

IPv6 over Low power WPAN WG (6lowpan)

63rd IETF

Paris, France, August 4, 2005

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6lowpan@IETF63, 2005-08-04

- **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)

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09:20 - IPv6 ND & gatewaying	Chairs (5)
09:28 - Mobility and Routing vs. Encapsulation	Chairs (16)
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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

- **All are late**
- **We are not chartered for work beyond this**

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

What we need to do today

- (work on our core documents)
- 6 other submissions:
figure out **whether they impact our core documents**
- We *may* work on the submissions later

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draft-ietf-6lowpan-problem-00.txt

- **Updates draft-kushalnagar-lowpan-goals-assumptions-00.txt**
- **Editorial fixes**

- **Any comments?**

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draft-ietf-6lowpan-format-00.txt

- **Encapsulation was modified!**
 - **Old protocol type was 5 bits, new protocol_type 11 bits**
 - Minimum overhead grew from 1 octet to 2 octets.
 - **Whereas growing from 5 bits to 7 bits was possible, this entailed**
 - 2 octets of overhead for the longer protocol types, anyways
 - complexity
 - 7 bits is still not future-proof
- **The 'M' bit had been left out of the 3rd packet format (for subsequent fragments).**
 - **Corrected this oversight.**
 - **The fragment tag lost one bit.**
- **Sundry editorial changes.**
- **Any comments?**

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draft-chakrabarti-lowpan-ipv6-nd-00.txt

- **Implicit assumption so far:**
 - We'll just use IPv6 Neighbor Discovery Protocol (NDP)
 - Solicitation/Advertisement, Unreachability Detection (NUD)
- **NDP was designed for Ethernet**
 - Heavy user of Multicast (☛ “solicited node multicast”)
- **802.15.4 only has Broadcast (expensive!)**
 - Star vs. Mesh
- **Draft: “Work in Progress”**
 - Change timers, define/use some special roles (coordinator)
- **Should this be in -format?**

draft-daniel-6lowpan-interoperability-01.txt

- **Identifies the special tasks of an IPv6 router that interfaces to a LowPAN**
 - Some are rehash of -format (SAR, HC, Address Resolution)
 - Assumes we will use **16-bit MAC addresses**
- **Assigns 16-bit MAC addresses to **off-link** nodes**
 - Mapping expires after ET (expiration time)
- **Needs **registration procedure** for address assignment**
- **Is this a **NAT**?**
- **Do we want to address **16-bit** MAC addresses?**

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draft-chakrabarti-mobopts-lowpan-req-00.txt

- Radio-based topology is **not** constant
- Lowpan nodes may move from one PAN to another
 - Same or different IPv6 link
 - Communication should continue transparently
- PAN coordinators need to conspire
 - Moving node needs to authenticate to old and new PAN C
- PANs need to be identifiable
- Is a LowPAN a PAN or an internet of PANs?
- Which kinds of mobility do we handle?

draft-daniel-6lowpan-hilow-hierarchical-routing-00.txt

- **Routing Scalability by hierarchical routing**
 - Forward in tree
- **Assignment of 16-bit identifiers to reflect hierarchy**
 - Tree building during registration with parent
- **Unclear: Address Stability, Single Point of Failure**
 - Recovery process “TBD”
- **Do we need 16-bit addresses and hierarchy?**

draft-daniel-6lowpan-load-adhoc-routing-01.txt

- **Updates draft-montenegro-lowpan-aodv-00.txt**
- **Simplified version of AODV**
 - FFD only
- **Not in WG scope right now**
- **Existence proof (?) of flat routing**
- **No implications on -format (?)**
 - **But what about RFDs?**
 - May need proxying/registration

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draft-daniel-6lowpan-sslp-00.txt

- **Simplified version of SLPv2 for service discovery**
 - User Agent (UA), Service Agent (SA), Directory Agent (DA)
- **Translation Agent (TA) translates SSLP ↔ SLPv2**
 - Removes/adds IP/UDP headers, simplifies SLPv2 header
- **Not in WG scope right now**
- **No implications on -format (?)**

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Which of these do we have to do before we can finish -format?

- **ND fixes**
- **RFD/FFD, device roles**
- **16-bit addresses, hierarchy**
- **Routing interface**
- **Pan ID/Pan coordinator selection**
- **[]**
- **[]**

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