Herzlich willkommen in Berlin
Agenda

Introduction to Thread
Details on the Thread Group
Technical overview
Q & A
Drinks & Demos
The need for a new wireless network

A new era of connected products

Existing wireless mesh protocol didn’t meet requirements

Other companies shared the same concerns
The need for a new wireless network

Requirements:
New wireless home network

- ✔ Low power
- ✔ Resilient (mesh)
- ✔ IP-based
- ✔ Open protocol
- ✔ Secure and user friendly
- ✔ Fast time to market
- ✔ Existing radio silicon
The need for a new wireless network

Requirements:
New wireless home network

- Low power
- Resilient (mesh)
- IP-based
- Open protocol
- Secure and user friendly
- Fast time to market
- Existing radio silicon

- No single point of failure
- Self-healing
- Interference robustness
- Self-extending
- Reliable enough for critical infrastructure
The need for a new wireless network

A new era of connected products

Existing wireless mesh protocol didn’t meet requirements

Other companies shared the same concerns
IPv6 - A unified Convergence Layer for the home
WHAT IT DELIVERS
A secure wireless mesh network for your home and its connected products

- Built on well-proven, existing technologies
- Uses 6LoWPAN and carries IPv6 natively
- Runs on existing 802.15.4 silicon
- New security architecture to make it simple and secure to add/remove products
- 250+ products per network
- Designed for very low power operation
- Reliable for critical infrastructure

Can support many popular application layer protocols and platforms

A software upgrade can add Thread to currently shipping 802.15.4 products

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Support for many application layers

- Any low bandwidth application layer that can run over IPv6

Some existing examples are

- CoAP and Smart Objects
- ZigBee Smart Energy 2.0
- ECHONET Lite
- Other IP based app layers like Alljoyn or OIC
THREAD Application layers & partnerships

- Application
  - Security/Commissioning
  - UDP
  - IP Routing
  - 6LoWPAN
  - IEEE 802.15.4 MAC
  - IEEE 802.15.4 PHY

- Example protocols
  - ZigBee Alliance
  - ipSO Alliance
  - AllJoyn
  - IoTivity
  - Nest Weave

Other IP-based Application Protocols
Thread Target applications

Thread is designed for all sorts of products in the home

- Appliances
- Access control
- Climate control
- Energy management
- Lighting
- Safety
- Security

Devices working together to form a cohesive mesh network
A version of Thread is shipping today in Nest products

Millions of Thread devices
Organization overview
Francois Girodolle - Nest Labs
The Thread Group was launched in July 2014
Not another standards body
A nonprofit market education group offering product certification
Promoting Thread’s use in connected products for the home
Thread will offer rigorous product certification to ensure security and interoperability
Added over **200 members** in 12 months

Sample of current members
A Delaware 501 (c)(6) Non-Profit Corporation for the mutual benefit of its members
Independent, vendor-neutral and open to all - Any entity can join

Organizational membership only - one membership, one vote

Thread Group manages the delivery of enabling solutions: Specifications, Certification
Programs, Website, Trademarks, Copyrights, Logos/Seals
Membership to Thread comes with its benefits:

Access to the technology and IP
Immediate product planning and development
Access to technical documentation and spec
Access to Thread Certification Program
Contributor Members get free access to Thread Test Harness

Participation in Marketing and PR campaigns
Network with an ecosystem of companies building connected products for the home
Help promote Thread and Thread-enabled products
There will be some great marketing benefits:

The Thread Group will help promote your Thread-compliant products
Engage in press activities and receive media coverage
Participate in industry events with Thread
Evangelize at high exposure speaking opportunities
Use Thread Group marketing collateral and assets
Build awareness through Thread online and social media
### Membership tiers

<table>
<thead>
<tr>
<th>Membership Benefits</th>
<th>Affiliate</th>
<th>Contributor</th>
<th>Sponsor</th>
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<td>Receive member communications</td>
<td>✔</td>
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<tr>
<td>Participation in general or annual meetings</td>
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<td>Access to members only website</td>
<td>✔</td>
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<td>Use of Alliance Member Logo</td>
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<td>Participation in press articles &amp; interviews</td>
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<td>Access Final Deliverables</td>
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<td>Chair Committees and/or Work Groups</td>
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<td>Certify Compliant Products and Utilize Certification Logo</td>
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<td>Access Draft Deliverables</td>
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<td>Participate and Vote in Work Groups</td>
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<td>Participation and Vote in Committees</td>
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<td>Approve Operating Budget</td>
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<td>Approve Final Deliverables</td>
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<td>Initiate Work Groups or Committees</td>
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<td>Can be admitted as Sponsor after launch</td>
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<td>✔</td>
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<td>Automatic Seat on Board of Directors</td>
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<tr>
<td><strong>Annual Fee</strong></td>
<td><strong>$2,500</strong></td>
<td><strong>$15,000</strong></td>
<td><strong>$100K</strong></td>
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You can join NOW

