

# Welcome to IoTivity

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# Abstract

This presentation will introduce today's track on IoTivity.

The session will explain where the effort fits strategically among the various efforts to build standards and implementations of standards to implement the Internet of Things.

It will also explain the IoTivity and OIC technical approach and why it is particularly well suited to large-scale IoT deployment.

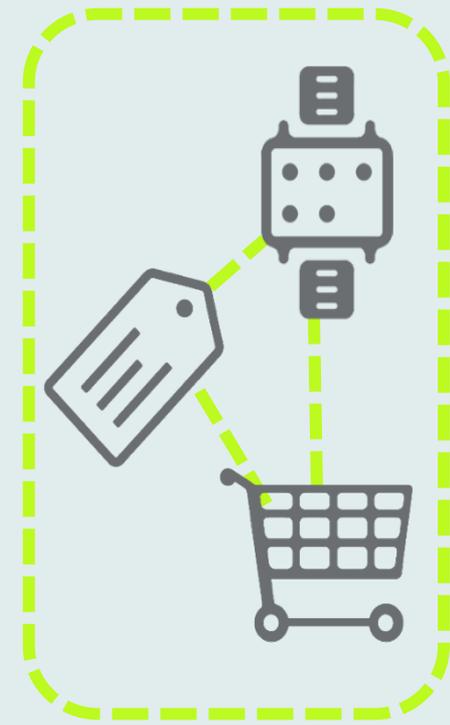
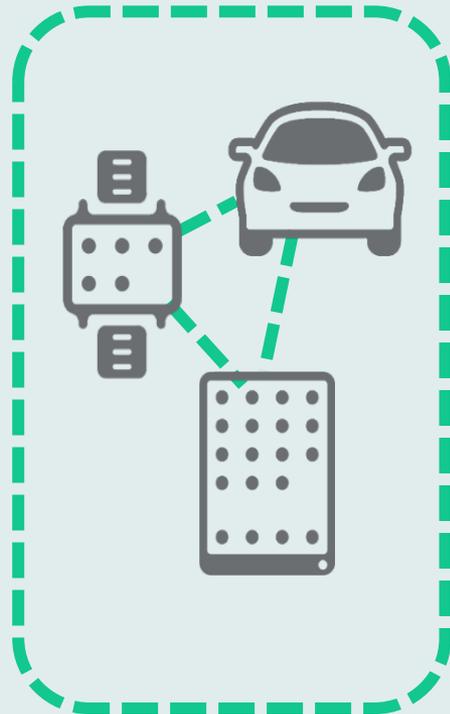
# The Challenge of IoT Communications



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The Internet of Things is currently evolving as “Isolated Islands of Things.”

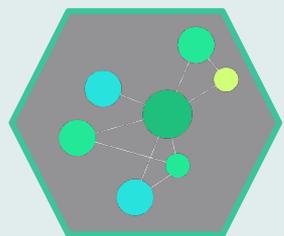
This severely limits the value of IoT.



We can do better.

# Addressing the Challenge of Communications

OIC (the standard) and IoTivity (open source project) is making it easy for devices to connect and interoperate - regardless of vendor, OS, hardware, etc.



Standards



Open Source  
Project



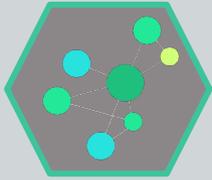
Certification

= Interoperability

# The Strategy for Building Device Interoperability

## IoT Device Interoperability

### Specification



- Broad spectrum of industry leaders providing guidance
- Common communications protocols, approaches for security and identity, and service-level protocols, object models and developer APIs
- Open specification that anyone can implement

### Open Source Project



- Provides a fast path to market for developers and manufacturers
- Open source development promotes faster innovation via community-driven development
- Connectivity framework that abstracts complexity

### Certification



- IP protection & branding for certified devices
- Certification = a device implementation as defined in the specification and released into the open source

*OIC is a global alliance to deliver "just-works" interoperability for developers, manufacturers and end-users through a specification and an open source project.*

