

IoT & The Smart Home Ecosystem: Mass Market Adoption



PARKS
ASSOCIATES

Speakers



Avi Barel

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Audio Recording

To replay the webcast, click here:

<https://attendee.gotowebinar.com/recording/4246615538025165570>



Agenda

Introductions

Overview

Introductions

Panel Discussion

ULE Position in the Smart Home

Interoperability

Smart Home Go-To-Market Strategy

Moving Beyond Early Adopters

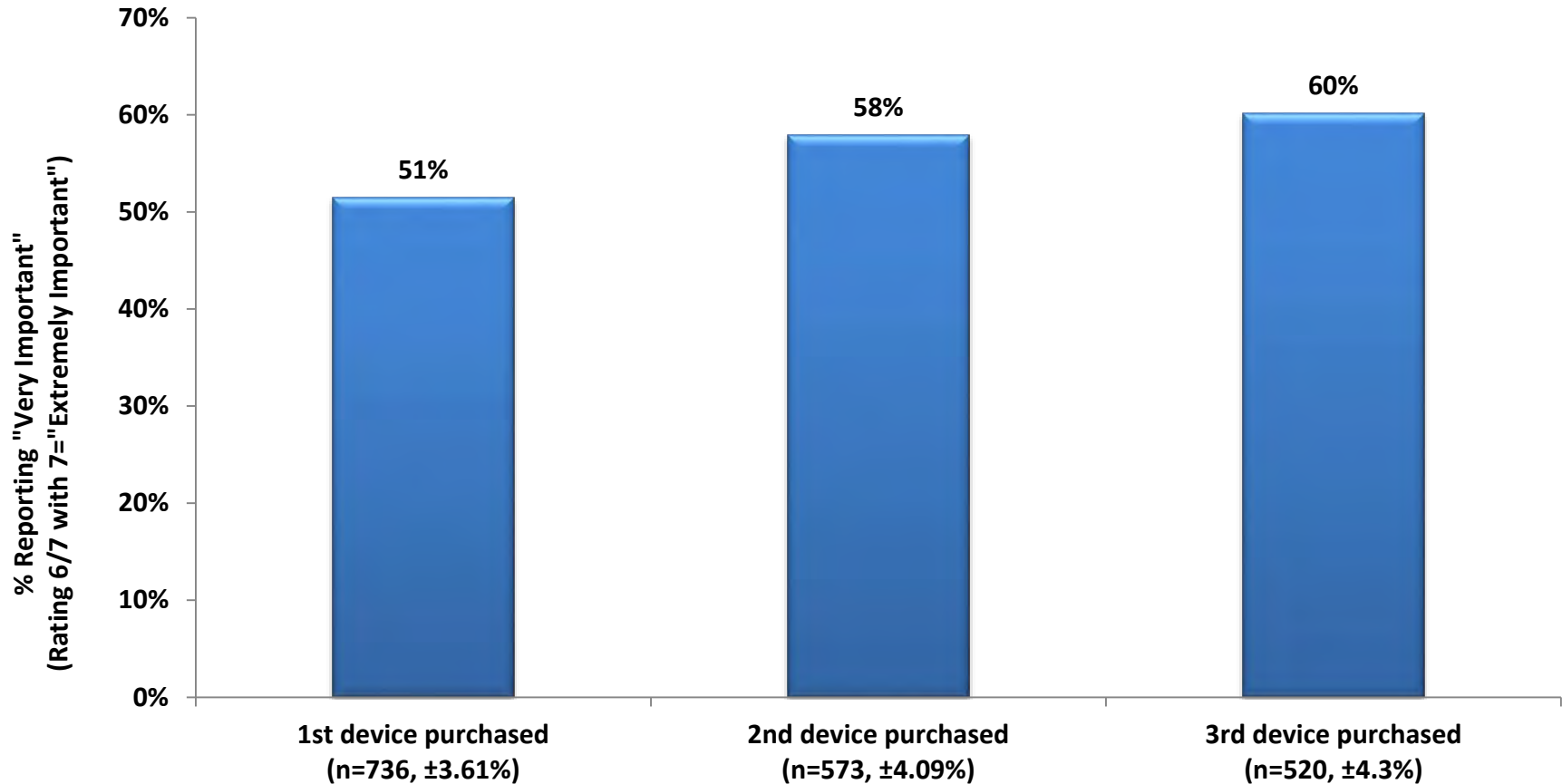
Market Trends and Implications

Audience Q&A



Consumer View of Interoperability

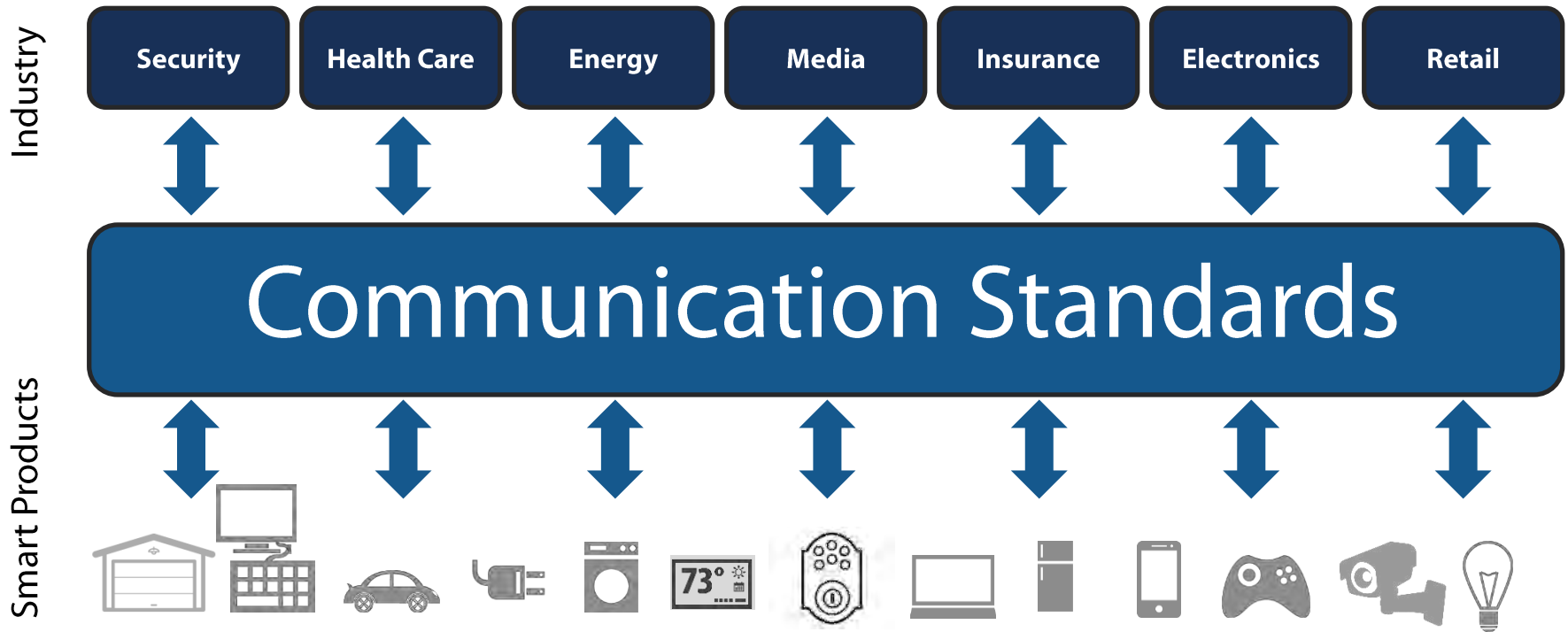
Importance of Interoperability (Q2/14)



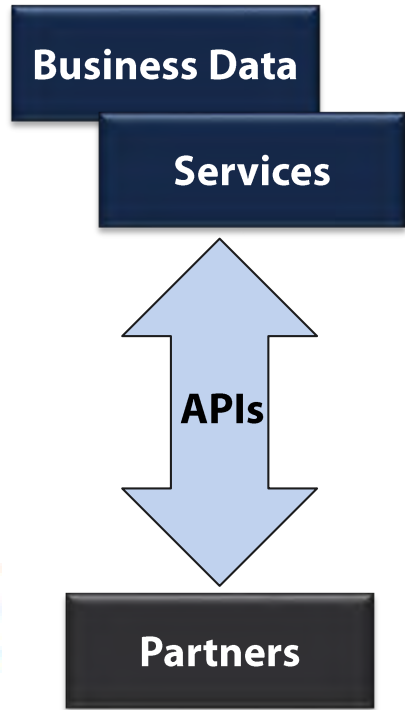
Source: American Broadband Households and Their Technologies Q2 2014 | N=10,000 broadband households, ±0.98% | © 2014 Parks Associates



Business View of Interoperability



Interoperability Solutions



Drivers and Barriers to Interoperability

Drivers

Business Motivation

Smart Home System Adoption

Smart Product Adoption

Barriers

Competition

Switching Costs

Fragmentation

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Driving Broad Adoption of the ULE Technology

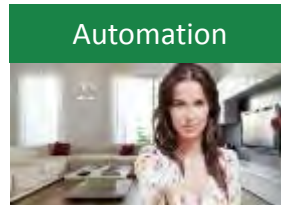
- Established January, 2013
- Founding members: DECT Forum, Dialog Semiconductor, DSP Group, Gigaset, VTech
- Currently ~70 members; maintain steady growth
- Application Layer Standard – open to public
- Application Layer Software - Open Source – open to public
- Certification Program in place – products in test
- 6LoWPAN (IP) version in development; target 2015 availability
- ULE Alliance is open and cooperation minded

