



# The Very Last IPv4 Allocations

## Some Concerns About Perceived Unfairness

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# Disclaimer

- I am not an Expert
  - No longer a ~~hostmaster~~ IP resource analyst
  - No Address Policy expert any more either
- I am not expressing a formal/official/... opinion of the RIPE NCC
- I just looked at *actual IPv4 allocation data* and this caused some *concern*.
- I want to *share the concern* with you and get feedback *if policy action is needed*.

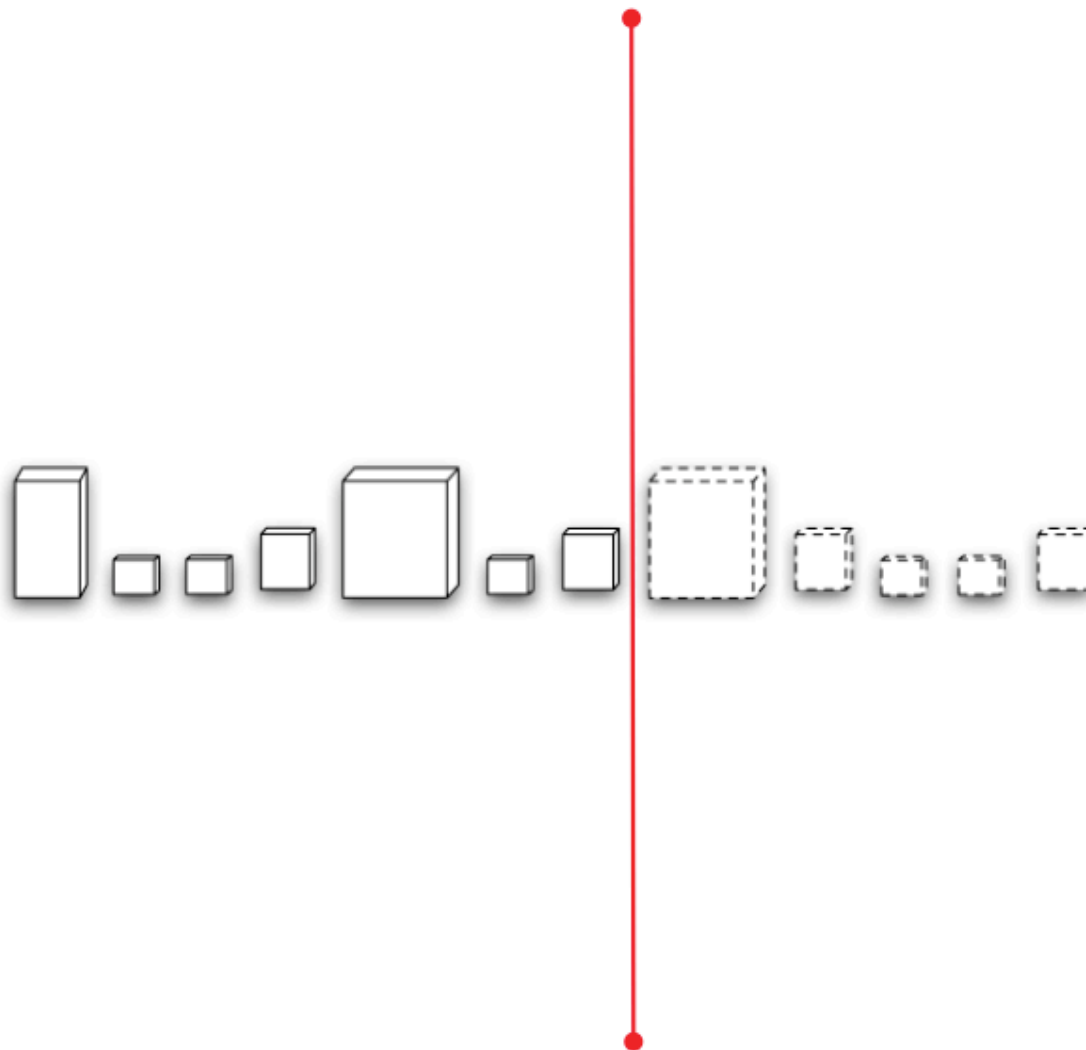


# The IPv4 Request Queue





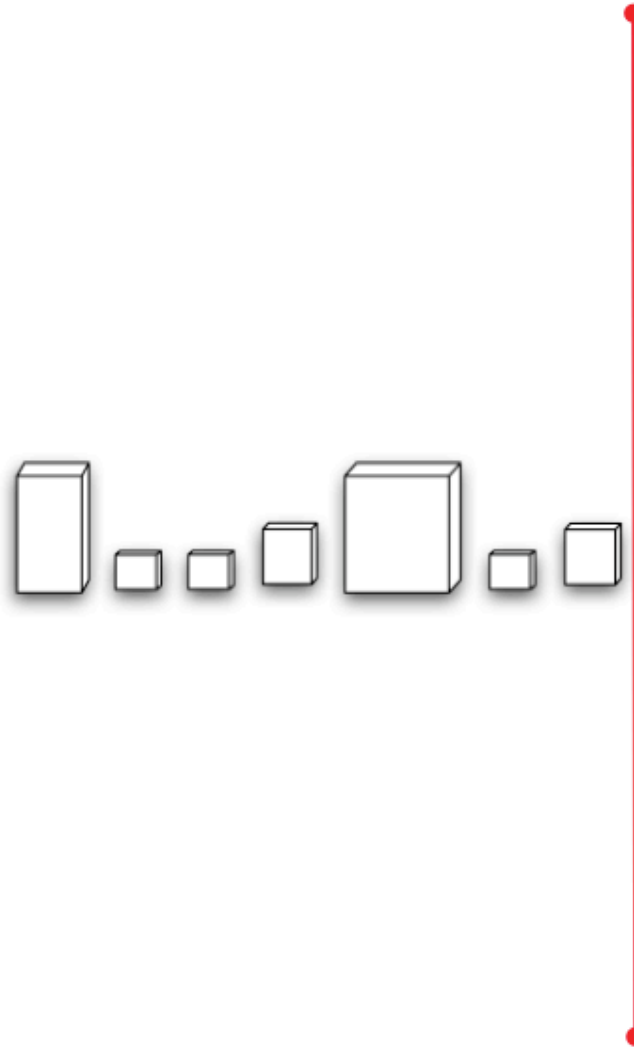
# Run-out Time: What We Imagine





