IPv6 over Low power WPAN WG (6lowpan)

Chairs:

Geoff Mulligan <geoff@mulligan.com>

Carsten Bormann <cabo@tzi.org>

~~Secretary:~~

~~**Christian Schumacher <schumacher@danfoss.com>**~~

Mailing List:

6lowpan@ietf.org

Jabber:

6lowpan@jabber.ietf.org

- **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

13:00	Introduction, Agenda	Chairs (5)
13:05	Rechartering Status	Chairs (10)
13:15	Current I-Ds	Chairs (15)
13:30	Architecture	JPV/DC (13)
13:43	Integration of 6LoWPAN into IP networks	GM/CW (10)
13:53	ISA100 input	GM (10)
14:03	Application Recommendations	EK/JPV (8)
14:11	Commissioning, Bootstrapping	KK (14)
14:25	Security	DP (15)
14:40	Routing Requirements	DK (10)
14:50	Stateful HC	KP (10)

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)**

Segment 1: Rechartering Status
13:05–13:15

Chairs

Milestones (from WG charter page)

- Done draft-ietf-6lowpan-problem: WG last call
- **Done draft-ietf-6lowpan-problem ➵ IESG**
  - **RFC 4919 (Informational)**
- Done draft-ietf-6lowpan-format: WG last call
- **Done draft-ietf-6lowpan-format ➵ IESG**
  - **RFC 4944 (Proposed Standard)**

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

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, which is also expensive.

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. This may involve changing the semantics of IPv6 ND multicasts.
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 describe where the problems are.
This document will be informational.

Charter 3/5

Produce “**6LoWPAN Architecture**” to describe the design and implementation of 6LoWPAN networks. This document will cover the concepts of "Mesh Under" and "Route Over", 802.15.4 design issues, network components, addressing, and IPv4/IPv6 network connections.
This document will be informational.

(Add: architecture specific routing requirements document; informational)

Charter 4/5

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 informational.

Charter 5/5

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

Charter: Status

- **Precise text being discussed between AD and chairs**
- **To be submitted to IESG after IETF 70**

Segment 2: Current I-Ds
13:15–13:30

Chairs

I-D Filename and Version Number	Submission Date	Status
draft-cansever-6lowpan-integration-00	2007-11-13	Active
draft-chakrabarti-6lowpan-ipv6-nd-04	2007-11-20	Active
draft-culler-6lowpan-architecture-00	2007-11-13	Active
draft-daniel-6lowpan-commissioning-00	2007-06-19	Active
draft-daniel-6lowpan-hilow-hierarchical-routing-01	2007-06-18	Active
draft-daniel-6lowpan-load-adhoc-routing-03	2007-06-19	Active
draft-daniel-6lowpan-sslp-01	2007-06-18	Active
draft-dokaspar-6lowpan-routreq-03	2007-11-20	Active
draft-ekim-6lowpan-scenarios-01	2007-11-15	Active
draft-hui-6lowpan-hc1g-00	2007-07-02	Active
draft-hui-6lowpan-interop-00	2007-07-08	Active
draft-montenegro-6lowpan-dymo-low-routing-03	2007-06-19	Active
draft-oh-6lowpan-packetbb-dymoapp-01	2007-07-12	Active
draft-shin-6lowpan-mobility-01	2007-11-13	Active
draft-thubert-lowpan-backbone-router-00	2007-11-07	Active
draft-chakrabarti-mobopts-lowpan-req-01	2007-03-07	Expired
draft-daniel-6lowpan-interoperability-01	2005-07-19	Expired
draft-daniel-6lowpan-security-analysis-01	2006-06-23	Expired
draft-daniel-lowpan-mib-00	2007-02-28	Expired
draft-guha-lowpan-mobility-protocol-req-00	2005-10-21	Expired
draft-montenegro-lowpan-aodv-00	2005-07-12	Expired

Segment 3: Architecture (CI-3)
13:30–14:11

13:30–13:43	Architecture	JPV/DC (13)
13:43–13:53	Integration of 6LoWPAN into IP networks	GM/CW (10)
13:53–14:03	ISA100 input	GM (10)
14:03–14:11	Application Recommendations	EK/JPV (8)

Segment 4: Commissioning, Bootstrapping (CI-1) 14:11–14:25

K. Kim

Segment 5: Security (CI-5)
14:25–14:40

D. Park

Segment 6: Routing Requirements (CI-3) 14:40–14:50

D. Kaspar

Segment 7: Stateful HC (CI-2)
14:50–15:00

K. Pister