ULE - Ultra Low Energy

Innovative, yet Simple, Reliable and Cost Effective wireless networks for IoT

- ✓ Dedicated Spectrum, Lowest Interference
- ✓ Long Range, Simple Architecture, Lowest Cost
- ✓ Voice, Video, Data, Control, Low Power
- ✓ Open Standard, Open Source
- ✓ Certification Ready
- ✓ IP Connectivity - 6LoWPAN support

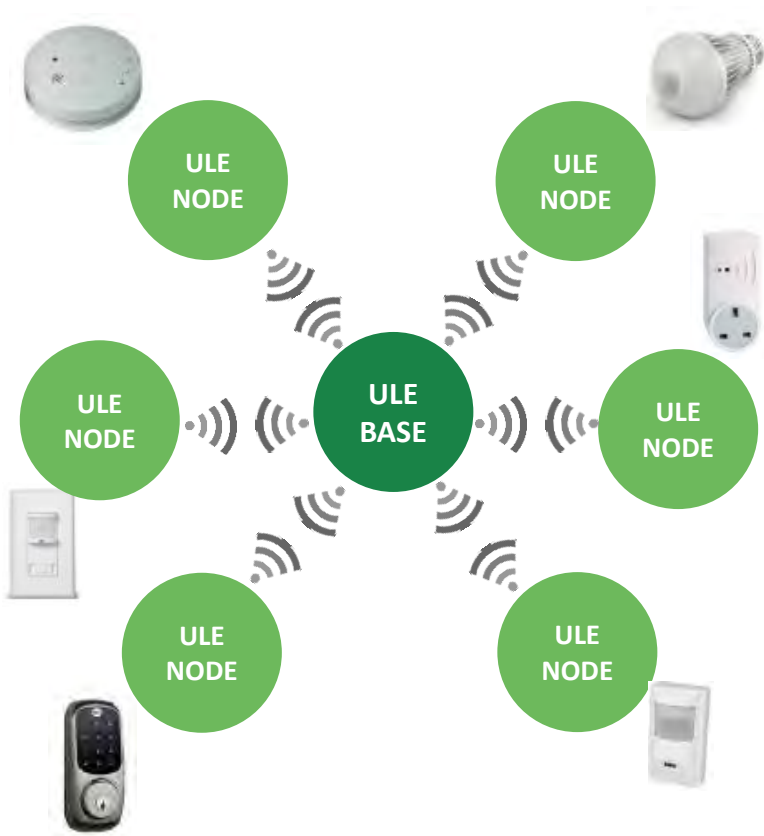
Applications



And More...



ULE Network Architecture



Basic ULE Network

- Star Topology: one base + multiple nodes
- Dedicated 1.9GHz frequency
- Long range: 1000ft open air; 200ft in buildings
- 1Mbit data rate (voice, low-rate video)
- Dynamic channel allocation & Collision avoidance in each node → Thousands of nodes per base
- More complex network may use multiple bases and/or range extenders (repeaters)
 - DECT experience: repeaters < 1%

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Panasonic Connected Home

ULE Alliance Webinar – 03/23/2015

Panasonic



WHY PANASONIC?

A GLOBAL LEADER

AT HOME



NEXT GEN AUDIO AND VIDEO TECHNOLOGY



AWARD WINNING CONSUMER PRODUCTS



SUSTAINABLE, SMART TOWNS

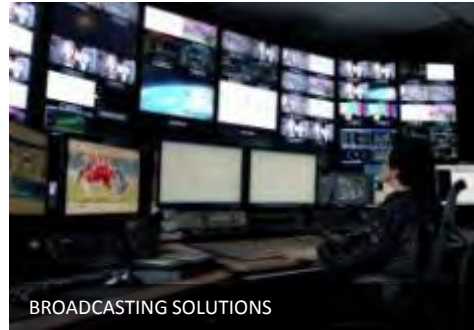


ENERGY STAR-RATED HVAC SYSTEMS

AT WORK



WORLD LEADER IN RUGGED TABLETS



BROADCASTING SOLUTIONS

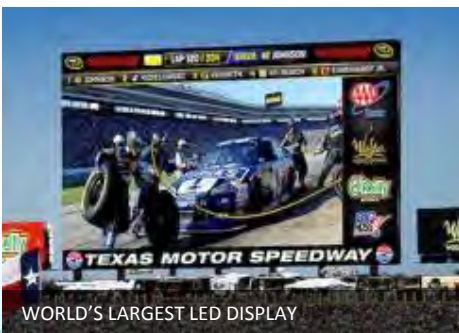


4K PROFESSIONAL VARICAM



TESLA GIGAFACTORY

ON THE ROAD



WORLD'S LARGEST LED DISPLAY



AUTO INFOTAINMENT PACESETTER



GREEN MOBILITY BATTERY LEADERSHIP



IN-AIR ENTERTAINMENT

Panasonic

A Better Life
A Better World

WHY PANASONIC?

GLOBAL REACH



- Panasonic is a global organization with operations in over 40 countries.
- Visionary founder Konosuke Matsushita formed the company over a century ago, based on the philosophy that everything we do should be in the service of improving peoples' lives and making the world a better place.
- There are 505 companies under the Panasonic umbrella, employing over 270,000 people.

A COMPANY OF FIRSTS

2014

- 1st **Sustainable Smart Town**, eco-responsible city for about 1,000 households and 3,000 people (Fujisawa, Japan)
- ‘**Largest High-Definition Television LED Screen**’ certification by Guinness World Record (Texas Motor Speedway)
- **Largest 4K high-Definition Ultra LED Video Board** (Churchill Downs)
- 1st **4K 25p Wearable Camcorder** (HX-A500)
- 1st **Mirrorless, Interchangeable Lens Camera with 4K Video Capture** (GH4)
- 1st **P2 HD Handheld Camcorder with AVC-ULTRA Recording** (AJ-PX270)
- Achieved 25.6% conversion efficiency rate in Panasonic crystalline silicon-based solar PV cell development, breaking own previous record of 24.7%

WORLD'S STRONGEST PATENT PORTFOLIOS

\$500 Billion investment in Annual Research & Development

Global #1 in Patent Filing ('09 – '11, '13)

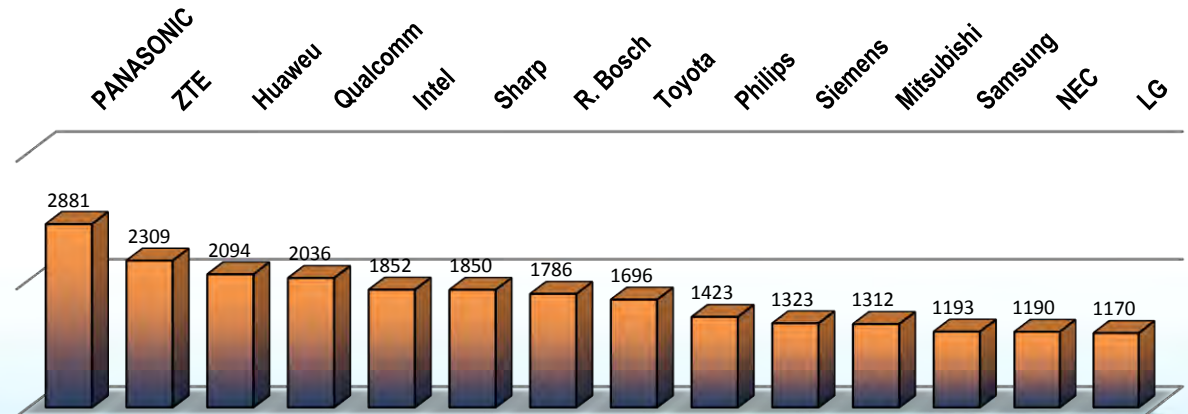
2013

- **The Panasonic Building**: state-of-the-art, LEED certified, 12-story, North American headquarters, **Newark's 1st new office tower in over 20 years**

- Introduced world's 1st **4K Ultra HD TV with 4K 60p Input Design**

In Addition

- **#1 player in Automotive Infotainment** for the 2nd year running. (IHS)
- **World Leader for In-Flight Entertainment and Communications**, entertaining more than 1.3 billion passengers on more than 275 airlines each year
- Panasonic owns the **#1 Market Share for Rugged PCs and Tablets**
- This year we began selling the **World's 1st 4K 20" tablet**



WHY PANASONIC?

SUSTAINABILITY

**BEST
GLOBAL
GREEN
BRANDS
2014**

Interbrand | CONDUCTED AND AWARDED BY Deloitte.

- **Ranked #5**, 2014 Best Global Green Brands. Highest ranking of any electronics company
- New US headquarters in Newark NJ **Platinum LEED Certified**
- Development of Fujisawa, a **Fully Sustainable Smart Town** in Japan
- **ENERGY STAR Partner of the Year** awards every year 2010-2014

Global leader in vehicle electrification.

Providing battery cells to Tesla and Toyota, Panasonic lithium ion cells can power the Tesla S for up to 265 miles on one charge.



Panasonic

A Better Life
A Better World

WHY PANASONIC?

CONSUMER ELECTRONICS

ENTERTAINMENT



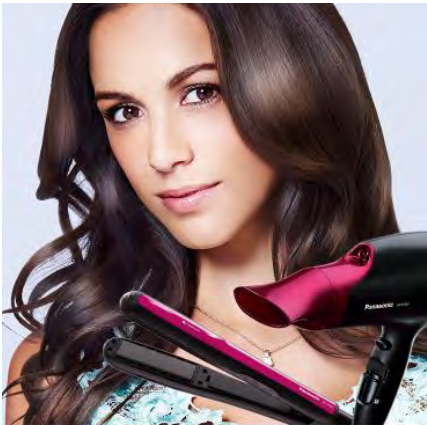
HOME



IMAGING



BEAUTY



GROOMING



ADVENTURE



Panasonic Consumer Electronics Company is structured into 6 pillars, encompassing a full range of products designed to improve consumers' lives.