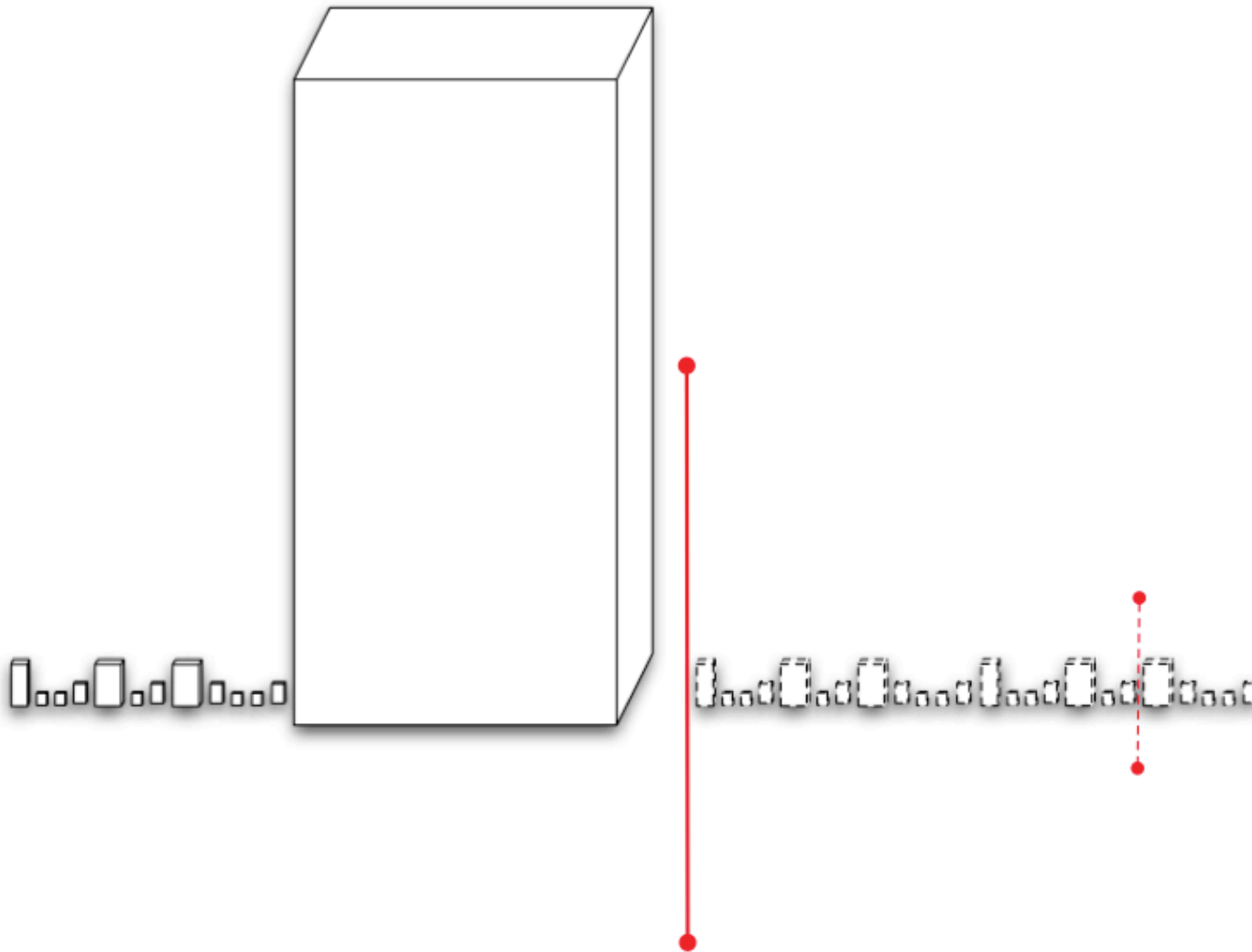


# Run-out Time: What We Imagine



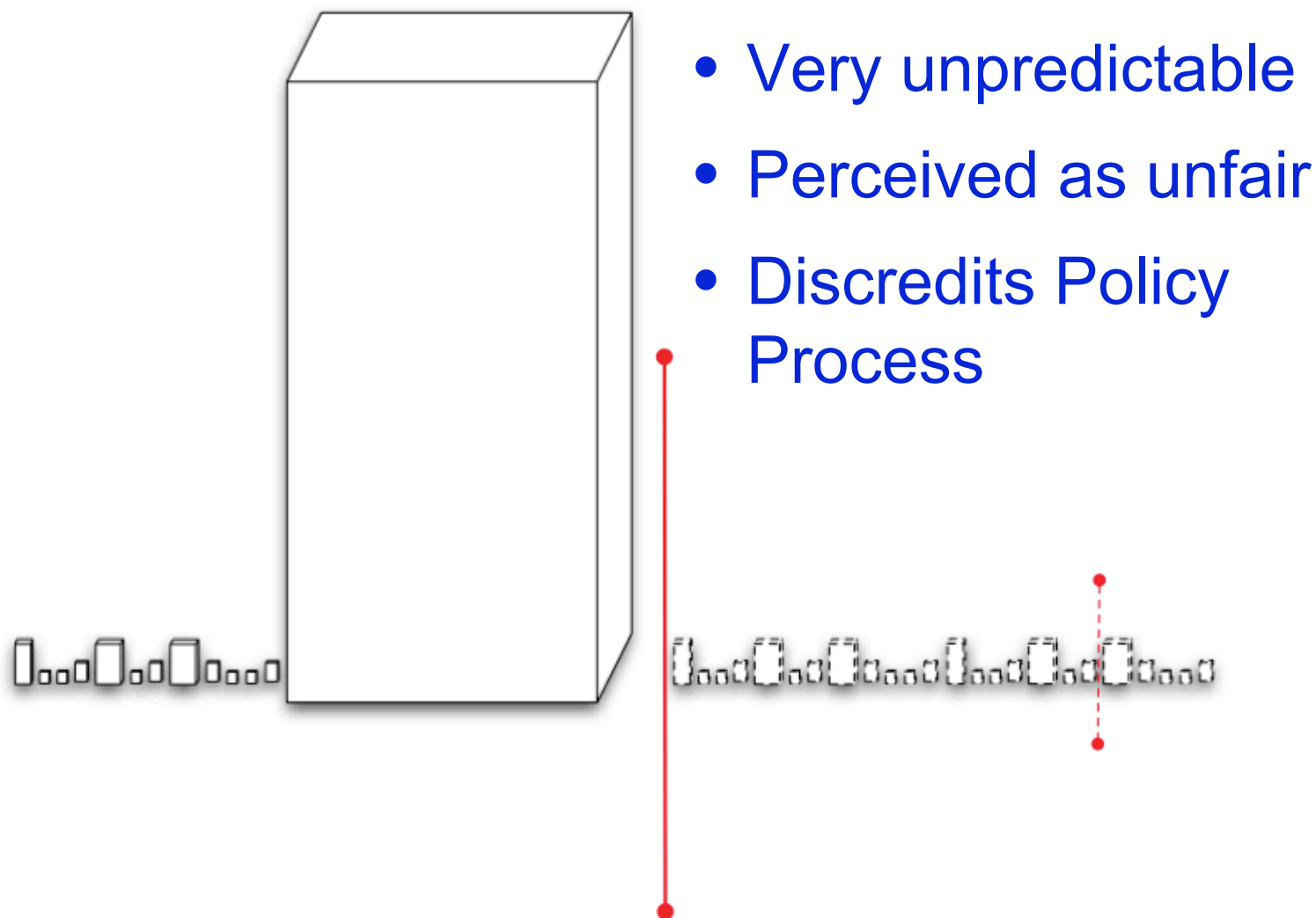


# What Might Happen



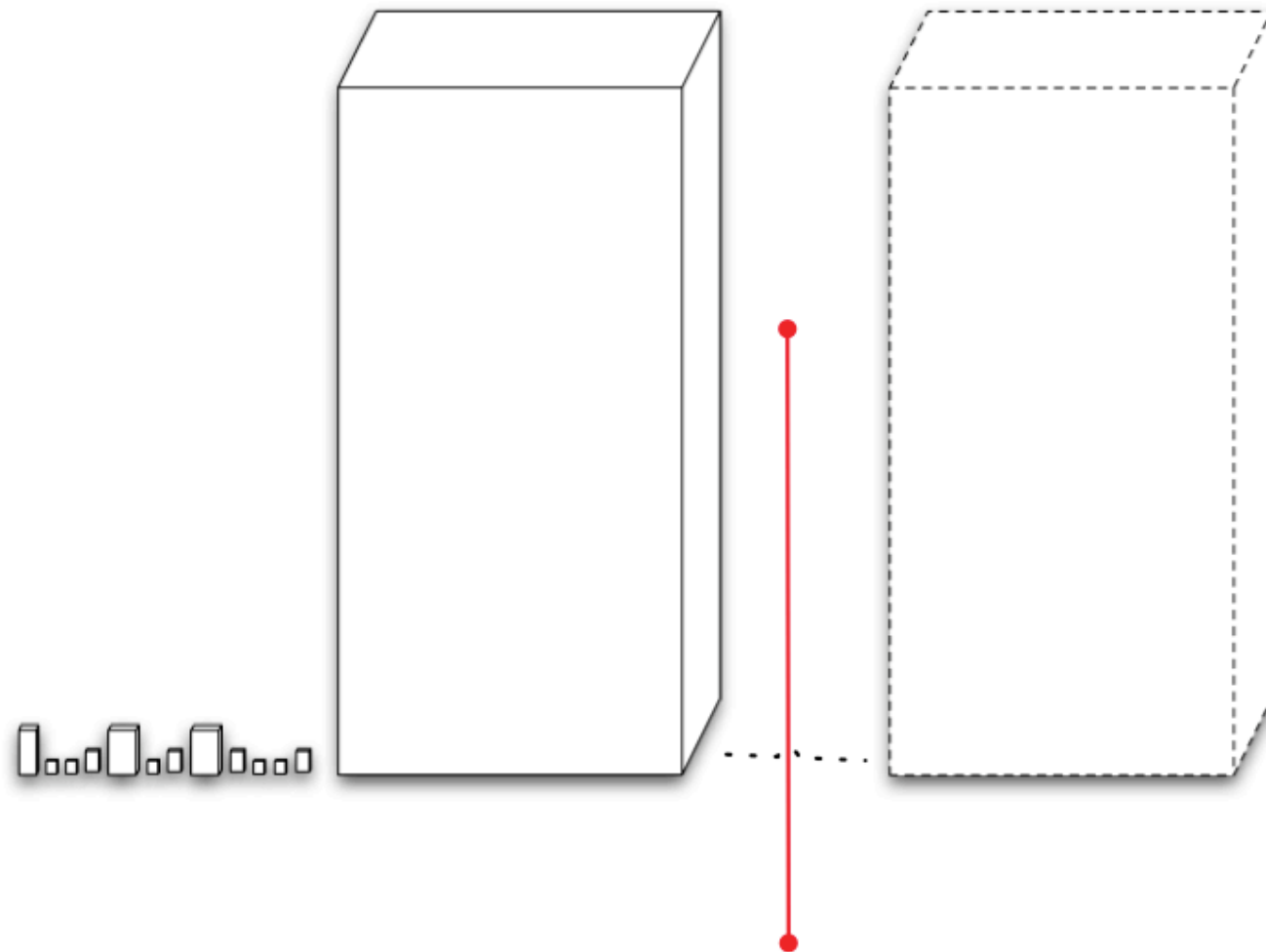


# Concerns





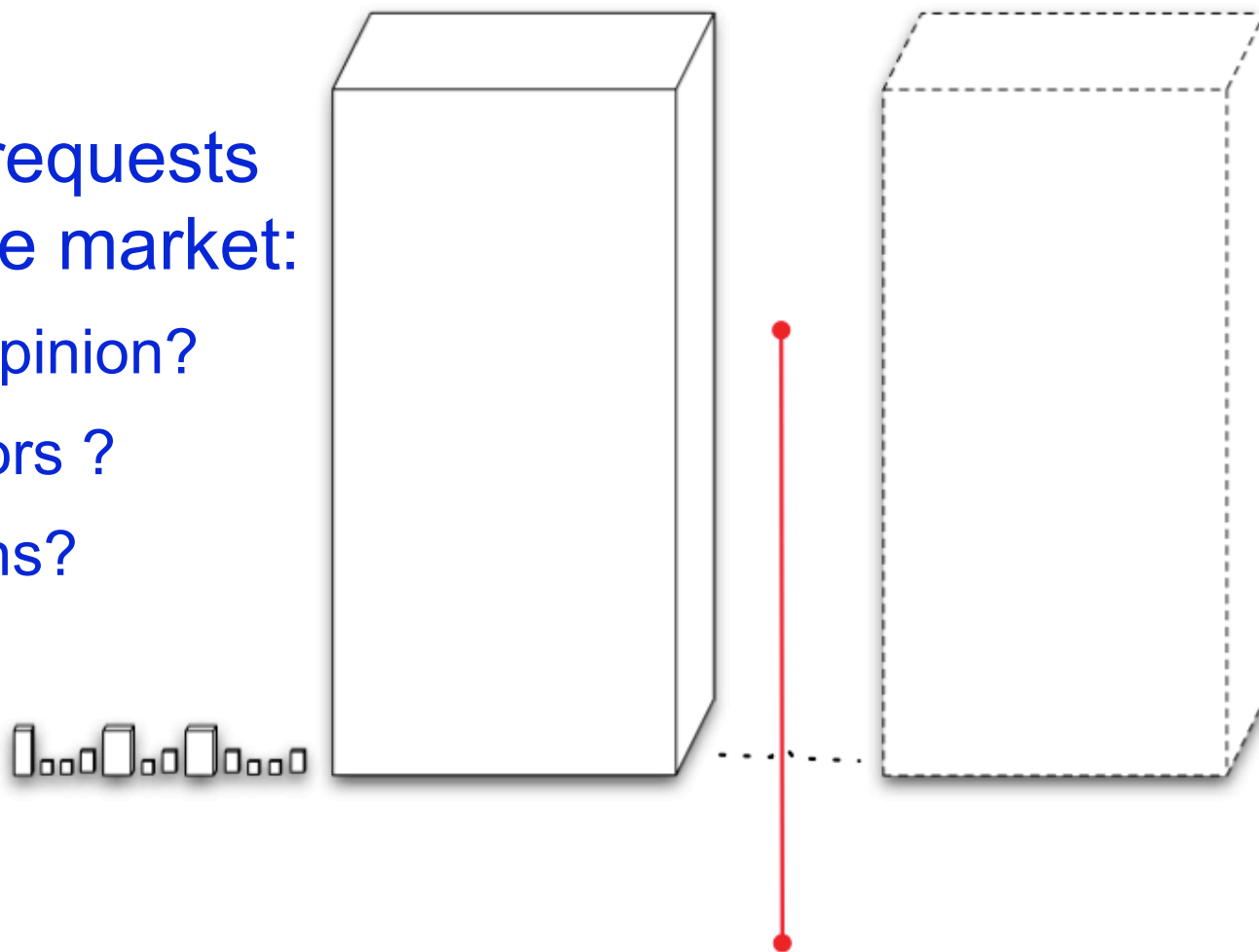
