

AUTOCONF wg

IETF '78 - Maastricht

Practicalities

- IPR reminder - RFC 3979
 - https://datatracker.ietf.org/public/ipr_disclosure.cgi
 - If you know about IPR relevant to the technology and You are contributing, you have to speak up
- Jabber:
[http://jabber.ietf.org/
autoconf@jabber.ietf.org](http://jabber.ietf.org/autoconf@jabber.ietf.org)
- Audiocast:
<http://tools.ietf.org/agenda/78/>
Please state name CLEARLY at mike

Agenda

- Notes takers, blue sheets, agenda bash - Chairs, 5min
- WG status update - Chairs - 5 min
- RFC5889 Update - Chairs, AD (& ENormark) - 20min
- New Charter discussion - Chairs - As Much As Needed
- "Survey of IP address autoconfiguration mechanisms for MANETs" - Carlos - 15min
<https://tools.ietf.org/html/draft-bernardos-manet-autoconf-survey-05>
- "Router Advertisements for Routing between Moving Networks" - Alex - 15min
<http://tools.ietf.org/html/draft-petrescu-autoconf-ra-based-routing-00>

WVG Status Update



2005 Mar AUTOCONF BOF1

2005 Aug AUTOCONF BOF2

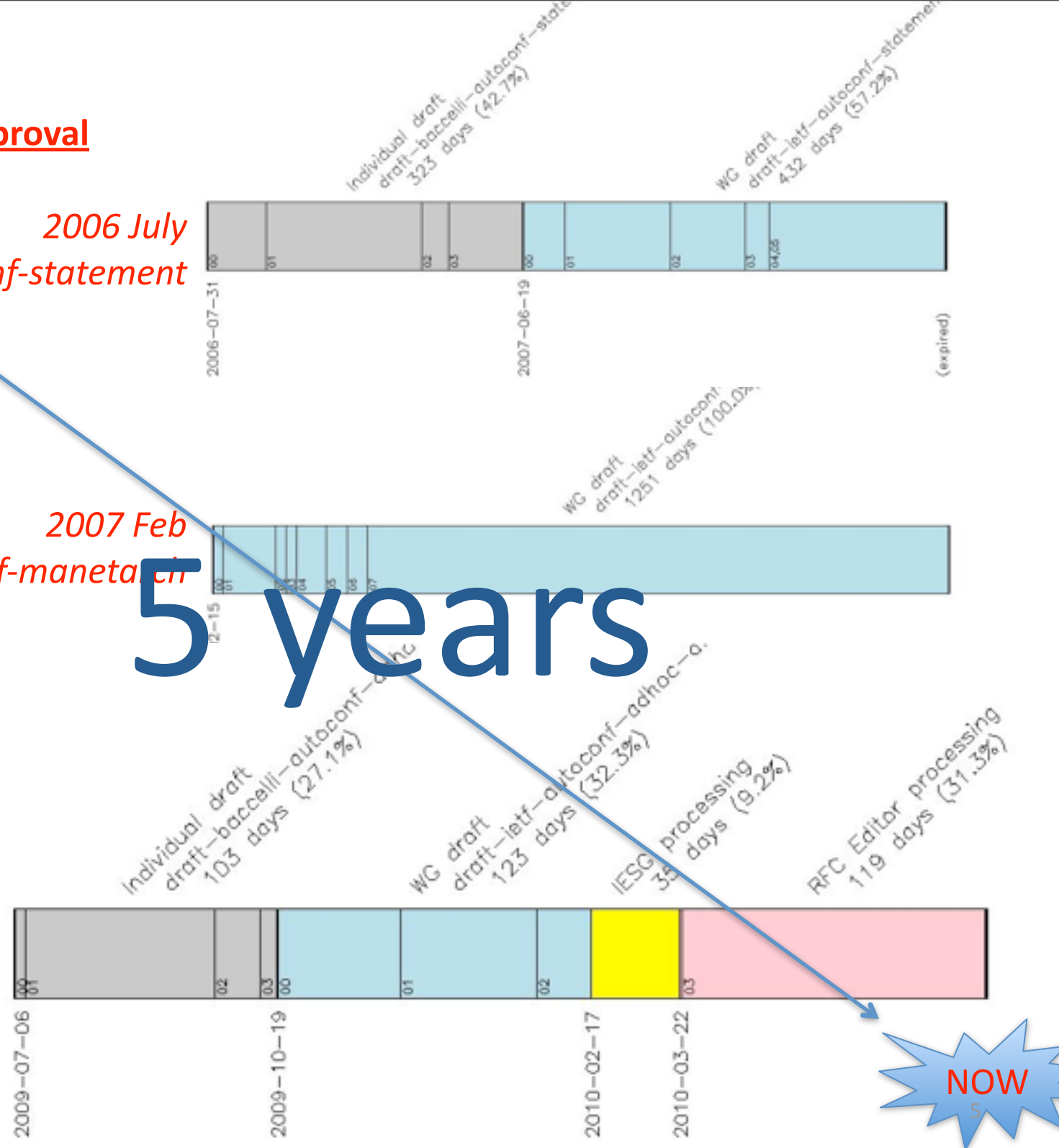
2005 Oct AUTOCONF WG Approval

2006 July
draft-ietf-autoconf-statement

2007 Feb
draft-ietf-autoconf-manet-arch

2009 Mar Recharter

2009 July
draft-ietf-autoconf-adhoc-addr-model



RFC5889 Update



Annaheim

Autoconf Status Pages

Ad-Hoc Network Autoconfiguration (Active WG)

[Login](#) | [Drafts](#) | [Agendas](#) | [Minutes](#) | [Wiki](#) | [Issues](#) | [Charters](#) | Jabber [Room](#), [Logs](#) | [List A](#)

Working Group Documents:

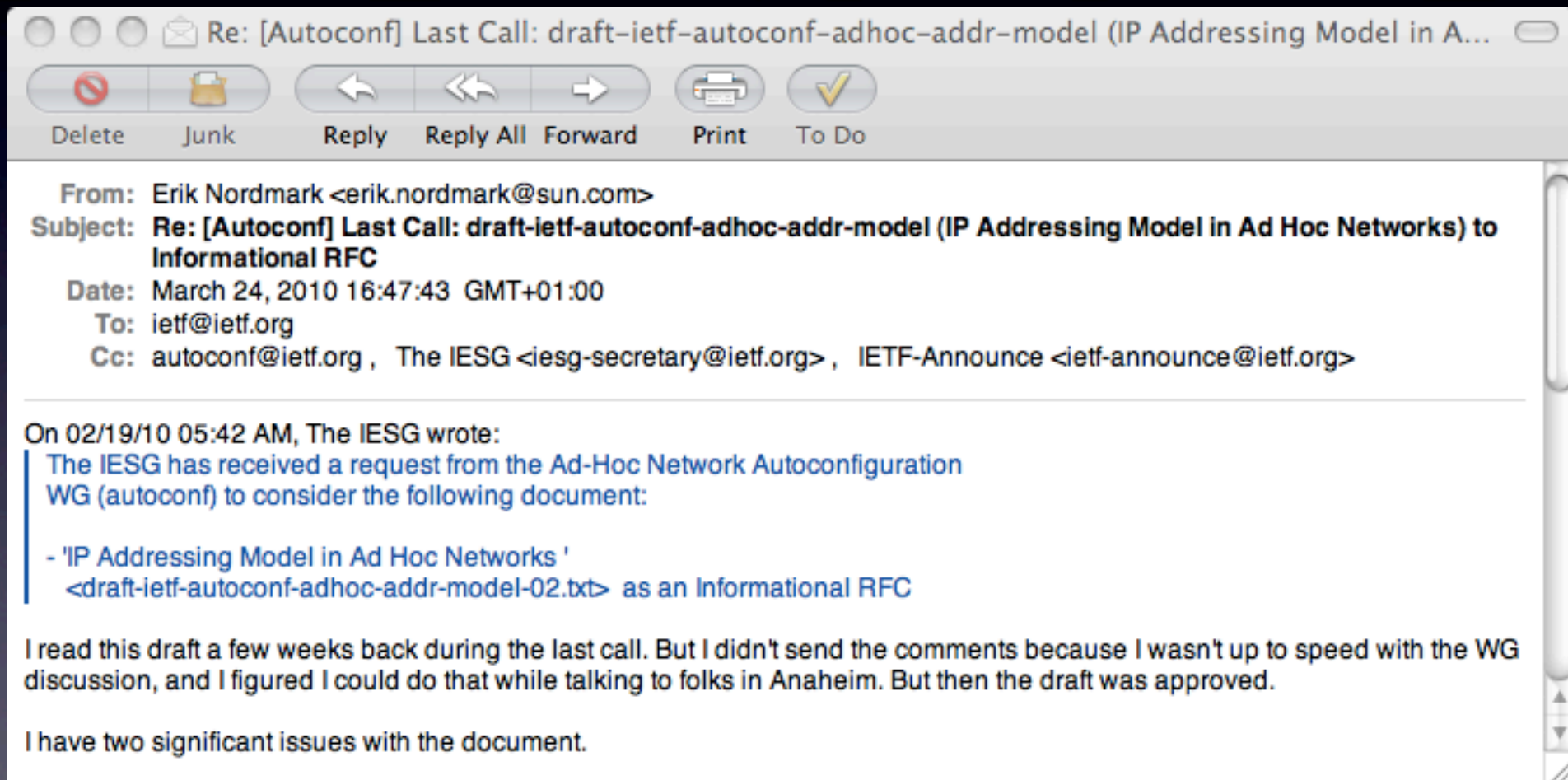
Draft name	Rev.	Dated	Status	Comments, Issues
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RFC-Editor's Queue:

draft-ietf-autoconf-adhoc-addr-model	-03	<i>new</i> 2010-03-22	RFC Ed Queue	
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✓ WGLC + AD Eval + IETF LC + IESG processing

.....but.....



Now....

Autoconf Status Pages
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Working Group Documents:

Draft name	Rev.	Dated	Status	Comments, Issues
<i>RFC-Editor's Queue:</i>				
draft-ietf-autoconf-adhoc-addr-model	-03	<i>new</i> 2010-03-22	RFC Ed Queue	

- Chair's do not know if/how/why WG can override IETF consensus
- Jari / Ralph....?

Change the title

FROM:

IP Addressing Model in Ad Hoc Networks

TO:

A Router Addressing Model in Ad Hoc Networks

In section 4

REMOVE:

Note that while link-local addresses are assumed to be "on link", the utility of link-local addresses is limited as described in Section 6.

In section 5:

OLD:

Routing protocols running on a router may exhibit different requirements for uniqueness of interface addresses; some have no such requirements, others have requirements ranging from local uniqueness only, to uniqueness within, at least, the routing domain (as defined in [RFC1136]).

Configuring an IP address that is unique within the routing domain satisfies the less stringent uniqueness requirements of local uniqueness, while also enabling protocols which have the most stringent requirements of uniqueness within the routing domain. This suggests the following principle:

- o an IP address assigned to an interface that connects to a link with undetermined connectivity properties should be unique, at least within the routing domain.

NEW:

Routing protocols running on a router may exhibit different requirements for uniqueness of interface addresses; some have no such requirements, others have requirements ranging from local uniqueness only, to uniqueness within, at least, the routing domain (as defined in [RFC1136]). Routing protocols that do not require unique IP addresses within the routing domain utilize a separate unique identifier within the routing protocol itself; such identifiers could be based on factory assignment or configuration.

Nevertheless, configuring an IP address that is unique within the routing domain satisfies the less stringent uniqueness requirements of local uniqueness, while also enabling protocols which have the most stringent requirements of uniqueness within the routing domain. As a result, the following principle allows for IP autoconfiguration to apply to the widest array of routing protocols:

- o an IP address assigned to an interface that connects to a link with undetermined connectivity properties should be unique, at least within the routing domain.

In Section 6.1:

OLD:

- o There is no mechanism to ensure that IPv6 link-local addresses are unique across multiple links, hence they cannot be used to reliably identify routers (it is often desirable to identify a router with an IP address).

NEW:

- o In general there is no mechanism to ensure that IPv6 link-local addresses are unique across multiple links, however link-local addresses using an IID that is of the modified EUI-64 form is globally unique. Thus if link-local addresses are used to reliably identify routers then they must be of the modified EUI-64 form.

In section 6.1

FROM

- o Routers cannot forward any packets with link-local source or destination addresses to other links (as per [RFC4291]) while most of the time, routers need to be able to forward packets to/from different links.

TO

- o Routers often need to be reachable at a global address for management purposes.
- o Routers cannot forward any packets with link-local source or destination addresses to other links (as per [RFC4291]) while most of the time, applications assume that routers can forward packets to/from different links.