# Sample of Current Members



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## Diamond



## Platinum



## Gold



# OIC/IoTivity IP Coverage— Best in the Industry



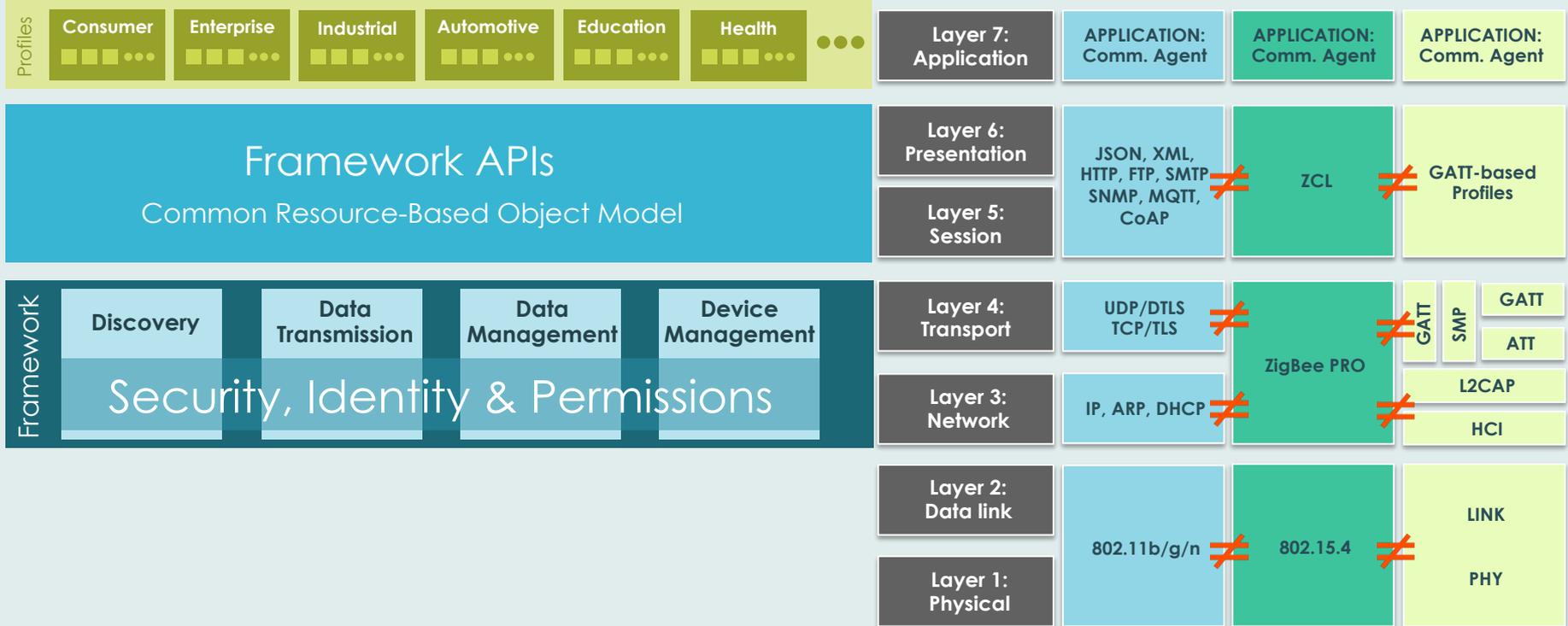
	OIC	others
Code contributed by a company is free to copy.	yes	yes
Code contributed by a company comes with a license to use patents from that company with the code as long as certification is passed.	yes	yes
Code contributed by a company comes with a license to use patents from that company with the code even without certification (forking).	yes	no
Spec implemented in another programming language and certified is licensed under patents of members.	yes	no
Patents from member companies who do not contribute code are still licensed if needed to implement the spec.	yes	no
If code comes from one affiliate of a company, and the patents are held by another affiliate or parent, the patents are still licensed.	yes	no

*Summary information only. Complete policies are part of OIC membership documents. As always, consult your company's attorney.*