# What might happen:





# Concerns

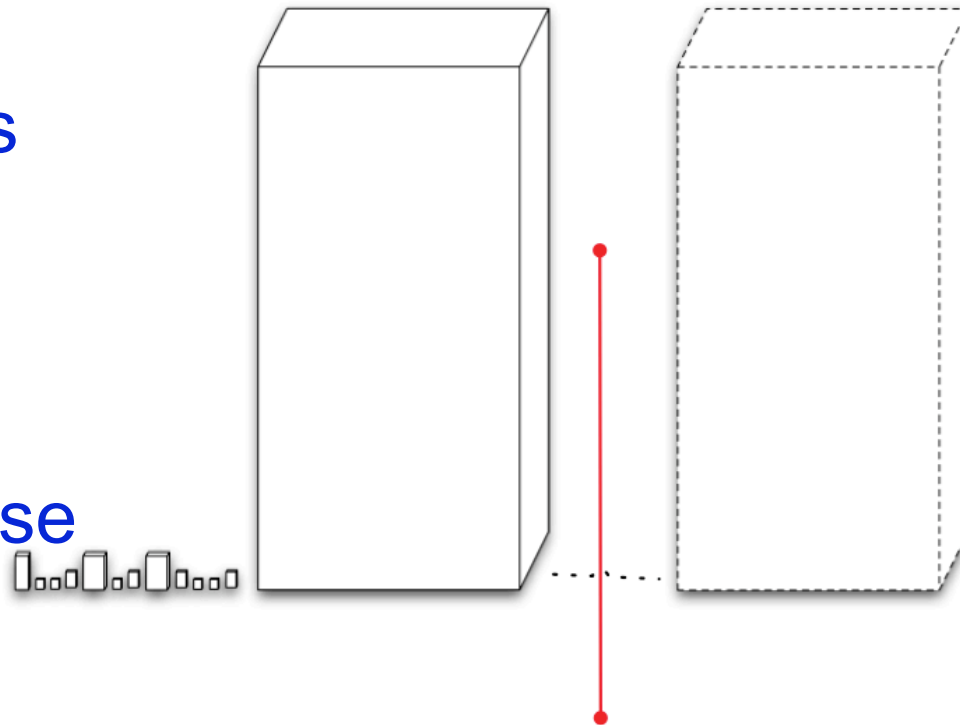
- Perceived as **very** unfair
- Both big requests from same market:
  - Public Opinion?
  - Regulators ?
  - Politicians?





