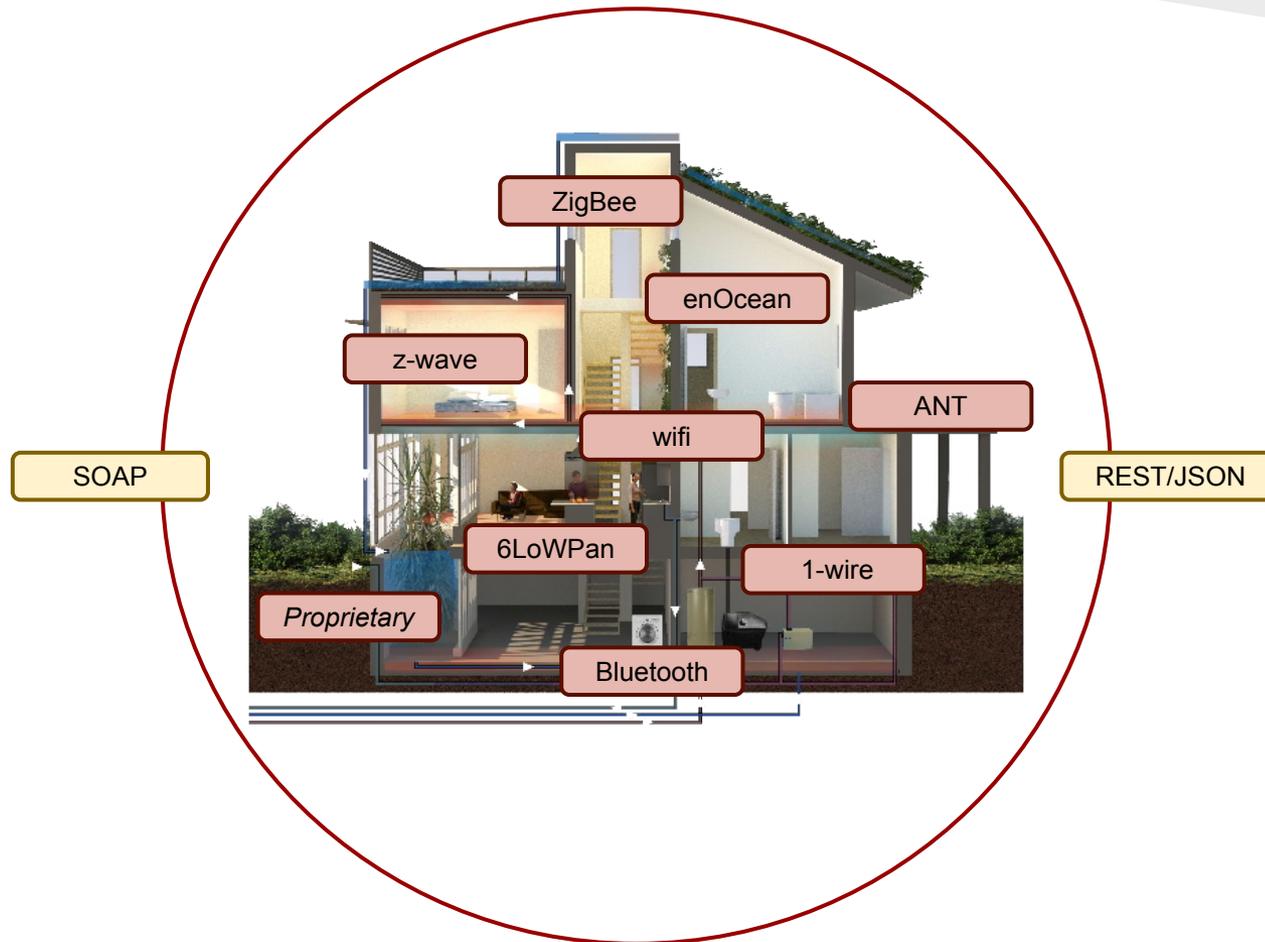
Energy Tariffs

Usage Predictions

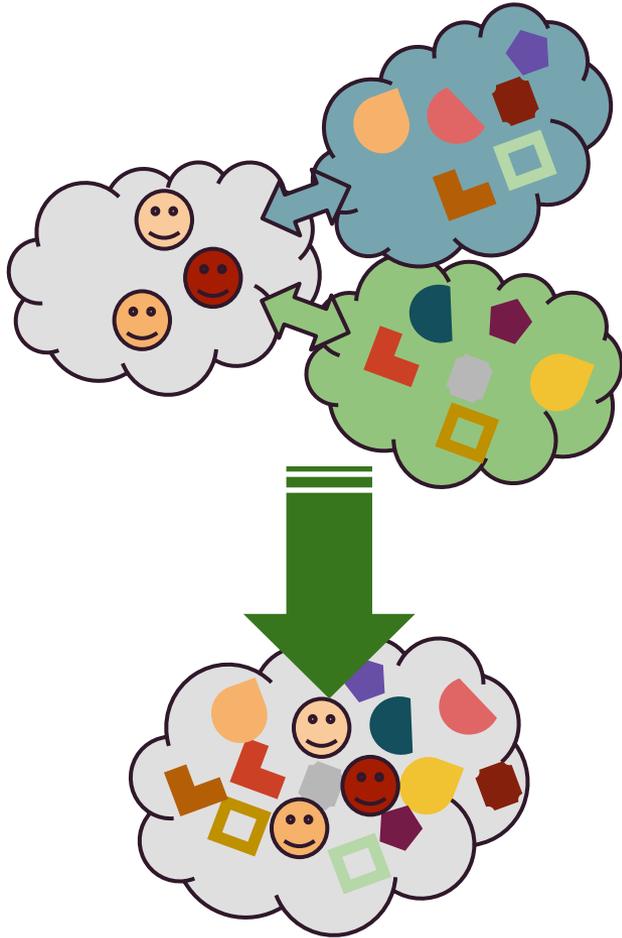
External Life



# IoT Communication Tech.



# Motivation

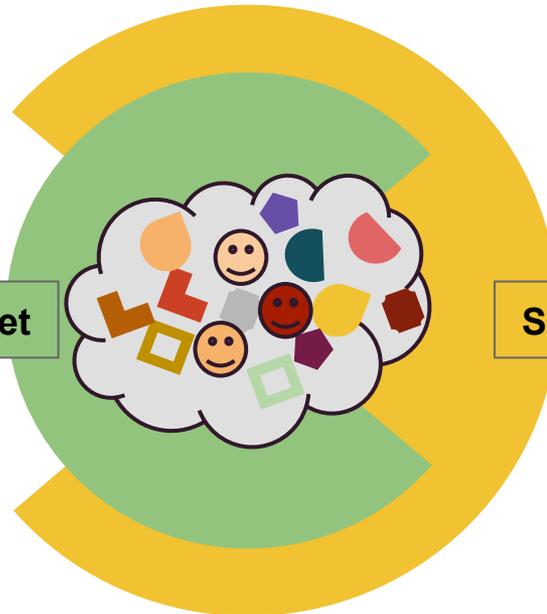


# WebSockets and STOMP

GET /app/path  
Connection: Upgrade  
Upgrade: websocket  
Sec-WebSocket-Key: XXX

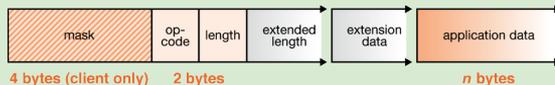
HTTP/1.1 101 Switching Protocols  
Connection: Upgrade  
Upgrade: websocket  
Sec-WebSocket-Accept: XXX

