

IRTF & ISOC Workshop on

# Research and Applications of Internet Measurements (RAIM)

in Cooperation with ACM SIGCOMM

Yokohama, Japan

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# Genesis

- EC looking for opportunities to bring SIG closer to industry
- Desire by the IETF/IRTF to increase researcher participation
- Collocated Tokyo/Yokohama meetings provided unique opportunity
- Decided to pick a few “hot” topics based on community interest
  - As expressed by paper submissions

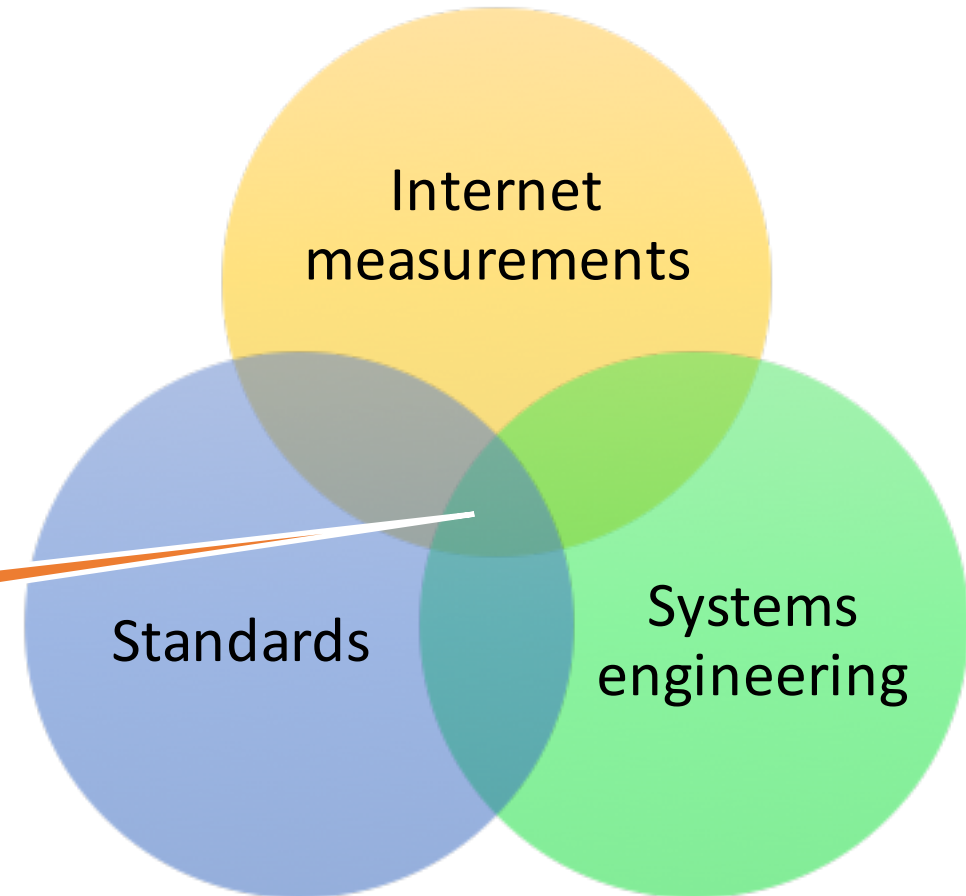
# Organizers

- Mark Allman, *ICIR*
- Kenjiro Cho, *IJ*
- Lars Eggert, *NetApp*
- Mat Ford, *Internet Society*
- Ratul Mahajan, *Microsoft Research*
- Renata Teixeira, *INRIA*
- Brian Trammell, *ETHZ*
- Darryl Veitch, *UTS*

# Desired outcomes

- Exchange information
- Introduce communities
- Foster collaboration
  
- Provide interactive discussion time

Increase this overlap!



# Why standards?

And not code?