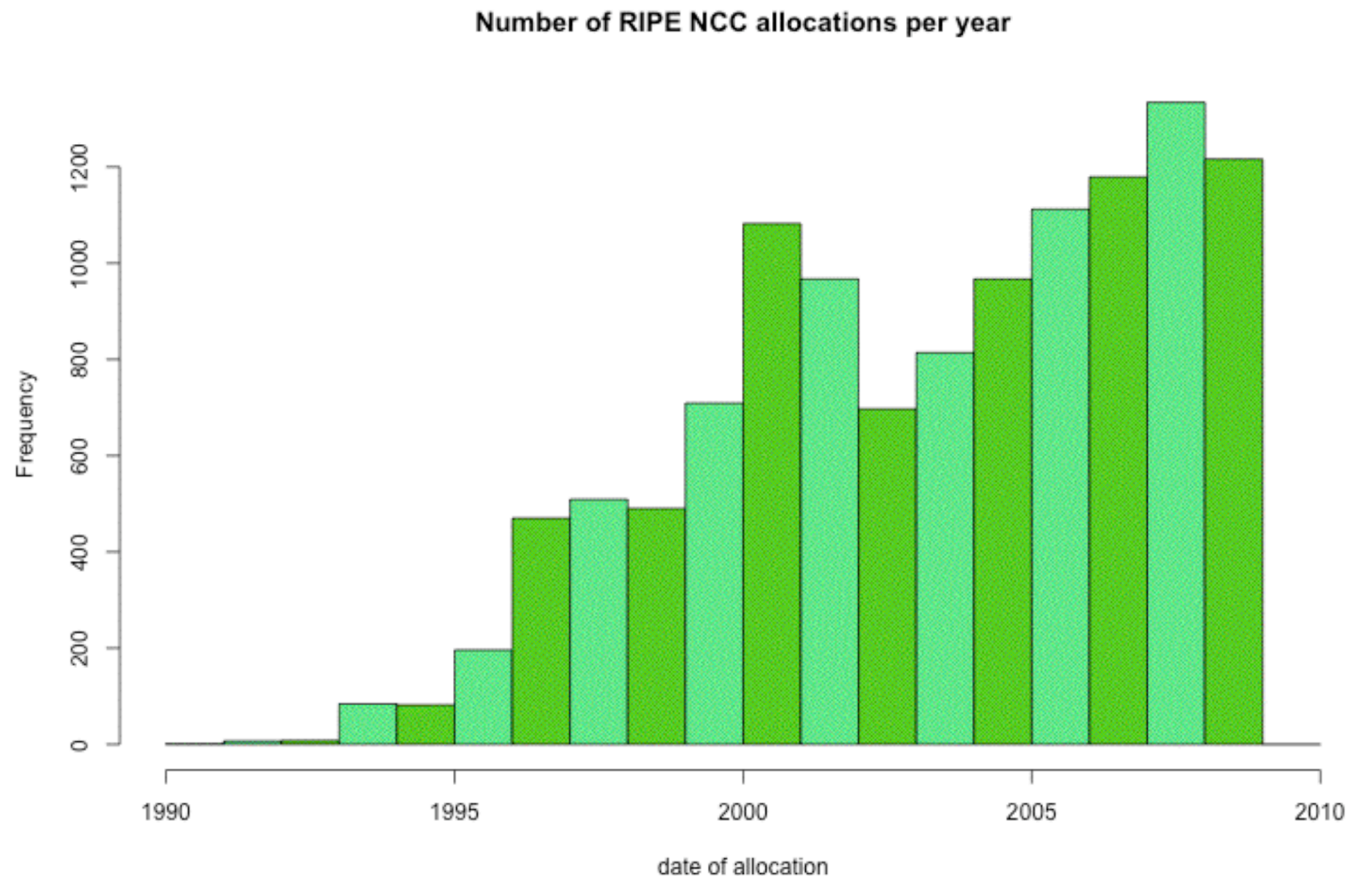
# Concerns

- From antagonistic societies:
  - War ?
- ***Really*** discredits RIPE policy process ***and*** RIPE NCC as institution
- This perceived unfairness may cause Internet breakage