WHY PANASONIC?

PARTNERSHIPS



Included in a wide-range of high profile sponsorships, Panasonic has been an Olympics Partner for 25 years.

Panasonic

A Better Life
A Better World

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Gigaset

An Overview



Gigaset
Wherever you go.

About Gigaset...

Internationally operating company in the area of communications technology

Europe's market leader in DECT telephones, top3 position worldwide in DECT telephones

In the telephone business for over 160 years

As trusted brand, we are in every 2nd German household with our award-winning products

Market presence in about 70 countries and 1.400 employees overall



Wherever you go,

Gigaset strategy...

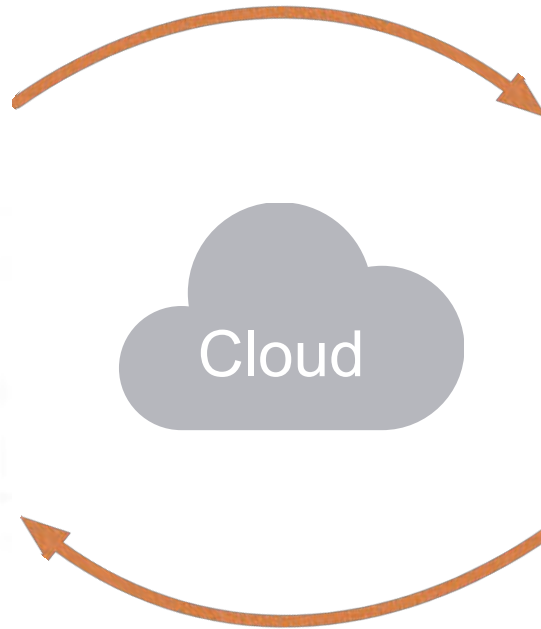


Gigaset

Wherever you go,

What is Gigaset elements?

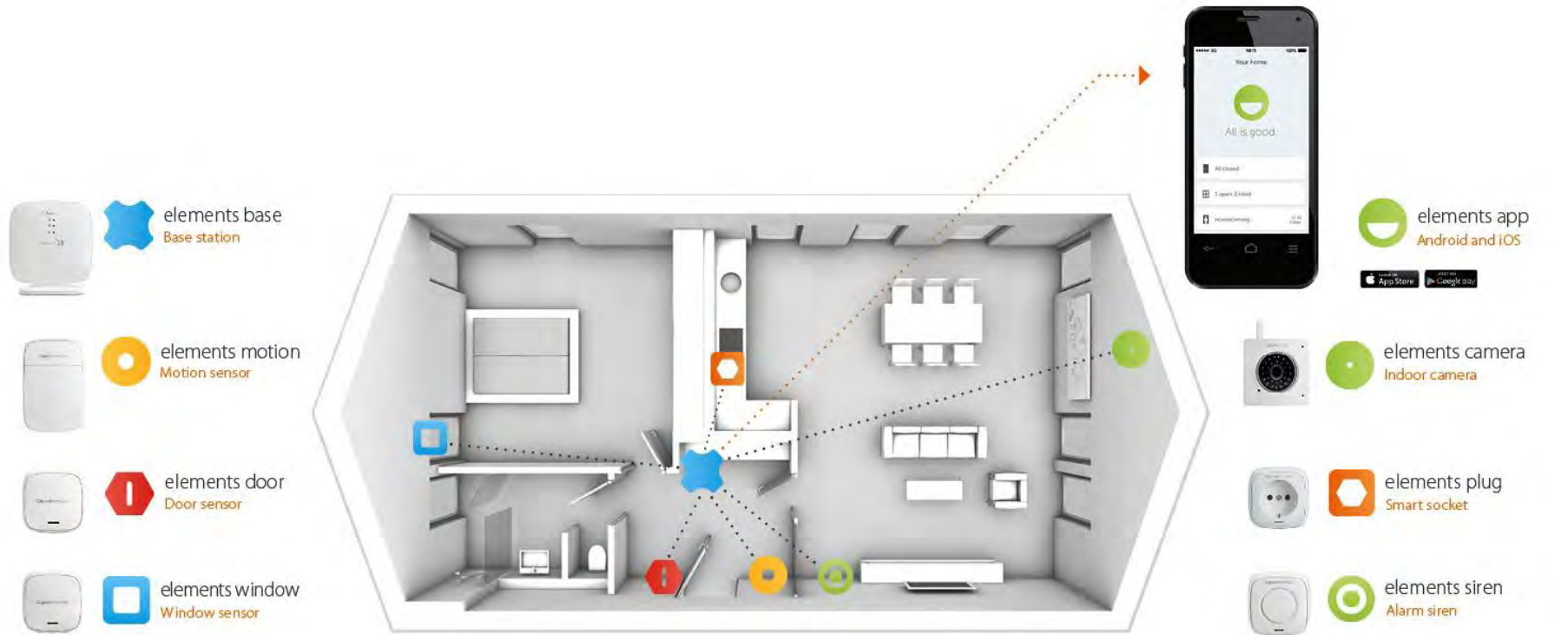
Gigaset elements is a smart and sensor based system that connects people to the most important place of their life – their home. No matter where.



Wherever you go,

Gigaset elements – Overview

- Installation is carried out by Plug-and-Play.
- Base forwards all relevant information that is listed by the
- Sensors to your customer's smartphone.



Wherever you go,

Speakers



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Gigaset



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Director Product
Marketing
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What We Do

Telecommunication Products



Consumer Telecom and Baby Monitors. Multi-line Business Communications Systems, SIP and Conference Speakerphones.

Hospitality



A comprehensive line of hotel phones is the result of expertise and resources—providing clear cost and feature benefits.

Electronic Learning Products



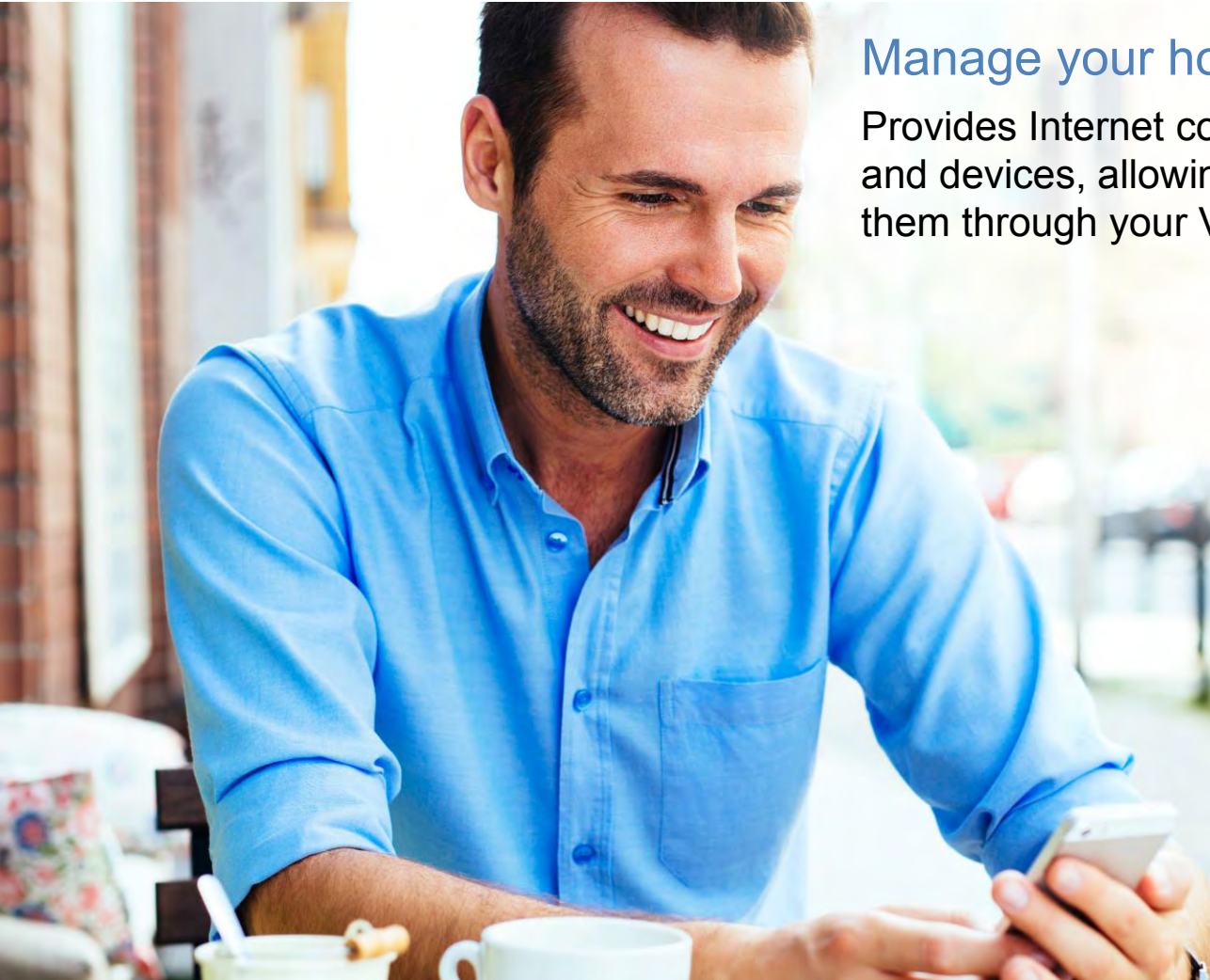
Global leader in infant / preschool learning products. With a worldwide base of loyal customers, our educational toys are sold in 84 countries and come in 24 languages

Contract Manufacturing Services



Manufacturing know-how in a number of product categories and strong reputation are key factors that have made us a top 50 EMS provider globally.