<http://ietfmemes.tumblr.com/>

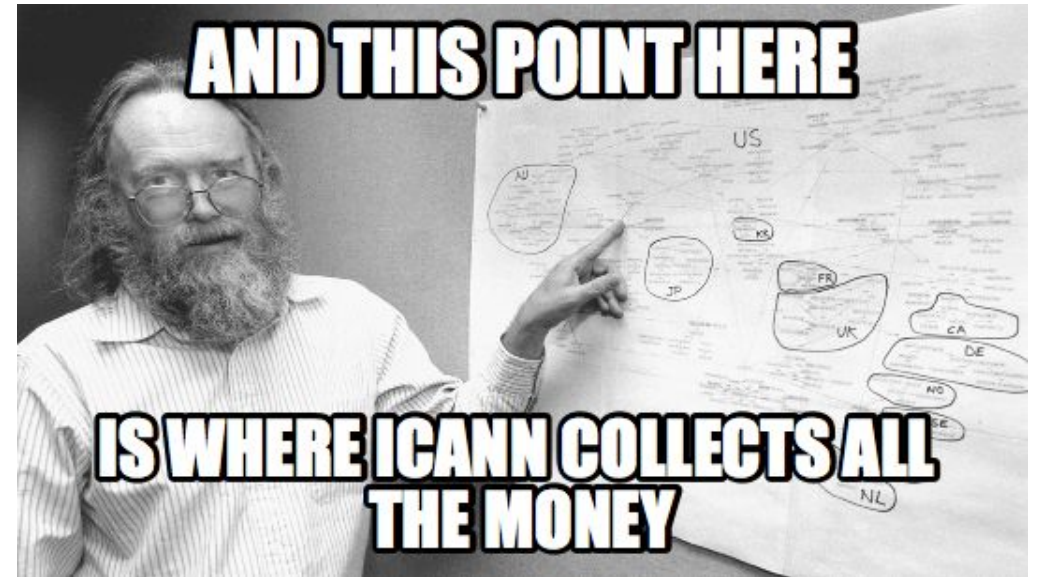
# Why should **you** care about standards?

- If you're researching Internet-related topics, **where do you learn what the real current issues are?**
  - Hint: wireless ATM is not one of them
- You need to **talk** to operators, vendors, registrars, policy makers, regulators...
  - Assuming you are interested in research that could have an actual impact
- Where is it **easy** to meet these folks?
  - Standards bodies, operator meetings, industry forums



# But don't forget to think

- You will talk to many folks who aren't researchers
- Their motivations are different
  - Often very short-term agendas
  - Few can abstract out to principles
  - Worried about symptoms, not causes
  - If all you have is a hammer, everything starts to look like a nail
  - Many are there to make money (or keep others from taking theirs)
- Think hard about the “problems” you learn about



# Still... go mingle!

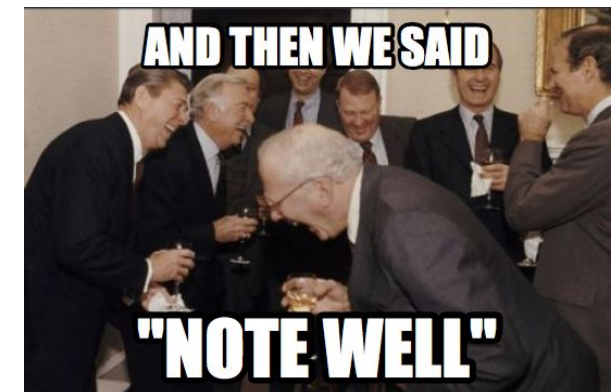
- If you're interested in learning about some of the real problems
- If you're interested in fixing some of them, you'll need to **participate more regularly**
- For Internet and "future" Internet stuff: participate in the IETF
- **Papers don't get deployed**
  - Unless you're a hyperscaler publishing your old stuff for publicity