# IoTivity Architecture



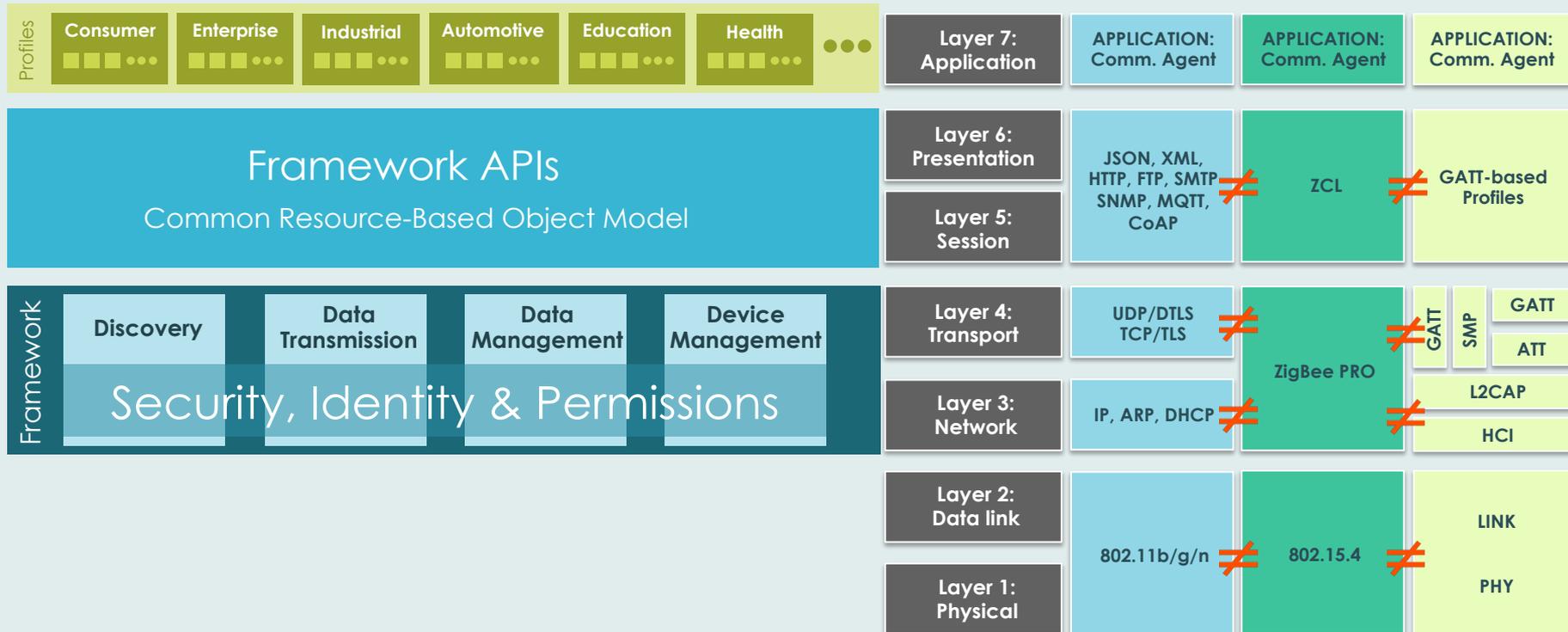
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Interoperability comes from a common application framework for discovery, data transmission, data management, and device management.

OIC is radio-independent.