Wireless Monitoring System – VTech IP Hub with ULE Sensors



Manage your home, away from home...

Provides Internet connectivity to VTech ULE sensors and devices, allowing you to monitor and/or control them through your VTech app wherever you are.



Panel Discussion – Q&A



Avi Barel

Director Business
Development
ULE Alliance



Nicholas Monaco

Director of Merchandising
Panasonic



Oliver Stahl

Head of Sales Development
& Strategy
Gigaset



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Panel Discussion – ULE Position in the Smart Home



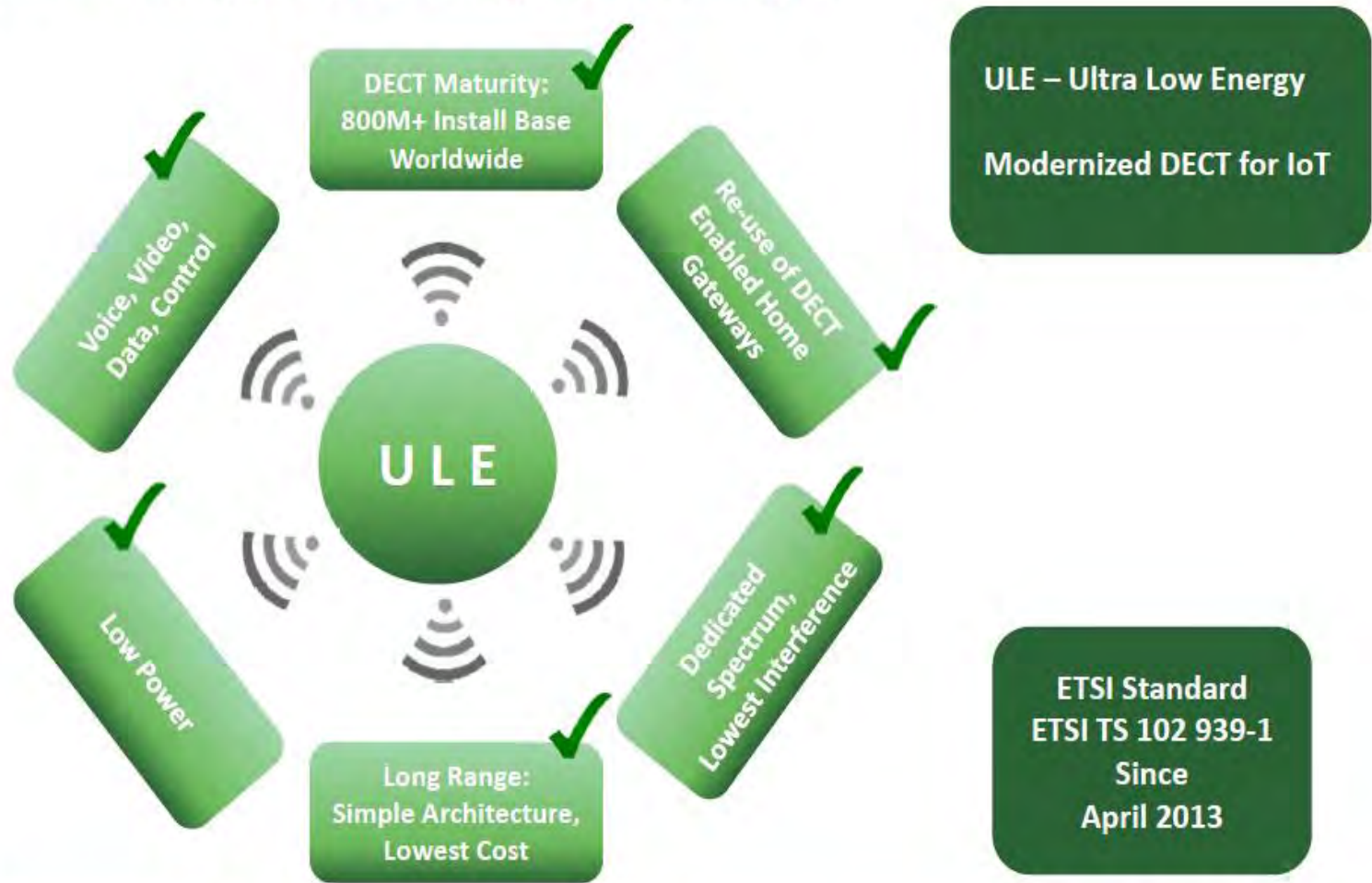
Oliver Stahl

Head of Sales Development
& Strategy

Gigaset

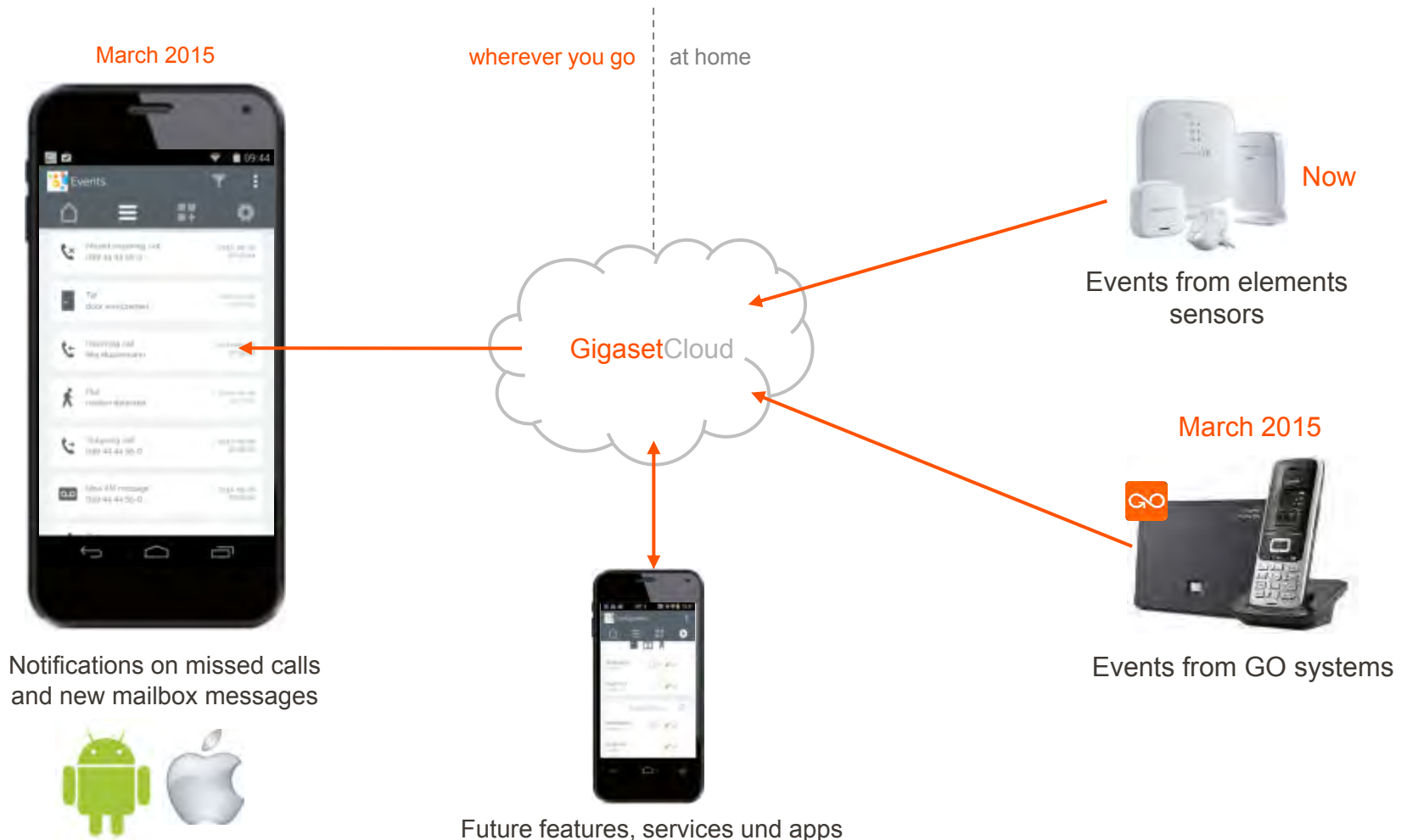
How will the strengths of DECT translate from the handset market to the smart home market?

ULE Technology Addressing the Challenges



The Best Wireless Technology for Home Automation, Security, Climate Control and More...

Gigaset GO...



Panel Discussion – ULE Position in the Smart Home



Nicholas Monaco

Director of Merchandising

Panasonic

How does the network fit into the messaging for your smart home solution?

