 IPv6 over Low power WPAN WG (6lowpan)

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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)
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

RFC 2418:
6.2. WG Secretary

Taking minutes and editing working group documents often is performed by a specifically-designated participant or set of participants. In this role, the Secretary's job is to record WG decisions, rather than to perform basic specification.
Open Milestones (from WG charter page)

- **Mar 05**  draft-ietf-6lowpan-problem: WG last call
- **Apr 05**  draft-ietf-6lowpan-problem ➔ IESG
  - Informational
- **May 05**  draft-ietf-6lowpan-format: WG last call
- **Jul 05**  draft-ietf-6lowpan-format ➔ IESG
  - Proposed Standard

- Almost done…
- We are not chartered for work beyond this

What we need to do today

1. **Work on** finishing our core documents
   1. Problem statement: only editorial nits remain (see list)
   2. Format statement: next segment
2. **Discuss future work**
   - How much should we bite off?
   - Plan for a Rechartering that keeps focus
Segment 2: Format spec
09:10–09:50

Gabriel Montenegro

Segment 3: Rechartering
09:50–10:50

Chairs
6lowpan: Proposed New Charter Items

- Network Setup and IPv6 ND Optimizations (PS)
- Problem statement stateful header compression (Inf)
- Recommendations for applications (Inf)
  - Transport, App, Discovery/Configuration/Commissioning
- Mesh Routing (PS)
  - Adaptation of existing routing protocol(s) to L2 and 6lowpan target environment
- Security Analysis (Inf)

Network Setup and IPv6 ND Optimizations (PS)

Problem:
- IPv6 ND is too expensive (power)
- IPv6 ND requires multicast

Solution:
- Use 802.15.4 network structure (coordinators)
- Obviate multicast by talking to coordinator
  - To do: Avoid single point of failure
- Change ND multicast semantics
- Define 6lowpan network setup
Problem statement stateful HC (Inf)

Problem:
- Stateless HC (format spec) may not be sufficient
- Stateful HC (2507, ROHC) too complex

→ Document problem

Recommendations for applications (Inf)

Problem:
- Applications are going to choose wildly different protocols for:
  - Transport, Application layer protocols, Discovery/Configuration/Commissioning

→ Document relevant choices
Mesh Routing (PS)

Problem:
- existing routing protocols
  - are at L3
  - don't consider 6lowpan target environment

Solution:
- Leave change control with MANET
- Define packet formats for L2
- Define interoperable subset for 6lowpan

Security Analysis (Inf)

Problem:
- Security in Lowpans is *hard*

→ Define threat model
→ Document suitability of existing key management schemes
Milestones

• ...
• Finish this round in Dec 06?

Interim?

Proposal:
• end of May
• Two days
• Europe?
Segment 4: New Work
10:50–11:35

Chakrabarti/Nordmark: ND
Kim: Routing
Sarikaya: Serial Interface