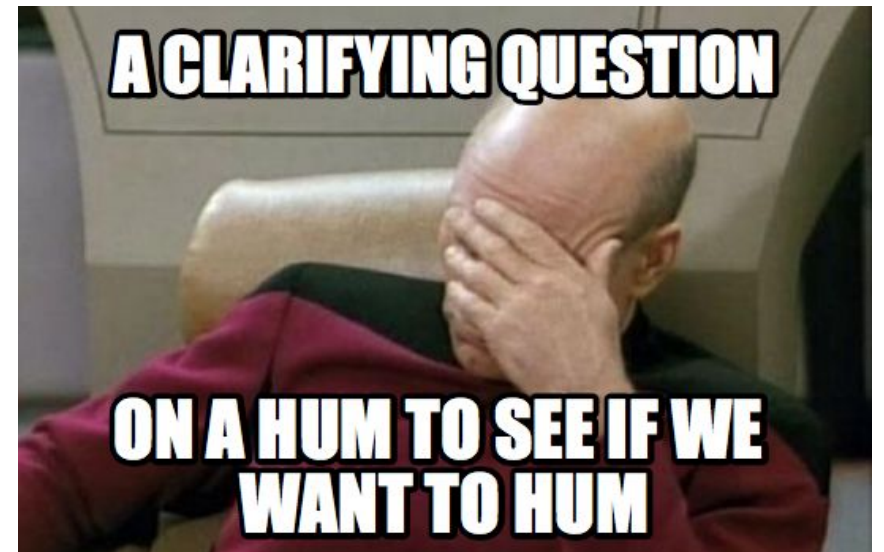
# Code is not (always) the answer

- Code comes under a **license**
- License incompatibilities:  
I may not be able to use your code
- Reading licensed code to interoperate is bad:  
may still taint my code
- (Some) IETF standards come with **IPR disclosures**
- Disease with different symptoms,  
but industry is used to this



# Participation takes **time**

- Standardization is very different from “fire & forget” academic venues
- The **time commitment** is substantial, both in terms of email discussion and meeting travel
- There are processes, and they are “interesting”
- You will need to **convince** a diverse set of stakeholders
  - **Theoretically optimal** ≠ **practically optimal**
  - Business aspects & deployment incentives are **critical**
- Don't forget about research arms (e.g., the **IRTF**)



# Need **additional** motivation?

- If you're on an academic career path,  
**standardization is unlikely to get you tenure**
  - But **it doesn't often hurt** you either
- You will meet likeminded people to collaborate with
  - And some of them have substantial budgets...
- If you're going for an industry career path,  
getting positively noticed in these forums can be good



# Your reception may vary



# Logistics

# Workshop structure

- **Keynotes** on (subjective) state-of-the-art and highlight hard issues
- **Lightning talks** to introduce participants, their work & viewpoints
- Lots of discussion time
- Collaborative minuting (to be turned into a workshop report)  
<http://tid.isoc.org:9001/p/raim-2015>

# Agenda

Time	Len	Session
9:00	15	Welcome & logistics
		<b>Measurement platforms &amp; tools</b>
9:15	45	Session keynote
10:00	120	Lightning talks
12:00	90	Lunch break
		<b>Measurement of fixed &amp; mobile broadband access networks</b>
13:30	45	Session keynote
14:15	90	Lightning talks
15:45	30	Break
		<b>Internet characterization through measurements</b>
16:15	45	Session keynote
17:00	90	Lightning talks
18:30		End

# Keynote etiquette

- Make this interactive
- Use the microphones (we are being live-streamed & recorded)
- Be prepared to postpone longer discussions until end of keynote



# Lightning talk etiquette

- Everyone gets **three minutes max**, no exceptions
- No questions, hold until end (take notes)
  
- Everyone starts clapping after exactly three minutes
- Speaker stops promptly
- Speaker fast-forwards to first slide of next speaker
- Next speaker continues

# Logistics

- We are being live streamed & recorded (thank you, Meetecho)
  - <http://www.meetecho.com/ietf94/raim/>
- Therefore, please use the microphones
- Lunch will be outside
  - Let the vegetarians get first dibs at vegetarian dishes

Questions?