



IETF Activities Update

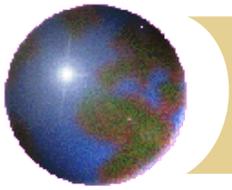


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ARIN XXVII

April 2011

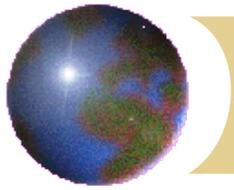
San Juan, Puerto Rico



Note

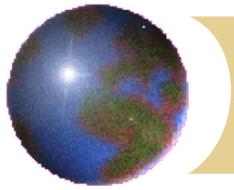
This presentation is not an official IETF report

- ❏ There is no official IETF Liaison to ARIN or any RIR
- ❏ This is all my opinion and my view and I am not covering everything just highlights
- ❏ You should know I like funny quotes
- ❏ I hope you enjoy it
- ❏ Your feedback is greatly appreciated



Initial Take-Aways

- ✚ After 10 years folks are much grayer
- ✚ RFC 6177 - new recommendations for IPv6 assignments to end sites.
- ✚ Re: X.400 "It went from the technology of the future to the technology of the past without ever becoming the technology of the present." Harold A.
- ✚ Interesting talk by Jim Geddis about Bufferbloat
 - 📄 <http://ietf80streaming.dnsalias.net/ietf80/ietf80-ch4-wed-am.mp3>



ISOC IPv6 Workshop

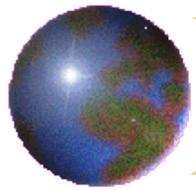
- ✦ This was a non-IETF event put on by ISOC.
- ✦ It was a panel to discuss what milestones we'll use to determine if we're there yet
- ✦ Talks by TW Cable, Telephonica, CZ NIC, RIPE NCC



ISOC IPv6 Workshop Continued

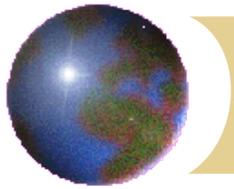
✚ Some Discussion topics

- ✚ Wait til IPv4 is on the verge of collapse and then folks will move quicker
- ✚ CGN breaks gaming and other apps.
- ✚ The big guys deploying IPv6 have more impact. Right now the little guys can't get transit
- ✚ Most home gateways don't support IPv6. So today 99% of TW Cable's customers can't get IPv6
- ✚ How to measure? Maybe a route6 object pingable IPv6 address



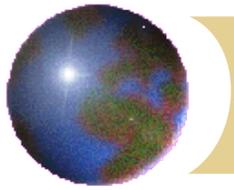
ISOC IPv6 Workshop Continued

- ✿ v6 enabled ASNs, v6asns.ripe.net, Global average is 9%
 - ✦ Czech republic has 9% and Holland 35%
- ✿ 40% of LIRs in RIPE have IPv6
- ✿ RIPE has a measure of IPv6 RIPEness.
 - ✦ Reverse DNS, v6 in route registry, etc
 - ✦ No measurement of actual traffic yet
 - ✦ Reward is a t-shirt and a star in the database
- ✿ CZ NIC – 20% of domains have AAAA for domain records



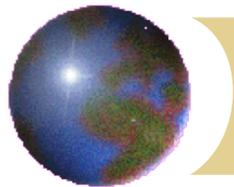
Internet Area

- ✚ New Draft to say that new IP implementations MUST support IPv6.
 - ☒ MUST NOT require IPv4
 - ☒ IETF should stop work on IPv4 only protocols.
 - ☒ Current implementations SHOULD support IPv4
 - ☒ Support for v4 and v6 MUST be equivalent
- ✚ On Demand IPv4 provisioning in dual-stack
 - ☒ This may free up unused IPv4 addresses
 - ☒ May be too complex and not worth it
- ✚ Other interesting discussions of address sharing and the need to support v4 and v6



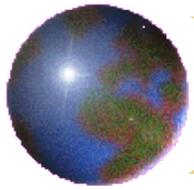
RENUM BOF

- ✦ Trying to decide whether to become a working group
- ✦ Would be chartered with writing documents to help renumber networks and design networks to facilitate renumbering.
- ✦ Lots of concerns since the existing renumbering RFC isn't used.
- ✦ Possibly break down problem to the components that would need to be renumbered.
- ✦ "Renumbering is hard, let's go shopping"



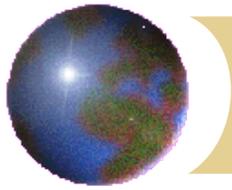
V6 Operations (V6OPS)