Long Range / Easy Pairing with DECT

Panasonic

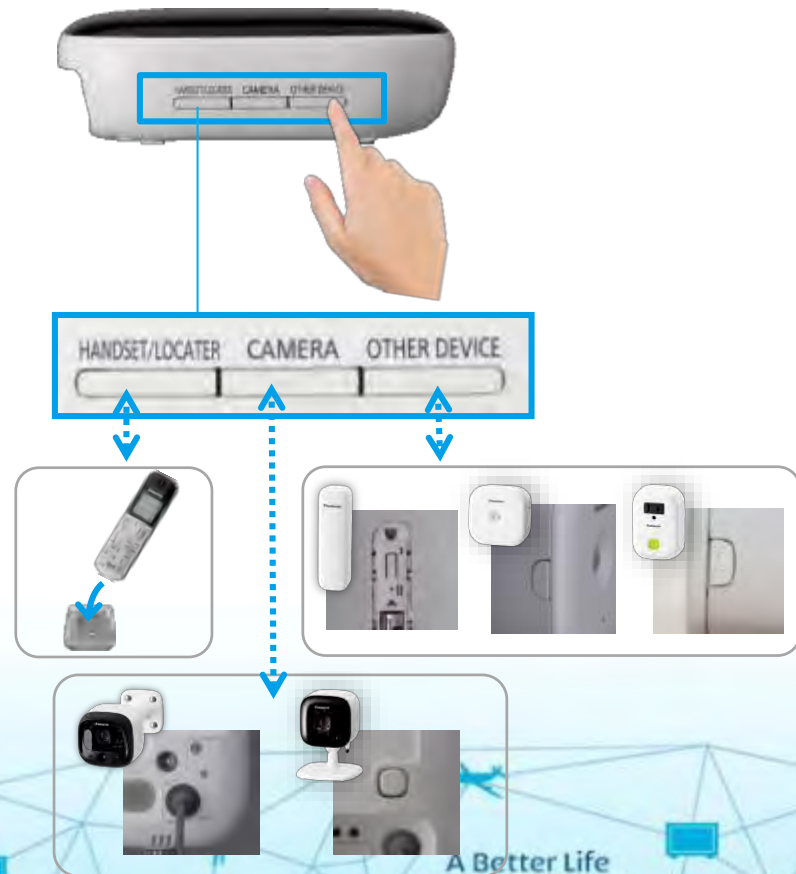


Others



DECT wireless technology for a longer range than Wi-Fi and 2.4GHz FHSS technology. Easy wireless installation even in remote locations.

When additional optional devices are purchased, they can be easily registered with a single button. (This procedure is not required for devices that were included as part of a bundle.)



Panel Discussion – ULE Position in the Smart Home



Chris Conrad

Director Product
Marketing

VTech

Why do you choose ULE for your smart home products?



Panel Discussion – ULE Position in the Smart Home



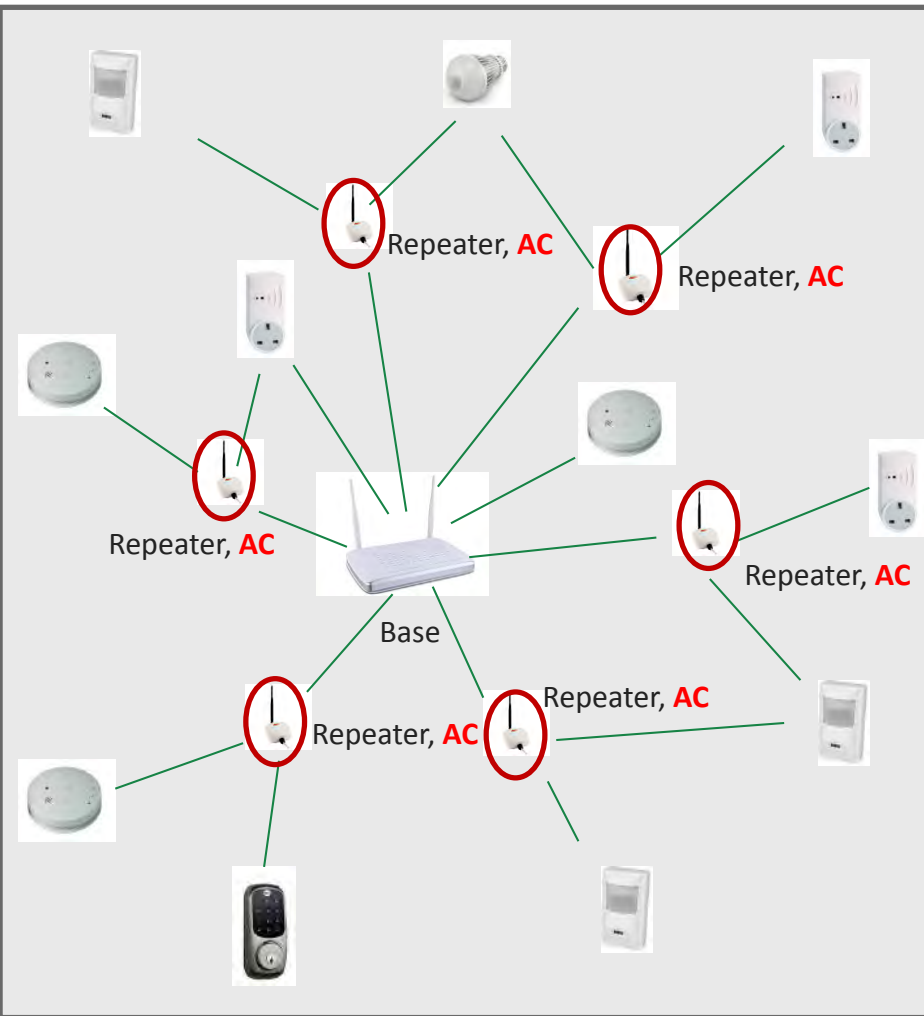
Avi Barel

Director Business
Development
ULE Alliance

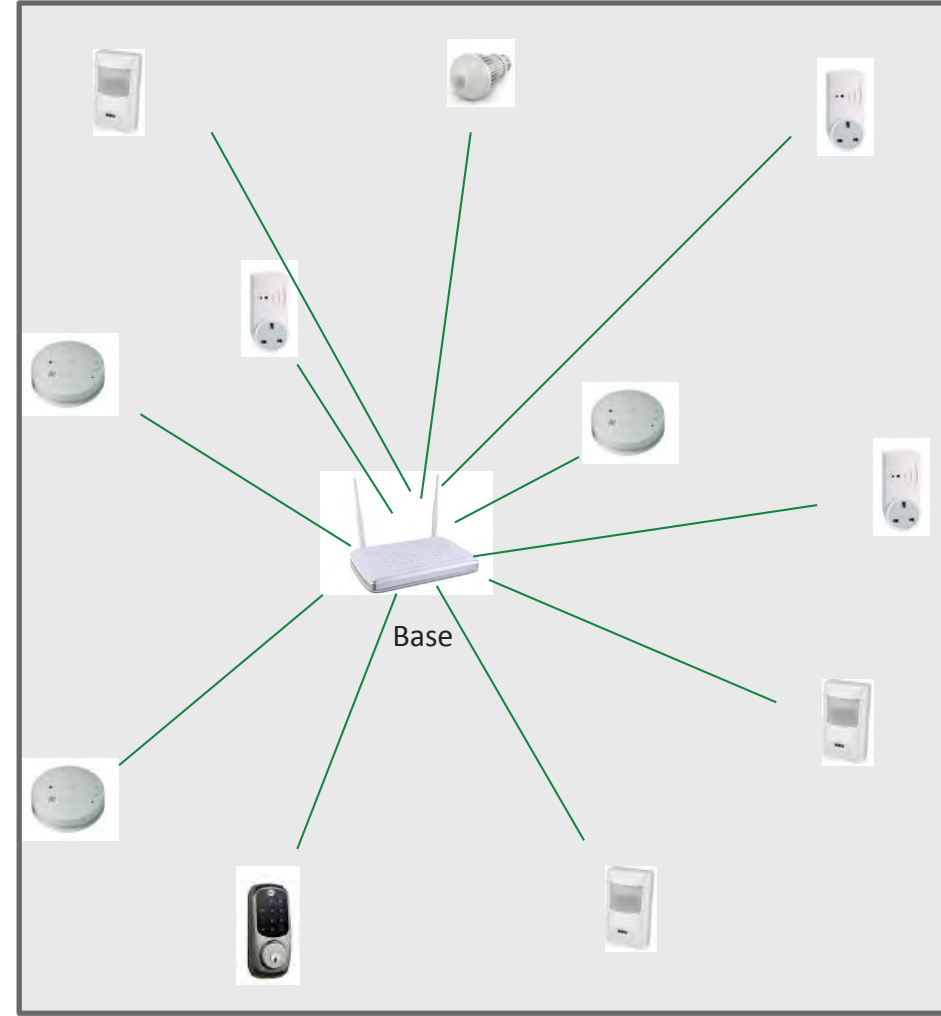
Why do you think ULE will be successful in the smart home market?

ULE – Simple, Reliable, Cost Effective

ULE: Over 200 feet indoor; Up to 1000 feet outdoor



Mesh Network



ULE Network – Maximum Reliability

Panel Discussion – ULE Position in the Smart Home



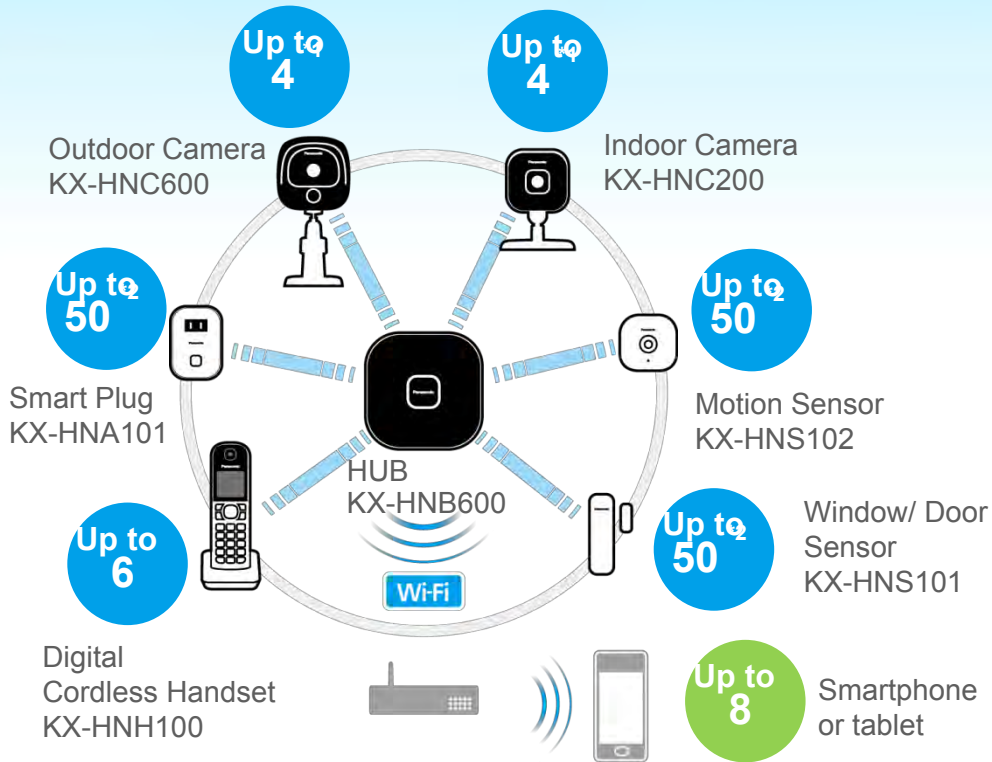
Nicholas Monaco

Director of Merchandising

Panasonic

What product categories do you think provide the best opportunity to leverage the competitive advantages of ULE?