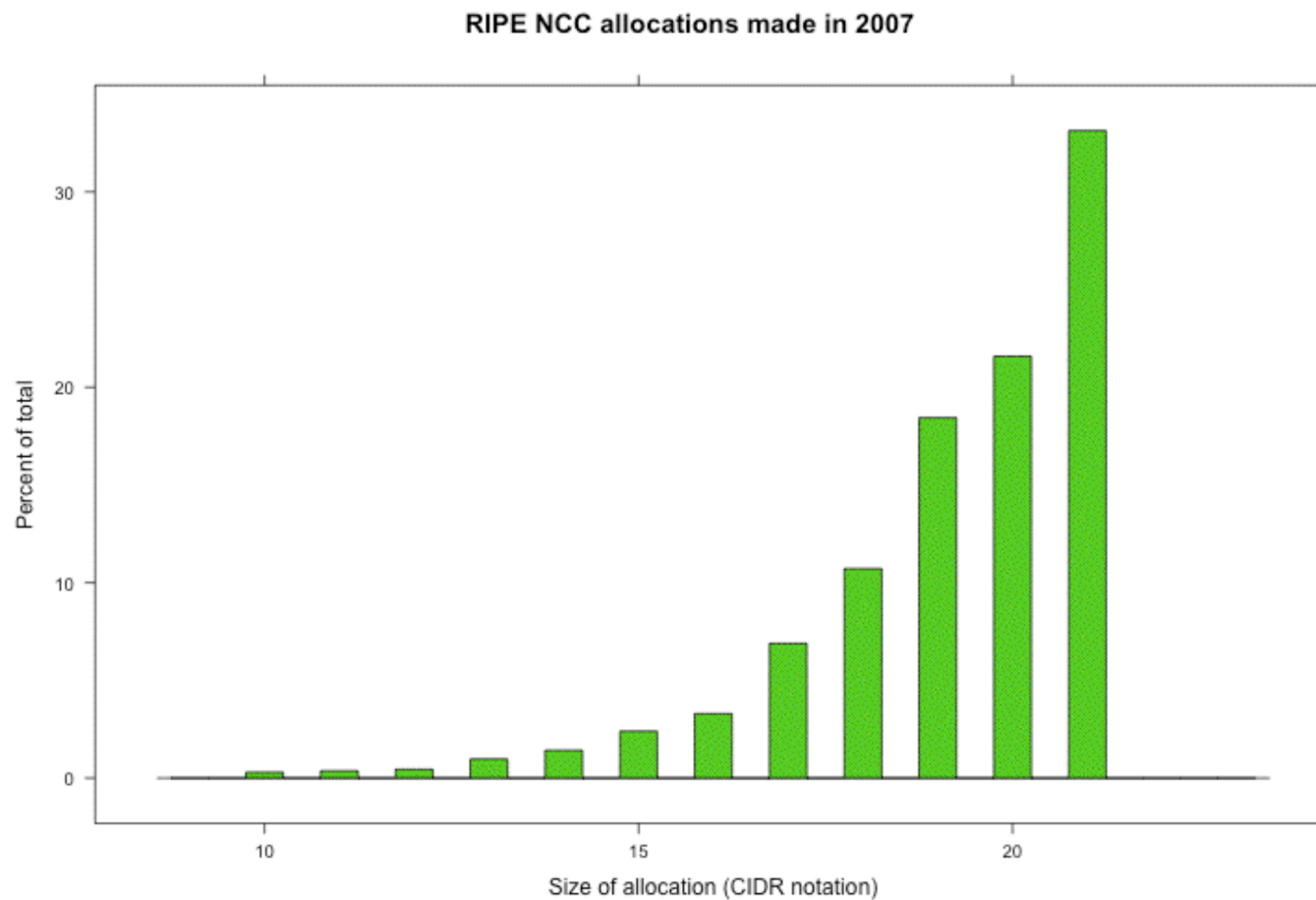


# Number of Allocations





# Size Distribution of Allocations 2007

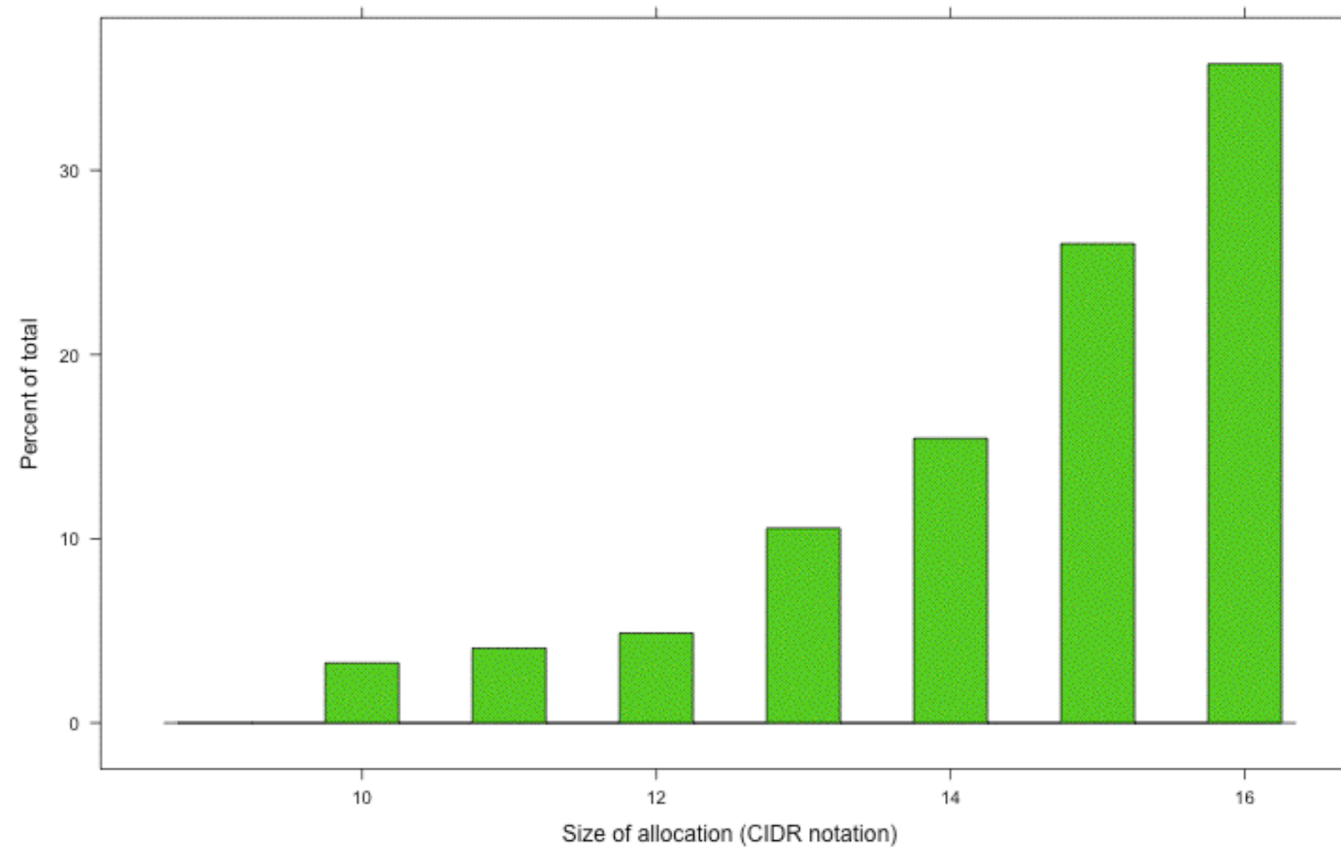