- ⊕ Geoff Huston gave an interesting presentation about the brokenness.
 - ⊠ 20x more folks who could use v6 who don't
 - ⊠ 6to4 is being de-pref'd by browsers
 - ⊠ 150ms penalty on every RTT
 - ⊠ "auto-tunneling sucks worse than you think"
 - ⊠ "badness clumps"
 - ⊠ 10%-20% of all 6to4 connections fail
 - ⊠ 38% of Teredo connections fail
 - ⊠ end systems can't hop over brokenness in provider's network
 - ⊠ To ISPs. if you're not doing IPv6 on the wire then customers can't



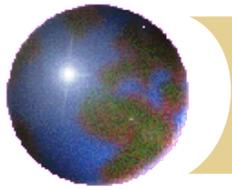
Routing Area Working Group

- ✦ LFA draft – last call
- ✦ Multicast Only Fast Re-route.
- ✦ A guy from Reuters presented OSPF TE Express path
- ✦ Routing Area WG up to date information can be found here
 - ☐ <http://tools.ietf.org/area/rtg>



Secure Inter-Domain Routing (sidr)

- ✦ This group met at the very end of the week. There is great progress with securing BGP.
- ✦ The drafts are well on their way to RFC for verifying the advertiser of a route
- ✦ Work now being done on verifying the path.
- ✦ <http://tools.ietf.org/wg/sidr/>
- ✦ Note: This is coming and everyone should think about it when sizing new border routers.



IPv6 Maintenance WG (6man)

✚ 6Man Docs available here.

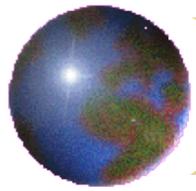
✚ <http://tools.ietf.org/wg/6man/>

✚ There are a number of drafts on flow labels. These can be used as a trigger for load balancing, sharing, etc.

✚ IPv6 Node Requirements RFC 4294-bis

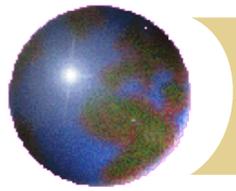
✚ IPv6 Extension Headers

- Consistent format has consensus
- Extension headers do not
- "I never thought we'd have almost no deployment of IPv6 and someone saying that we can't do something in the non-existent deployed base"
anonymous



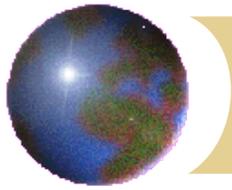
Benchmarking Methodology WG

- ✦ Happy Eyeballs – methodology to test if dual stack hosts are working properly
- ✦ Software update time
- ✦ Power usage
- ✦ Working Group info here
<http://datatracker.ietf.org/wg/bmwg/>



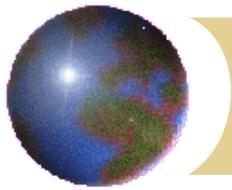
DNS Operations (DNSOP)

- ✚ DNSSEC is being deployed (yay) and now they're working on docs to help with this.
- ✚ Operational practices
- ✚ Trust anchors
- ✚ As well as delegations for IPv6
- ✚ <http://tools.ietf.org/wg/dnsop/>



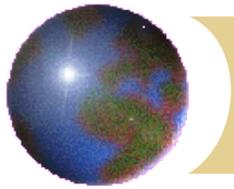
Global Routing Operations (GROW)

- ✚ Talk about filtering recommendations
- ✚ Survey of route flap dampening
- ✚ Virtual Aggregation
- ✚ FIB Aggregation
- ✚ Info is found here
 - ☒ <http://tools.ietf.org/wg/grow/>



BEHAVE WG

- ✦ *This group is all about address translation.*
- ✦ *DNS 64 Status*
- ✦ *CGN Requirements*
- ✦ *Analysis of NAT-PT*
- ✦ *Several other NAT and CGN Presentations*
- ✦ *Current info is available here*
 - 🌐 *<http://tools.ietf.org/wg/behave/>*



References

- ⊕ General WG Info:

- ⊞ <http://datatracker.ietf.org/wg/> (**Easiest to use**)

- ⊕ Internet Drafts:

- ⊞ <http://tools.ietf.org/html>

- ⊕ IETF Daily Dose (**quick tool to get an update**):

- ⊞ <http://tools.ietf.org/dailydose/>

- ⊕ Upcoming meeting agenda:

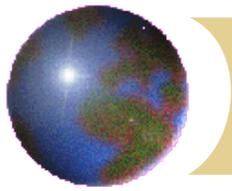
- ⊞ <http://tools.ietf.org/agenda>

- ⊕ Upcoming BOFs Wiki:

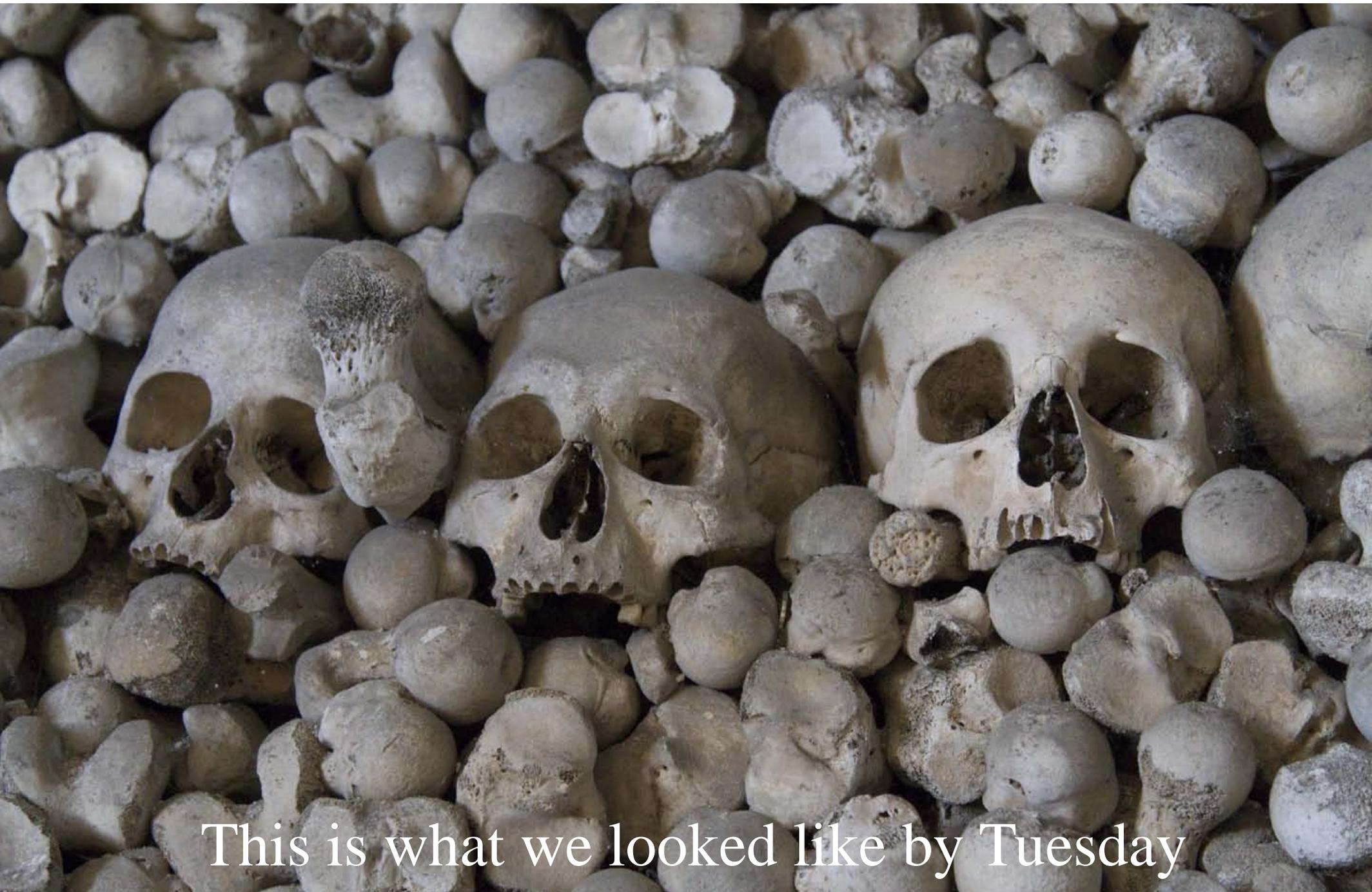
- ⊞ <http://tools.ietf.org/bof/trac/wiki>

- ⊕ Also IETF drafts now available as ebooks

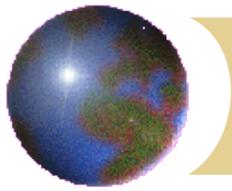
- ⊞ <http://www.fenron.net/~fenner/ietf/ietf-ebooks>



It was a long week !



This is what we looked like by Tuesday



Questions?