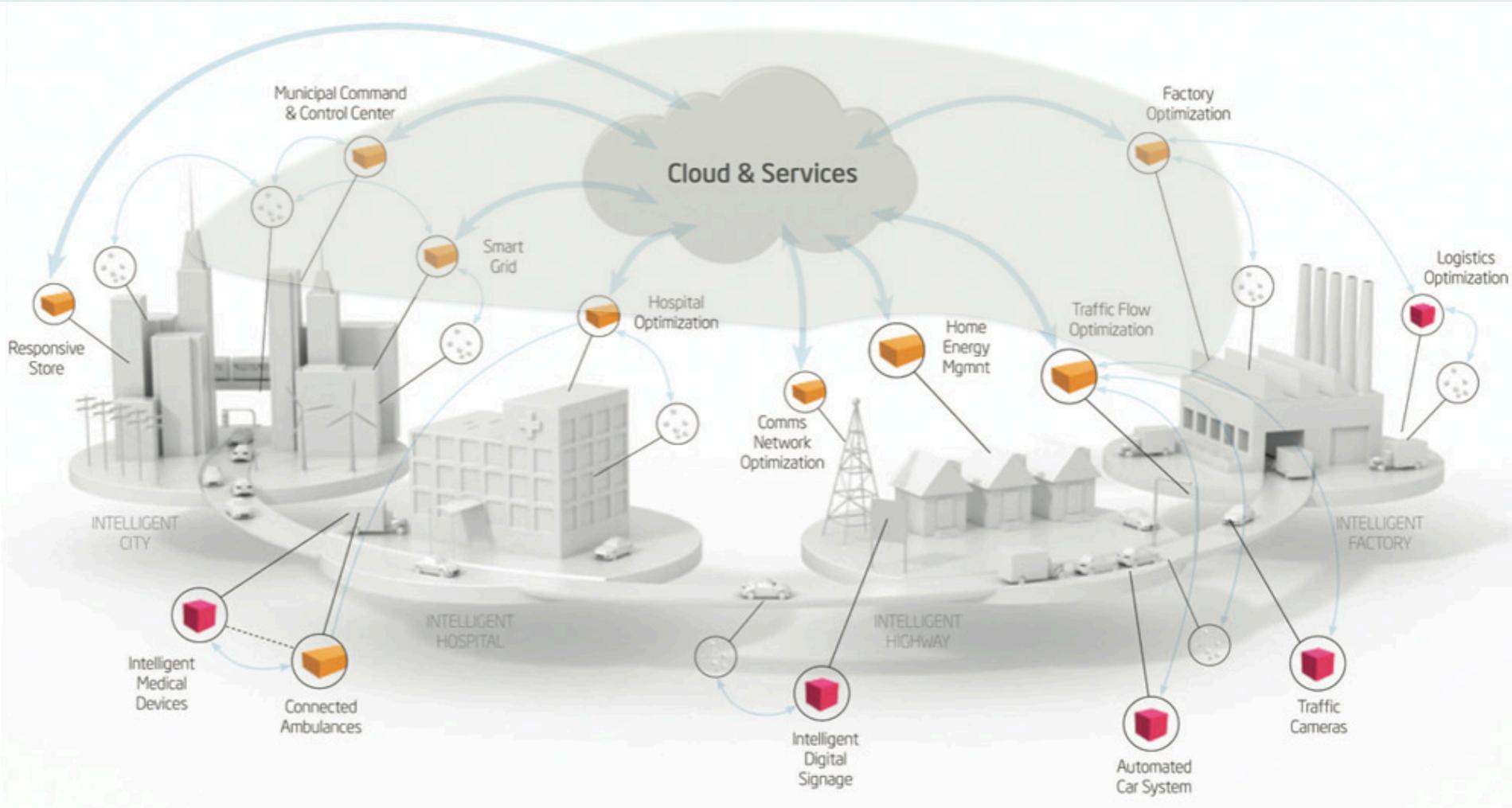
# What you don't see in OIC



- Required gateway systems.
- 1990s-style remote procedure calls.

*Why is this important?*

# IoT Can't Deliver Potential Without Cloud



source: <http://m.eet.com/media/1174500/internet-of-things-lg.jpg>

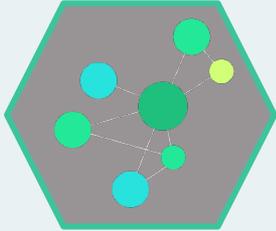
# Successful IoT will build on Cloud-native Lessons from Mobile

- Techniques developed for mobile click-bait have established the way to handle millions of devices with services integrated from dozens of companies.
- Enterprise-style software and RPCs are scaling constraints.
- Instead, IoT projects need technologies like node.js, microservices, containers and VMs.

***OIC/IoTivity are architected for scale deployment.***

# Participate!

## Become A Member!



### Membership includes:

#### *Gold Membership and above:*

- Certify spec compliant apps and devices
- Use OIC branding
- Benefit from patent cross-licensing protection
- Provide input in the standard development

#### *Platinum and above:*

- Participate in working groups

#### *Diamond and above:*

- One director appointed to the board

<http://openinterconnect.org/join/>

## Join the Open Source Project



- Download the code and get started
- Code is available under the Apache v2.0 license
- Contribute code!  
<http://www.IoTivity.org>

## Get Educated on the Standard



- Go to the website to find out more and sign up to get updates
- <http://openinterconnect.org/newsletter/>

<http://www.openinterconnect.org>

Device interoperability will change IoT as we know it today!

# Summary

- OIC is a member-driven organization establishing transport-independent standards for communication in IoT applications.
- OIC sponsors IoTivity, an open source project.
- Between them, they offer the most robust, cloud-friendly architecture with the best IP policies available.
- Learn more, and join us!

11:30 IoTivity Primer

2:00 Security within IoTivity

3:00 Bringing Web Services to IoTivity

4:00 How to accelerate IoT Development with IoTivity  
Primitive services