**WebSocket**

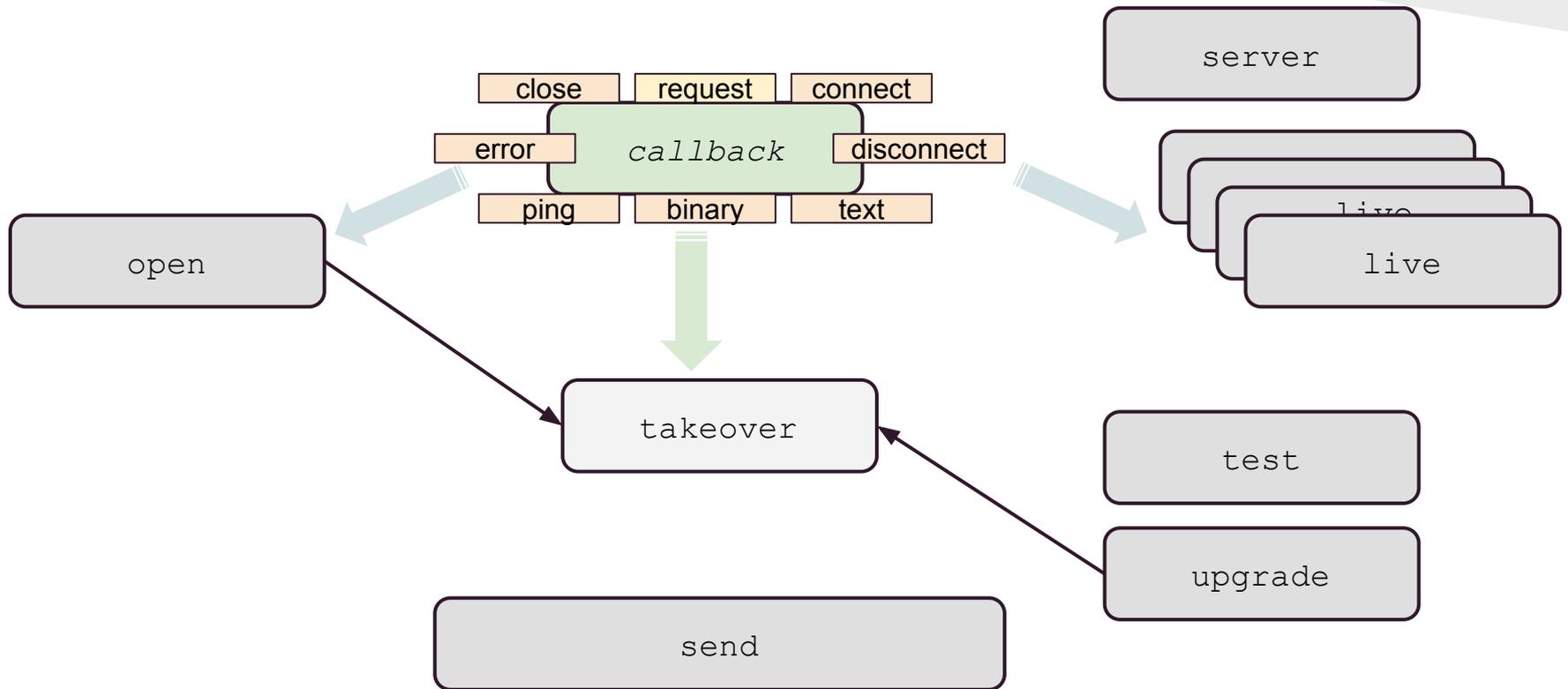


**STOMP**

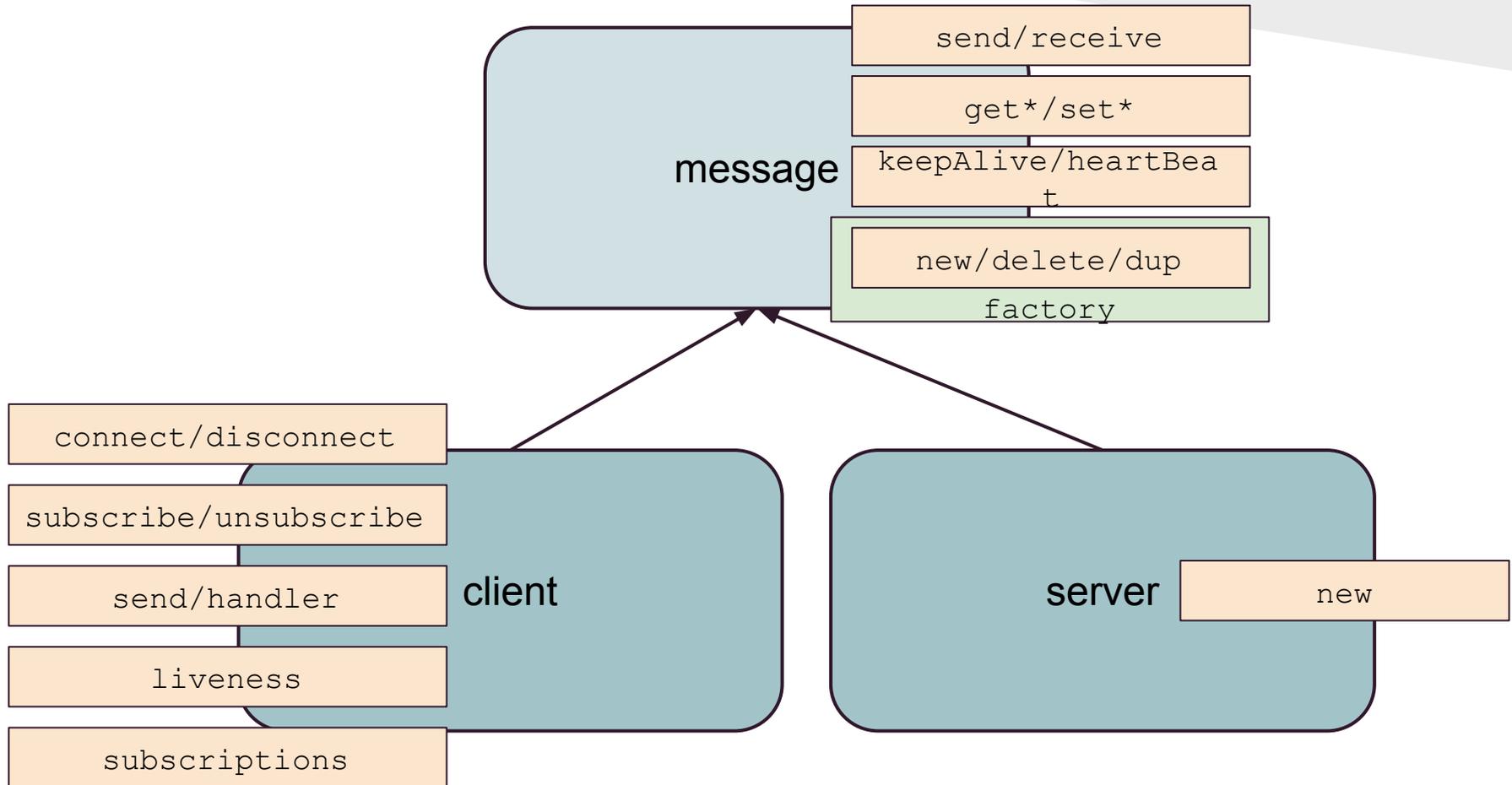
SEND  
destination:/queue/a  
content-type:text/plain  
  
hello queue a  
^@



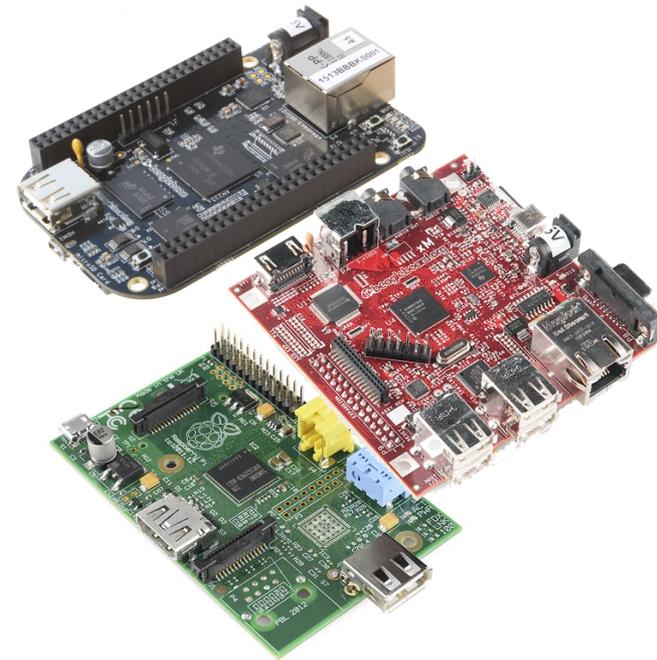
# WebSocket Library



# STOMP Library



# Conclusion



# Open Source



<http://code.google.com/p/efr-tools/>

- Embeddable Web Server
  - REST
  - WebSockets
- WebSockets
- UPnP
- Tcl event library
- Web aware application startup framework
- "make" system, incl. binaries
- Templating system
- Tk-style 8.4 object support

# 7.6-8.6=15 yrs of Tcl'ing



1997



2003



2004



2005



2006



2007



2010

## Thank You!

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