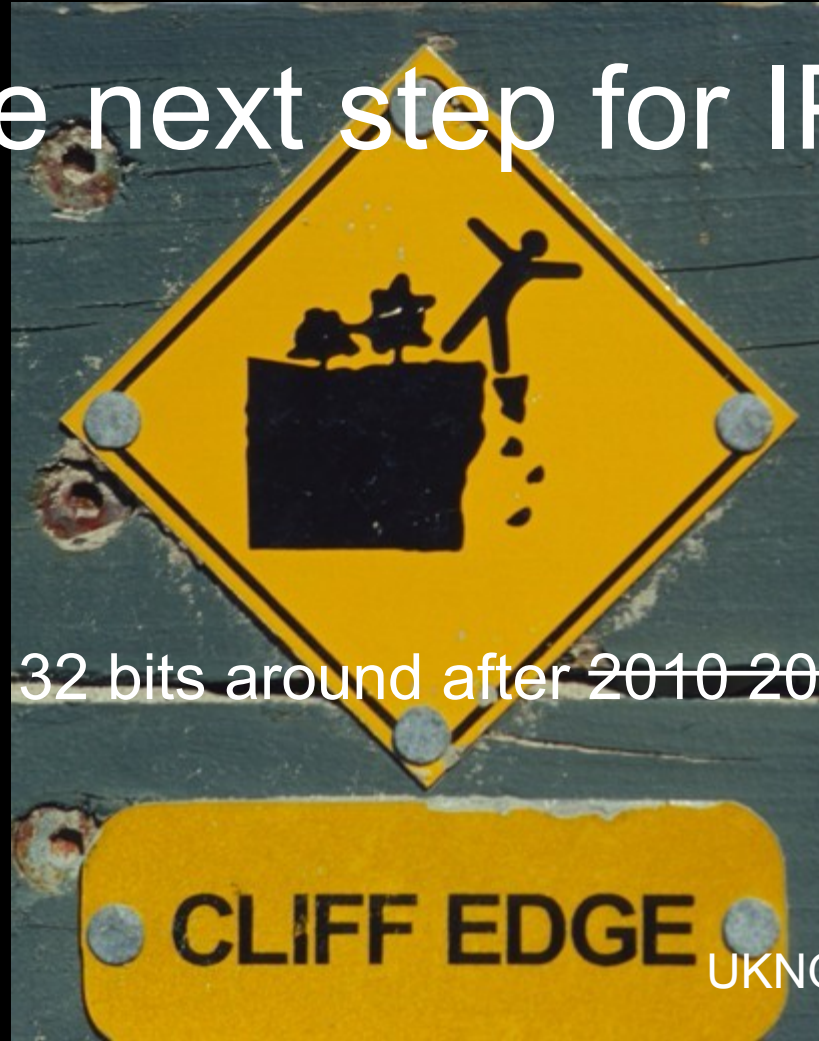


# The next step for IPv4



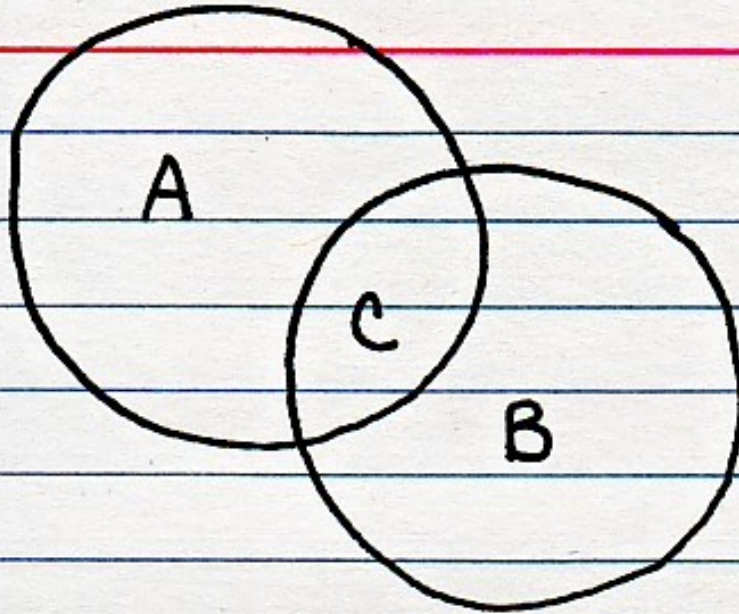
Moving 32 bits around after ~~2010-2009~~ 2011

UKNOF 10, May 21<sup>st</sup> 2008

Remco van Mook

(no hats)