Expandable System / Interference Free



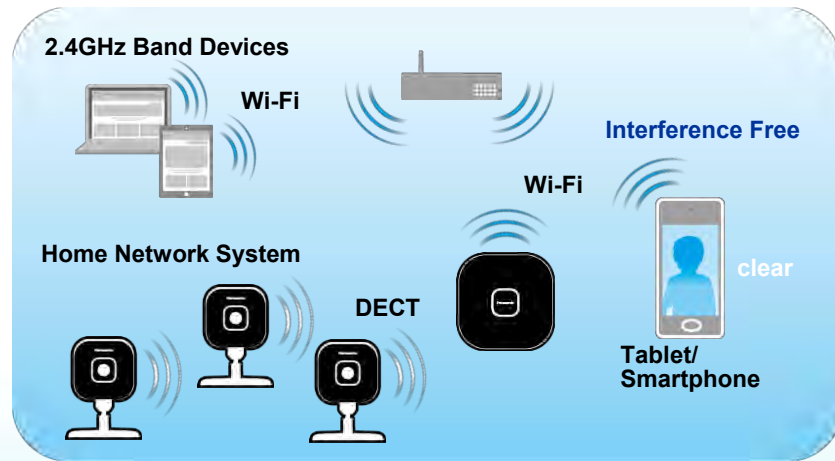
Compatible devices are explained below. You can choose a preconfigured package, add individual devices to an existing package, or build your own system by selecting the desired devices.

*1 A total of 4 cameras can be registered to the hub, including outdoor cameras and indoor cameras.

*2 A total of 50 devices can be registered to the hub, including Smart Plugs, Motion Sensors and Window/ Door Sensors.

Free from interference by commonly used 2.4GHz band devices such as computers and microwaves, for smooth monitoring without picture disruption.

Panasonic



Panel Discussion – ULE Position in the Smart Home



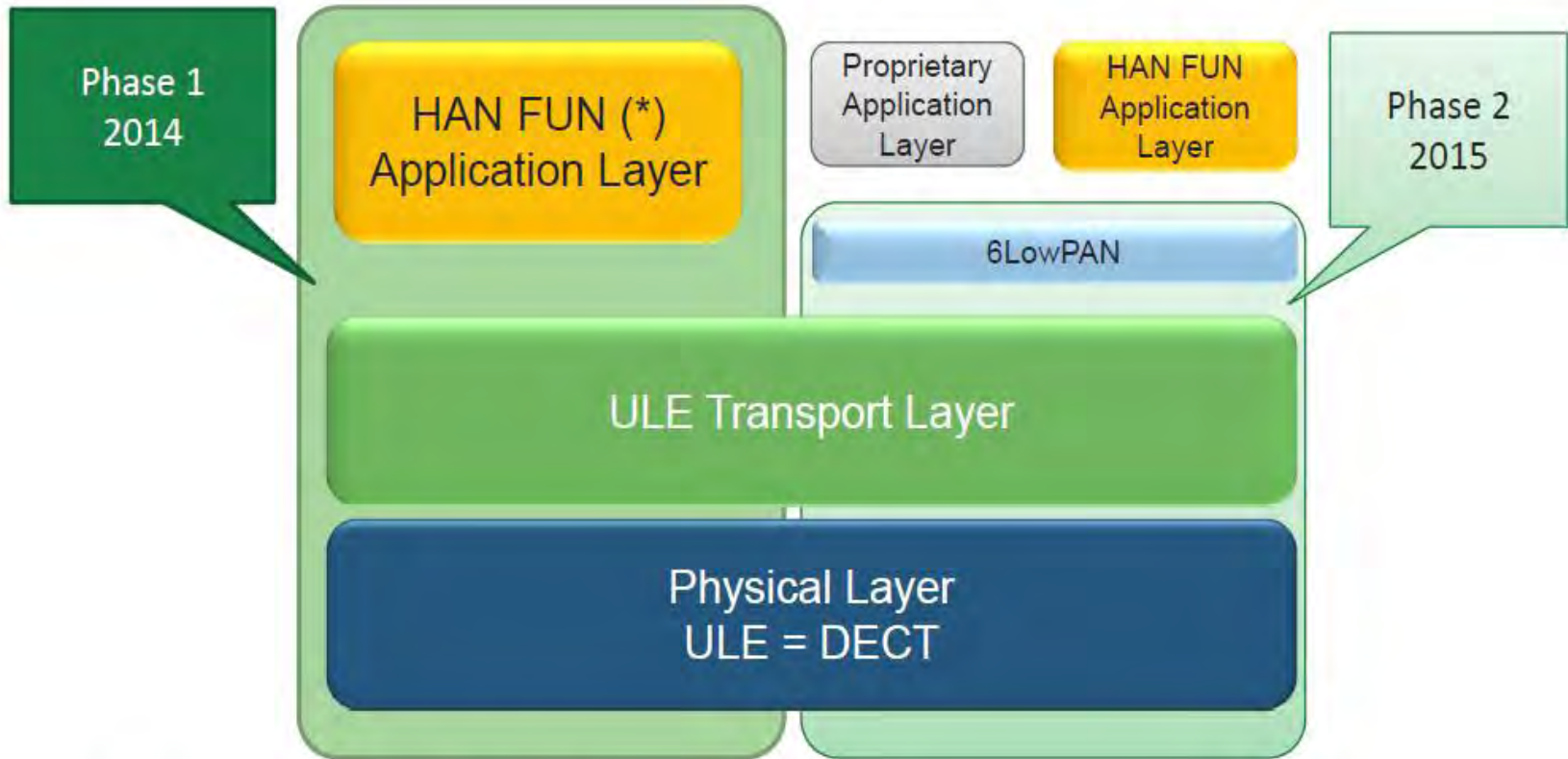
Oliver Stahl

Head of Sales Development
& Strategy

Gigaset

How will the transition to IP impact the competitive position of ULE?

ULE Technology Standardization – Next Phase

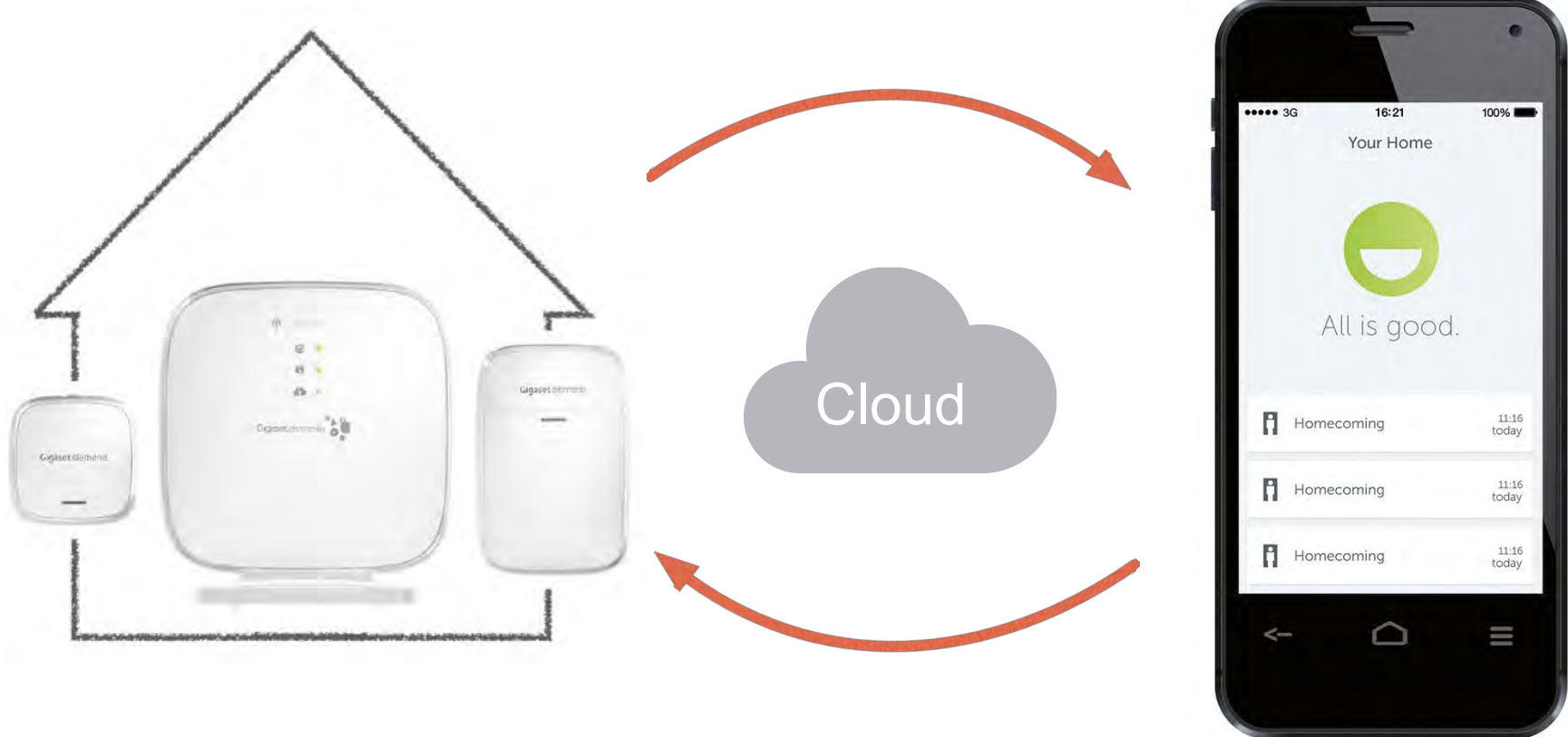


(*) HAN FUN – Home Area Network Functional Protocol



What is Gigaset elements?

