IPv6 over Low power WPAN WG (6lowpan)

69th IETF
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- **We assume people have read the drafts**
- **Meetings serve to advance difficult issues by making good use of face-to-face communications**
- **Be aware of the IPR principles, according to RFC 3979**

✓Blue sheets
✓Scribe(s)

69th IETF: 6lowpan WG Agenda

09:00	Introduction, Agenda	Chairs (5)
09:05	Document Status	Chairs (10)
09:15	Rechartering Status	Chairs (15)
09:30	Application Scenarios/Architecture	EK, GM (30)
10:00	Bootstrapping (ND, Commissioning)	SC, KK (40)
10:40	Header Compression for Global	DC (20)
11:00	Interop Testing	JH (15)
11:15	Routing Requirements	DK (15)

What is 6lowpan?

- **Interesting L2 network: IEEE 802.15.4**
  - **Low power, 20..250 kbit/s, 900 and 2400 MHz**
  - **Almost, but not entirely, unlike 802**
    - Small MTU, limited range
- **Job of 6lowpan: make this look like an IPv6 link**
  - **Classical encapsulation issues ➜ format document**
  - **Reachability: mesh routing**
  - **No multicast: emulate, avoid (e.g., ND)**

6lowpan Wiki

- http://6lowpan.tzi.org
- Read: Everyone
- Update/Create: AuthorGroup
  - Send mail to cabo@tzi.org to get in there
- Your changes are welcome
  - If we really don't like them, we'll revert them :-)
- Gives us a chance to compile material that will be useful for next steps
  - Of course, mailing list is better for actual discussion

Segment 1: Document Status 09:05–09:15

Chairs

Milestones (from WG charter page)

- Done draft-ietf-6lowpan-problem: WG last call
- Done draft-ietf-6lowpan-problem ➳ IESG
  - Informational
- Done draft-ietf-6lowpan-format: WG last call
- Done draft-ietf-6lowpan-format ➳ IESG
  - Proposed Standard

- **Done...**
- **We are not chartered for work beyond this.**

What we need to do today

1. **Finalize the charter proposal**
2. **Start future work**

Segment 2: Rechartering Status
09:15–09:30

Chairs

Charter 1/5

Produce **"6lowpan Bootstrapping and 6lowpan IPv6 ND Optimizations"** to define the required optimizations to make IPv6 ND applicable in 6lowpans, given the fact that IPv6 ND is too expensive for the devices of 6lowpan and requires multicast. This document will define how to bootstrap a 6lowpan network and explore ND optimizations such as reusing the 802.15.4 network structure (use the coordinators), and obviate multicast by having devices talk to coordinators without creating a single point-of-failure, and changing the IPv6 ND multicast semantics. This document will be a proposed standard.

Charter 2/5

Produce **"Problem Statement for Stateful Header Compression in 6lowpans"** to document the problem of using stateful header compression (2507, ROHC) in 6lowpans. Currently 6lowpan only specifies the use of stateless header compression given the assumption that stateful header compression may be too complex. This document will determine if the assumption is correct and will be an informational document.

Charter 3/5

Produce **"Recommendations for 6lowpan Applications"** to define a set of recommendations of protocols to use for applications. The recommendations will cover protocols for transport, application layer, discovery, configuration and commissioning. This document will be an informational document.

Charter 4/5

Produce **“6lowpan Mesh Routing”** to evaluate different mesh routing protocols for use within 6lowpans. While most routing protocols are defined above the IP layer, 6lowpan requires a mesh routing protocol below the IP layer. “6lowpan Mesh Routing” may be several proposed standard documents.

Charter 5/5

Produce **“6lowpan Security Analysis”** to define the threat model of 6lowpans and to document suitability of existing key management schemes and to discuss bootstrapping/installation/commissioning/setup issues. This document will be an informational document.

Charter: Status

- Proposed charter items agreed in meeting at IETF66
- Validation on mailing list held up by non-completion of milestones
  - That is now (almost) done
- Has anything changed? (This meeting)
- Re-validate on mailing list (after this meeting)

Segment 3: Application Scenarios 09:30–10:00

E. Kim, Chevrollier, Kaspar

Application Scenarios: Objective

- Foundation for work on CI-3 ("Recommendations for 6lowpan Applications")
- Establish a common base for talking about
  - Actual requirements from industry
  - Technical approaches in the context of a specific scenario
- Possibly develop further into the CI-3 deliverable
  - But more important as a working document to organize our own work

Segment 4: Bootstrapping (CI-1) 10:00–10:40

Chakrabarti (ND)

K. Kim (Commissioning)

Segment 5: HC (CI-2)
10:00–10:40

Chakrabarti (ND)
K. Kim (Commissioning)

Segment 6: Interop Testing (no CI)
11:00–11:15

Culler

Segment 7: Routing Requirements (CI-4) 11:15–11:30

Kaspar