# Reality check

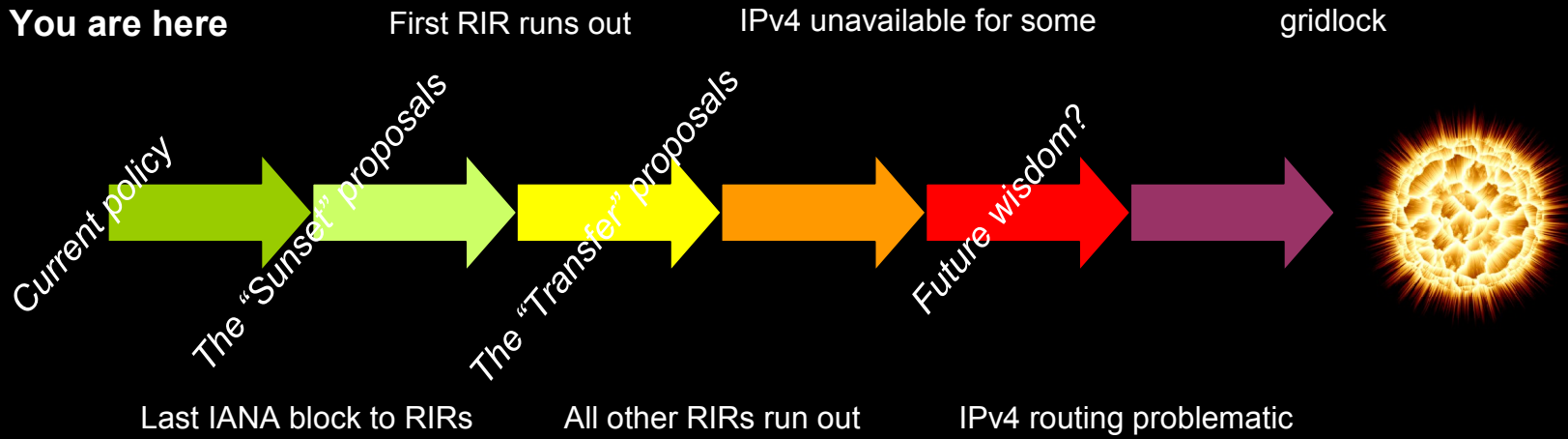


A = The way things are

B = The way things will be

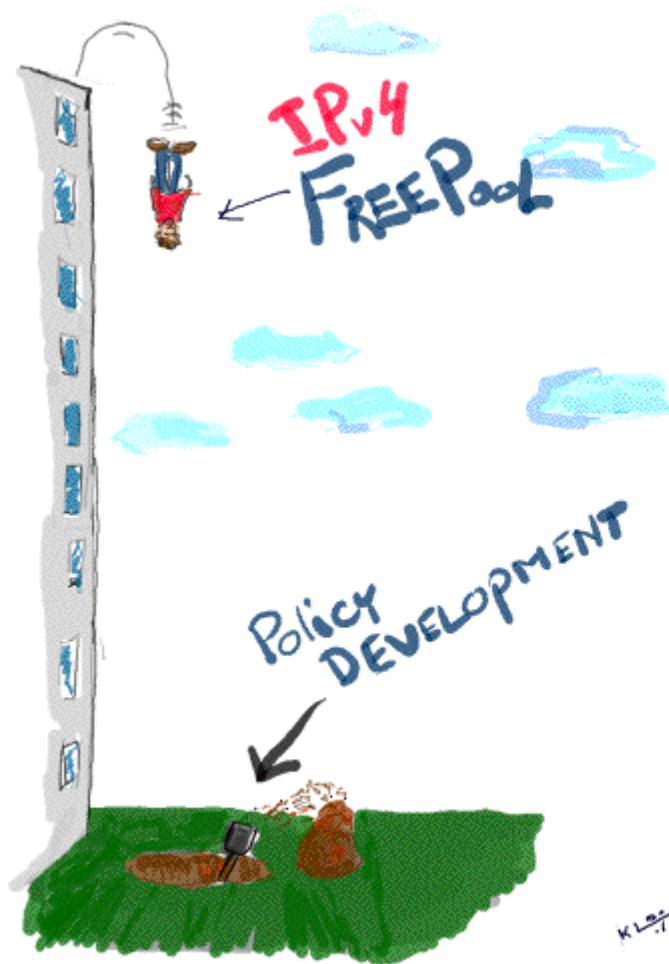
C = Smaller than you think

# Future of IPv4



None of the proposals will be able to save the world, rescue kittens from trees, cure the common cold or even save us from eventual doom with IPv4. Get IPv6, already.