Gigaset elements is a smart and sensor based system that connects people to the most important place of their life – their home. No matter where.



Panel Discussion – Interoperability



Avi Barel

Director Business
Development

ULE Alliance

How is the ULE addressing interoperability within the Alliance?

ULE Technology Standardization – Current Status

**Standardized
in ULE Alliance**

HAN FUN (*)
Application Layer

**Standardized
in ETSI**
(ETSI TS 102 939-1)

ULE Transport
Layer

Physical Layer
ULE = DECT

- ✓ Specification released in October 2013; available on UA Website
- ✓ 20+ device profiles; more in definition
- ✓ Common Implementation – Open Source in Q4, 2014
- ✓ Specification Available since April 2013
- ✓ Certification program is open

(*) HAN FUN – Home Area Network Functional Protocol

Panel Discussion – Interoperability



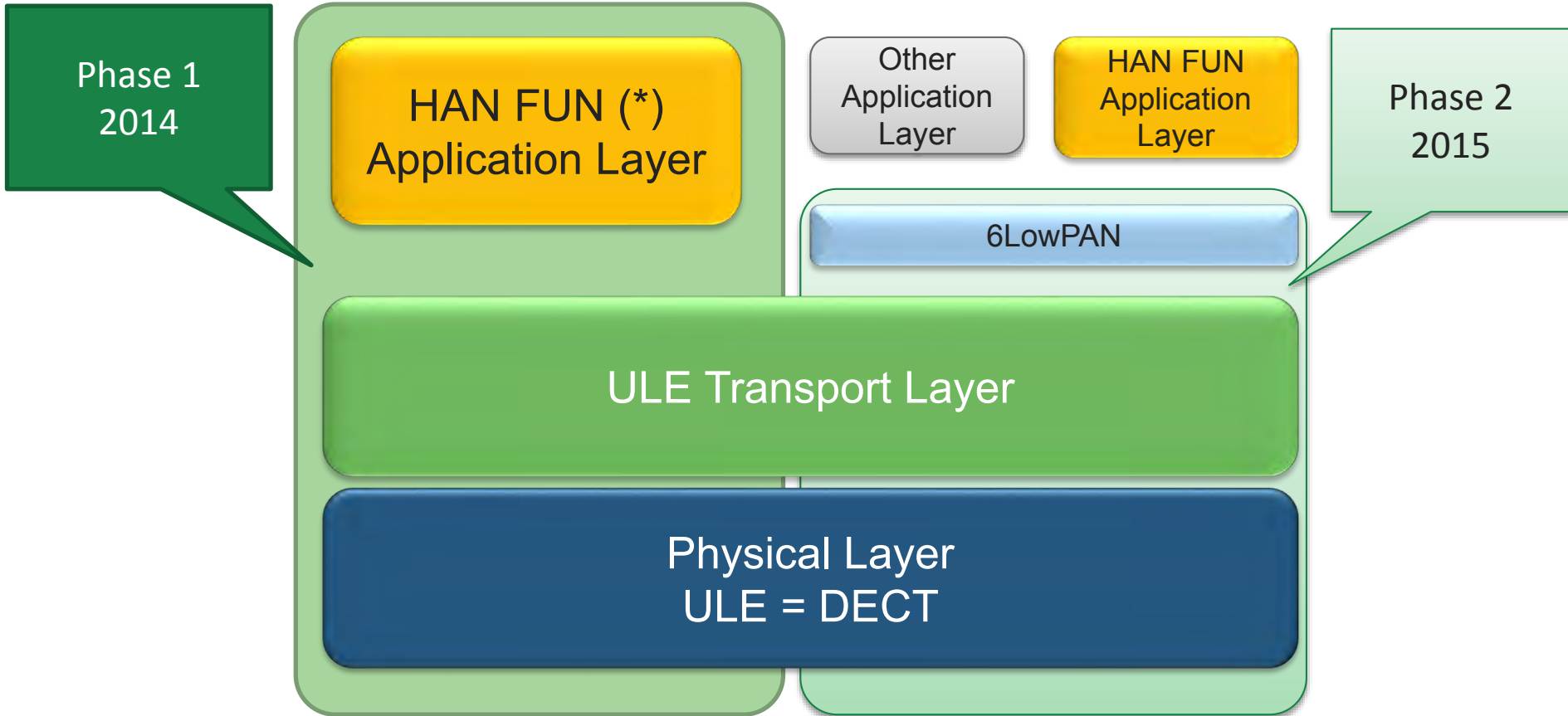
Avi Barel

Director Business
Development

ULE Alliance

How will ULE expand application interoperability?

ULE Technology Standardization – Next Phase



(*) HAN FUN – Home Area Network Functional Protocol

Panel Discussion – Smart Home Go-To-Market Strategy



Oliver Stahl

Head of Sales Development
& Strategy

Gigaset

What channels will drive the smart home market?

European E-Commerce Trends

816 Million

People live in EUROPE

565 million

People use the Internet

264 million

People are e-shoppers

How much does the average e-shopper spend?

€1376



Ref: eCommerce Europe B2C Report 2014

Panel Discussion – Smart Home Go-To-Market Strategy



Nicholas Monaco

Director of Merchandising

Panasonic

How does low consumer awareness of smart home solutions impact your go-to-market strategy?

Package Lineup



Home Surveillance System KX-HN6002



Baby Monitor KX-HN6001



Home Monitoring & Control Kit KX-HN6003



Home Safety Starter Kit KX-HN6000



Panel Discussion – Smart Home Go-To-Market Strategy



Chris Conrad

Director Product
Marketing

VTech

How important is brand recognition of the underlying technologies?

Panel Discussion – Moving Beyond Early Adopters



Nicholas Monaco

Director of Merchandising

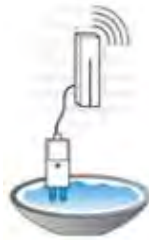
Panasonic

How must smart home products and services change as the market shifts from early adopters to the early majority?