Submit Application via www.threadgroup.org

Agreements provided for legal and business review

Membership complete once agreements signed and payment processed

Members will be granted access to the Thread Group Members Only Portal

The Portal will include technical documentation, certification info and marketing plans (as available)
Our IPR policy is designed to maximize the adoption of the Thread technology.

IPR Policy for Thread Group membership balances interests of all stakeholders.

Commitment to grant a RAND-RF (royalty free) license to members for patents essential to the Thread specification.

- Applies to all Thread members
- Avoids patent confusion
- Accelerates market acceptance

Thread Group copyrights, trademarks are licensed to participants royalty free.
We recognize that much of the innovation in the Connected Home is coming from small start-up companies who can’t necessarily afford membership fees. We want to help these small, innovative companies launch Thread-enabled products.

To do this, we give away a free contributor membership to the Group.

A fantastic response from start-up companies, ~15 applying per quarter.

Applicable Thread Affiliate members can apply.

Selection is done via the Marketing Committee and Board.
In Q1 we selected Ubiant

In Q2 we were inundated with great applications
We selected both Elarm and Amatis

We’ve had great submissions for Q3 and are in the middle of reviewing applications
1.0 spec released to all members on July 13th
7+ interop events completed
Technical white papers available on threadgroup.org

Qualcomm joined the board of Thread

Thread product certification will launch in Q4 2015
We expect to see Thread products certified by end of Q4 2015
Full time Thread Cert Director on-board - Tom Sciorilli
Product companies can start developing Thread-based products today
Compatible silicon is already available
Many new products are in development

Pre-certified Thread stacks will be available from 3+ sources
Please get in contact with the below companies
There will be more silicon and stack providers over time
Near term Milestones

Certification Program launch in Q4 2015
Certified products in late Q4 / early Q1
3rd Thread Group All Member Meeting - November 18 / 19th - Evian France
Thread exhibiting at CES 2016 - Booth, demos, tons of good stuff
Status
Francois - Nest Labs
We opened membership to the Thread Group one year ago.

In just 12 months we’ve added:
- New Sponsor members
- 90+ new Contributor members
- 110+ new Affiliate members

We’re now well over 200 member companies
Results by Numbers: July – September 2015

- 209M+ impressions
- 216 articles published
- 21 inbound media requests
- 14 briefings conducted
- 7 member press releases
Thread CEO: Homes Can't Truly Be Smart Without Security

This Thread Could Tie Your Smart Home Together

Qualcomm Joins Google’s Rival Internet-of-Things Consortium

“Together, this crew has pulled together a fast-growing network of hundreds of other affiliate and contributor companies. As a roster, it reads like a CES sponsor list, with each of these companies committing to supporting the Thread protocol. It’s a major shot across the bow of related networking protocols like Zigbee, Z-Wave — even Bluetooth.”

– Mike Llewellyn

“Altogether, the Thread Group is gathering momentum, laying a foundation for much needed unity in IoT, and rolling out the networking layer designed to interoperate with a broad range of IoT solutions. Among various industry alliances jockeying for position in the fragmented IoT market, the Thread Group, with its specs in place, will shift gears to the certification of commercial Thread IoT products and market education.”

– Junko Yoshida

Qualcomm Joins Thread As IoT Dance Heats Up
Summary

We’re entering a new era for Thread

Spec available now - Cert program very soon

Moving to focus on adoption, certification

We’re working hard to help members make great compatible products

We’re going to supply tools to help you ship Thread devices
Recap
Thread is designed and focused on worldwide adoption

Membership is now open to all companies
Visit www.threadgroup.org to sign up

Technical documentation available to the public
White papers on the site now

3rd All Member Meeting - Evian France November 18 - 19th

Millions of Thread devices already in the field
Running a version of Thread
Performing very well
Companies can start developing Thread-based products NOW
Compatible silicon is already available

Thread stacks are going to be available from 3 sources
Please get in contact with the below companies