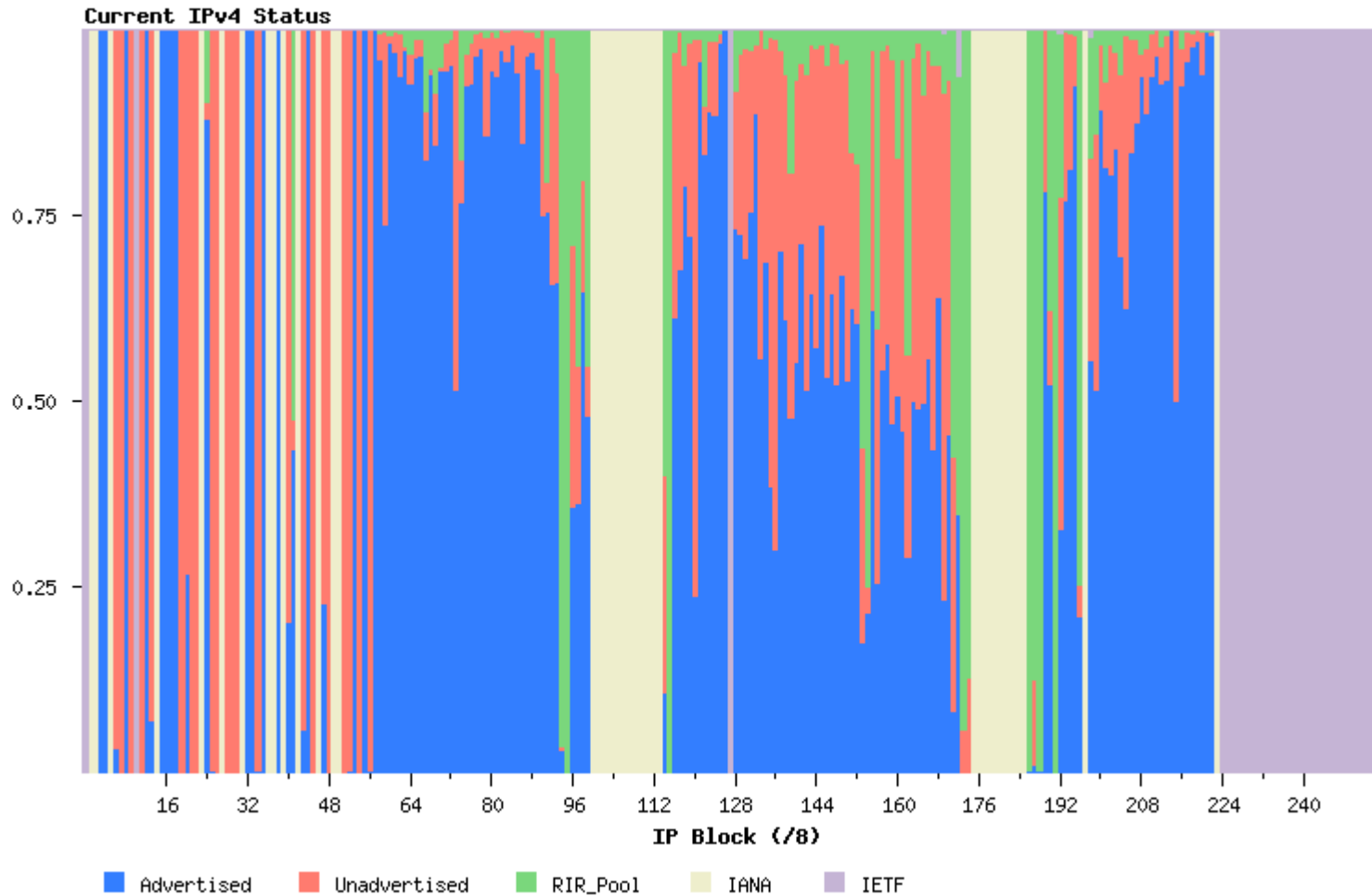
# Cause of Much Discussion



Terminal  
velocity

We are told that the pool of v4  
Is more shallow than ever before  
When you try a long dive  
And you want to stay live  
Better hope there's a shovel next  
door

# The current status



# Chilling facts

- The IANA pool currently has 41 /8s
- The RIRs are currently using 13 a year
- A year or so ago this rate was about 9
- IPv6 migration is going to take at least 5 more years
- NAT doesn't exist (according to IETF), NAT-PT more so
- We don't have any rules about 'what happens afterwards'

# Sunset

- Sharing the pain between regions
- Even though much denied, has significant political (or at least Layer 8 and up) background
- Does try to solve potential in-fighting between the RIRs
- Possibly consensus before it's irrelevant

# Transfer

- Tries to set out rules for the ‘afterlife’
- Much preferred to do this on a global scale
- ..but that takes time we don’t have
- 3 proposals in 3 regions, APNIC, ARIN, RIPE
- RIPE & APNIC roughly similar, ARIN wildly different but under review



# Transfer(2)

- It allows LIRs holding IPv4 space to transfer to other LIRs without RIR intervention
- Either permanently or temporary
- With no involvement in any negotiating/dealmaking between those LIRs
- As long as the outcome is registered with the RIR

# Transfer (3)

- Who will offer IPv4 space
  - ISPs/carriers: perhaps, if the price is right
  - Content: probably not
  - Enterprise: perhaps, if the price is right
- Who will want to acquire
  - ISPs/carriers: unlikely
  - Content: definitely
  - Enterprise: potentially

# “Future wisdom”

- At the current rate we'd run out again in a decade even if we found an entire new IPv4 space
- Unabandon NAT-PT
- Do something smart with 240/4
- Deploy alien technology?

# Questions

Answers ?

Many thanks to:

Geoff Huston, Leo Vegoda, Jessica Hagy, E Horne, J  
Comeau & Secret WG for their contributions

# But wait, this one's for practice!



e horne and j comeau



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