Also in section 6.1

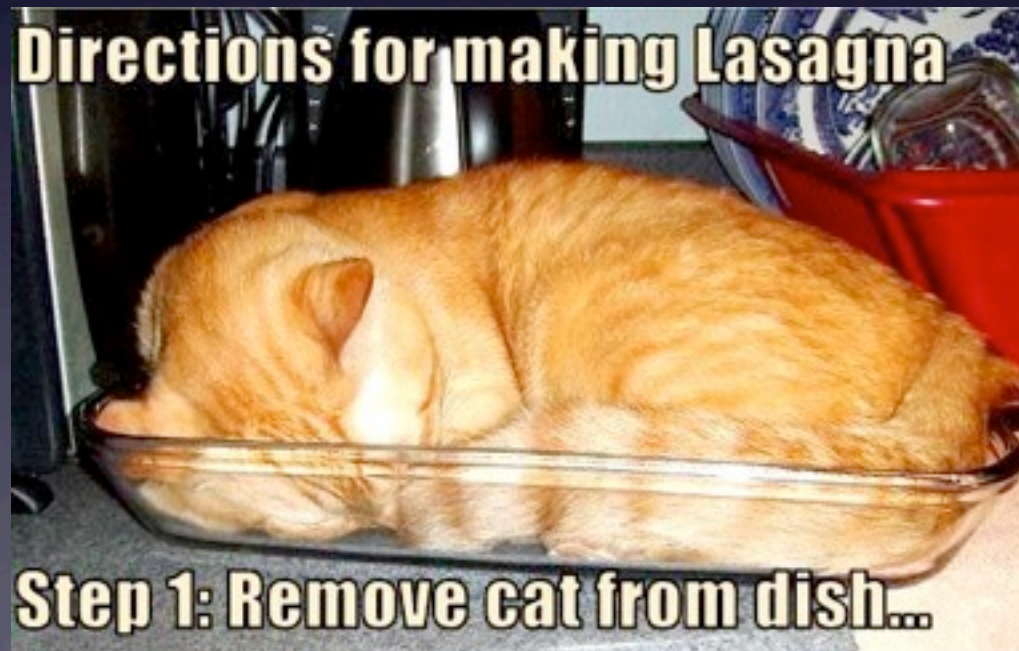
OLD:

Therefore, autoconfiguration solutions should be encouraged to primarily focus on configuring IP addresses that are not IPv6 link-local.

NEW:

Therefore, an autoconfiguration solution which provides a mechanism for assigning addresses with a wider scope than IPv6 link-local alone will be more generally useful than one that does not.

Step I: WGW Re-Chartering



WG re-Charter

- **Strawman charter** (posted June 29, 2010):
 - “Small” next step proposed: DHCP operation over MANETs
- **Comments raised** (summarized July 20, 2010):
 - Centralized and/or De-centralized
 - Existing protocols (DHCP and/or ND) vs. new protocols
 - Single or Multiple Protocol(s)
 - Security issues
 - Informational link characteristics document

WG re-Charter

(abbreviated)

1. DHCPv6 operation over MANET, including:

- A DHCPv6-based mechanism for configuring required interface addresses for the routers in the ad hoc network.
- A DHCPv6-based mechanism for delegating prefixes to each router for use by applications running on the routers themselves, or for configuration of attached hosts/networks.

Both mechanisms should be independent from operation of any specific MANET routing protocol, although may exploit information maintained by such a routing protocol, if available.

The working group will adapt and/or reuse existing protocols whenever reasonable and possible. No new duplicate address detection mechanisms are will be specified; it is expected that address uniqueness is guaranteed by the central node alone.

WG re-Charter

Proposed additional item

1. DHCPv6 operation over MANET, including:

- A DHCPv6-based mechanism for configuring required interface addresses for the routers in the ad hoc network.
- A DHCPv6-based mechanism for delegating prefixes to each router for use by applications running on the routers themselves, or for configuration of attached hosts/networks.

Both mechanisms should be independent from operation of any specific MANET routing protocol, although may exploit information maintained by such a routing protocol, if available.

The working group will adapt and/or reuse existing protocols whenever reasonable and possible. No new duplicate address detection mechanisms are will be specified; it is expected that address uniqueness is guaranteed by the central node alone.

2. Analysis of Problem Space for distributed address assignment and service discovery.

WG re-Charter

Goals and Milestones

The working group plans to establish design teams for rapidly advancing towards initial submissions for these two work items.

Goals and Milestones:

- Dec 2010 First working group draft of the "DHCPv6 operation over MANET"
- Dec 2010 First working group draft of the "Analysis of Problem Space for distributed address assignment and service discovery"
- Sep 2011 Submission of the "DHCPv6 operation over MANET" draft to the IESG for publication as BCP
- Sep 2011 Submission of the "Analysis of Problem Space for distributed address assignment and service discovery" the IESG for publication as Informational RFC
- Sep 2011 Rechartering or Closing WG

Agenda

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