Solution Based Thinking

Water Leak Sensor

- Detect the water on the floor
- One push pairing



Indoor Siren

- Make a Loud Sound and Light LED triggered by sensors



Glass Break Sensor

- Detect glass break noise
- One push pairing



Panel Discussion – Moving Beyond Early Adopters



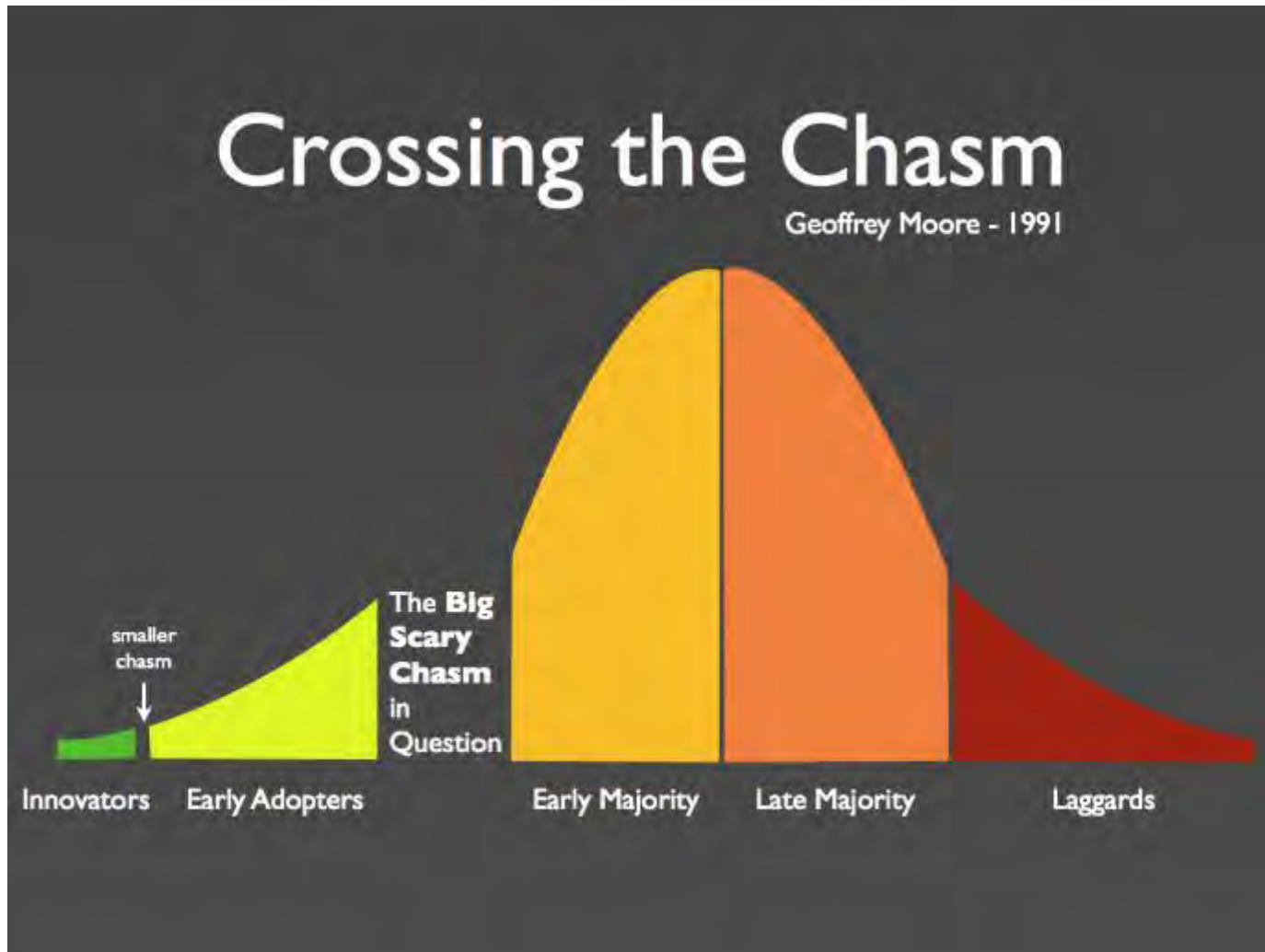
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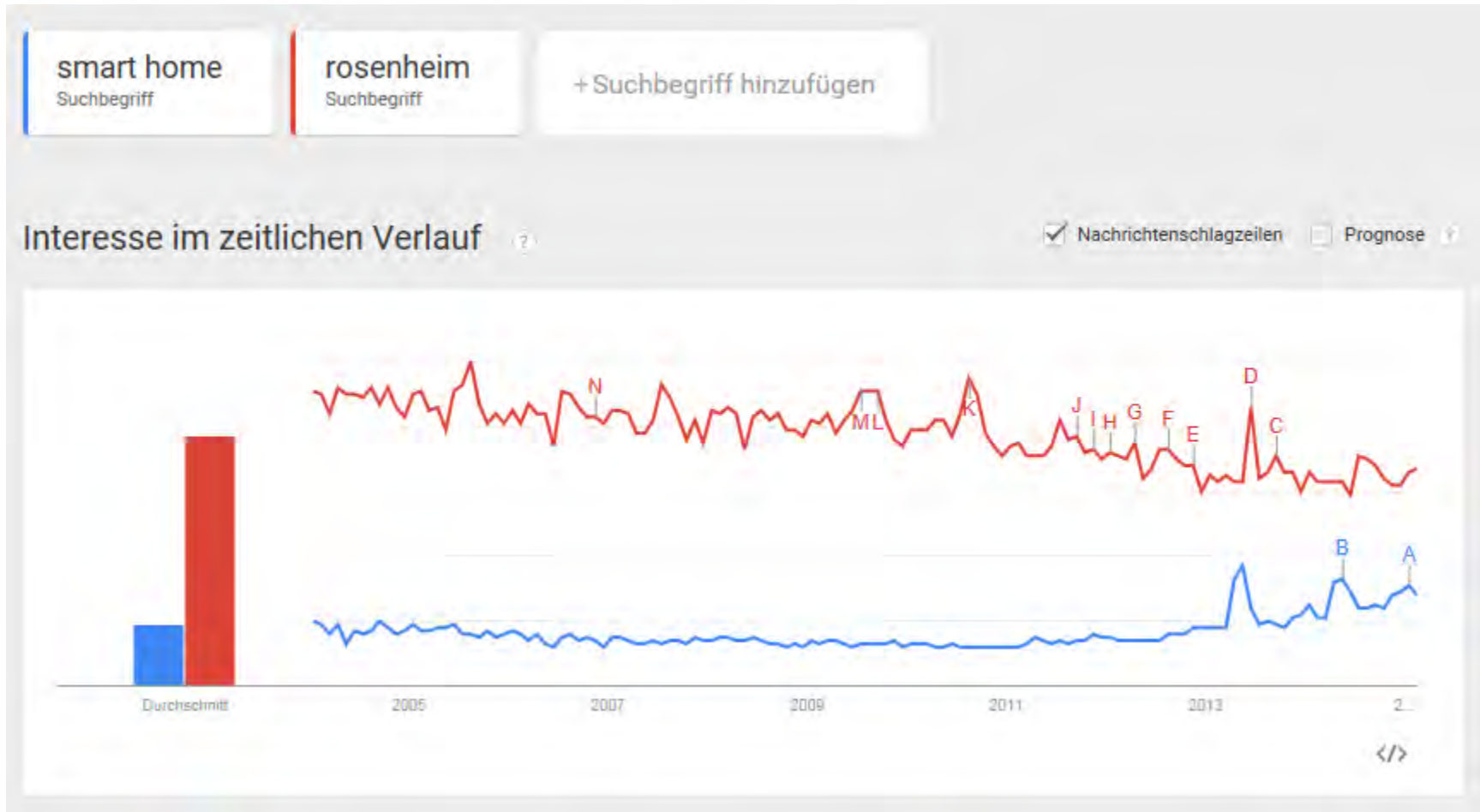
Gigaset

Are there any lessons learned from successful or failed transitions in other markets?

Why...



Where are we with „smart home“?



Panel Discussion – Market Trends and Implications



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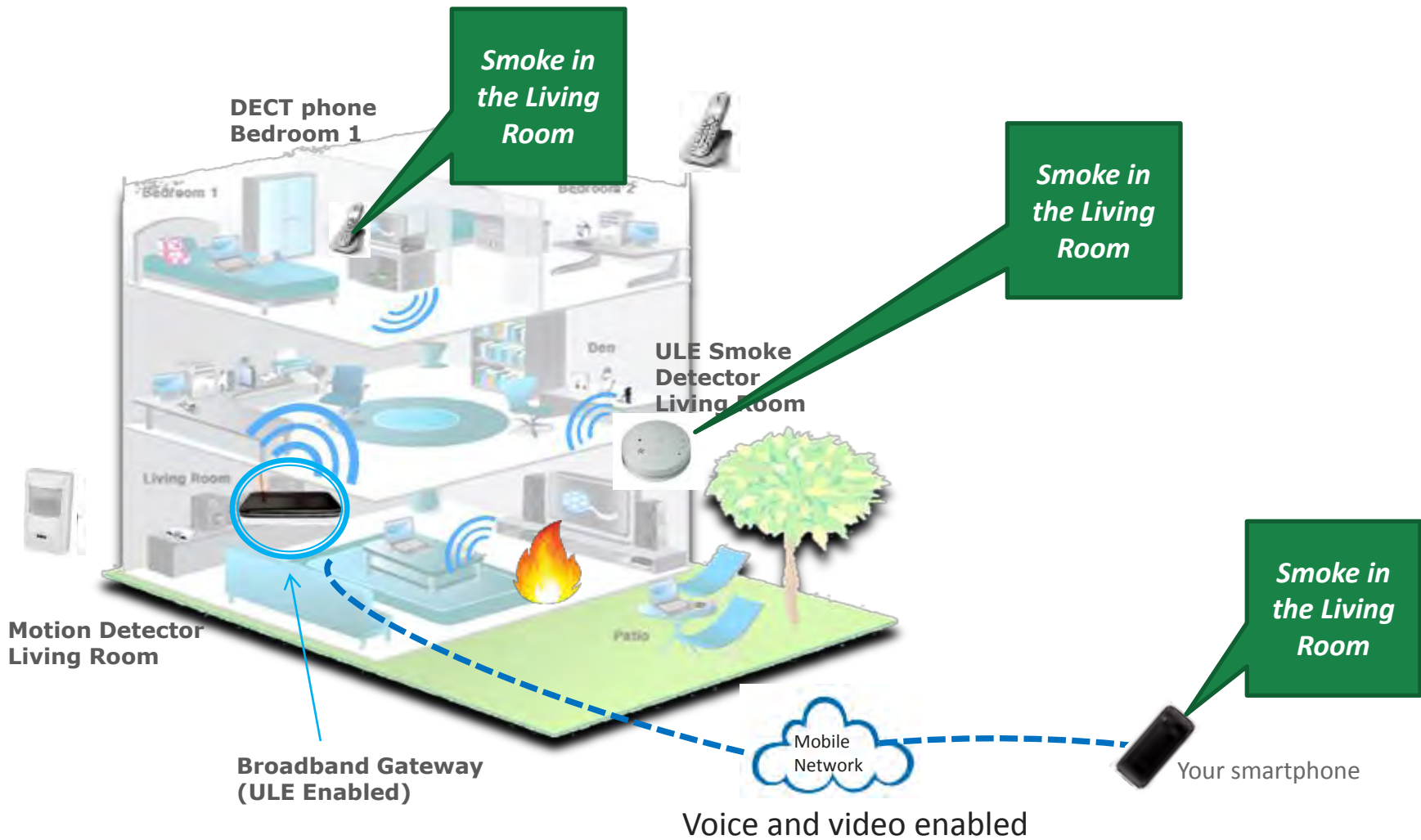


Chris Conrad

Director Product
Marketing
VTech

What are some of the differentiation strategies and trends that you are seeing in the market?

ULE – Adding Vital Dimensions: Voice



Panel Discussion – Market Trends and Implications



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Chris Conrad

Director Product
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What are the implications of the trends?

Panel Discussion – Audience Q&A



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Oliver Stahl

Head of Sales Development
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Chris Conrad

Director Product
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Thank you



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Tom Kerber

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ParksAssociates.com**