# Large Allocations 2007

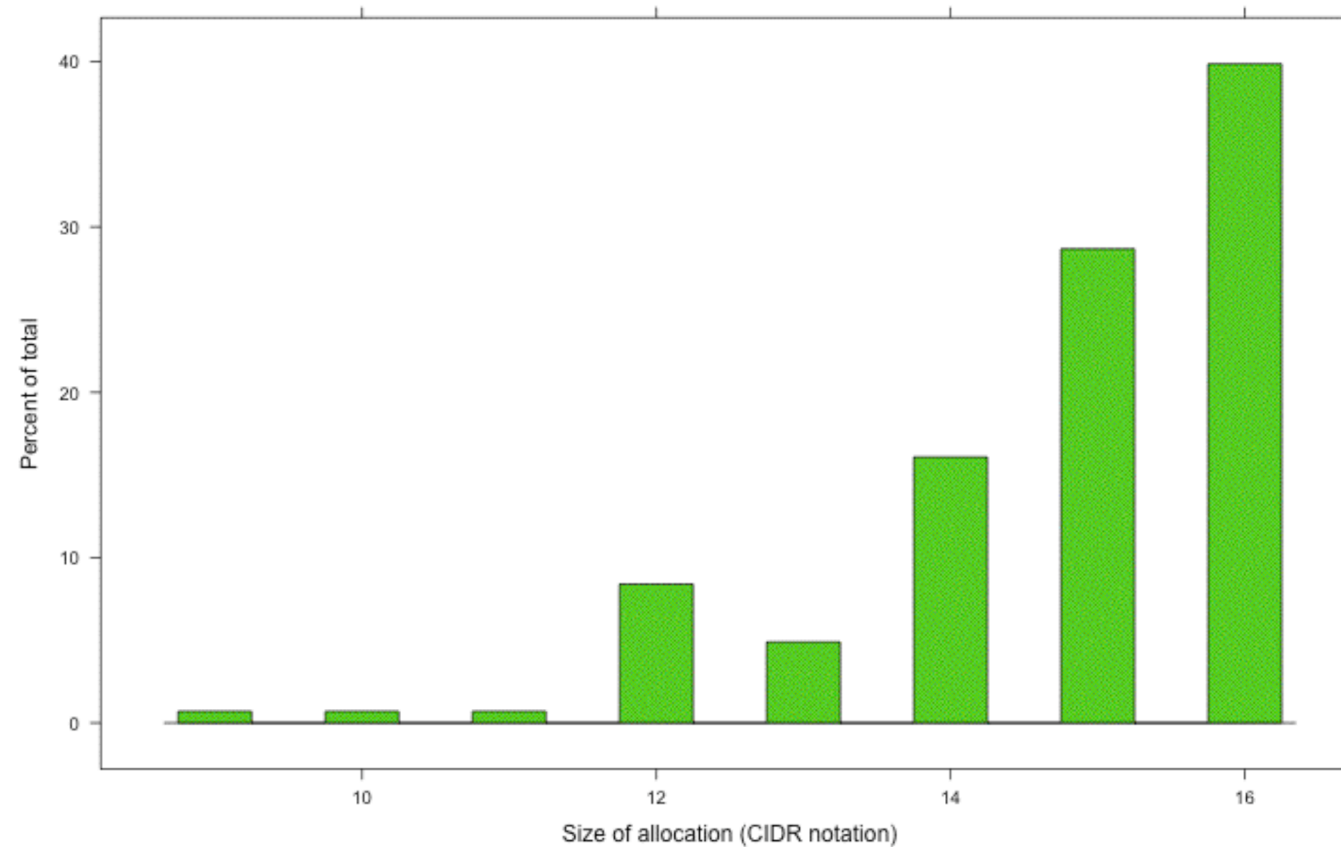
RIPE NCC allocations made in 2007 (/16 and shorter)





# Large Allocations 2006

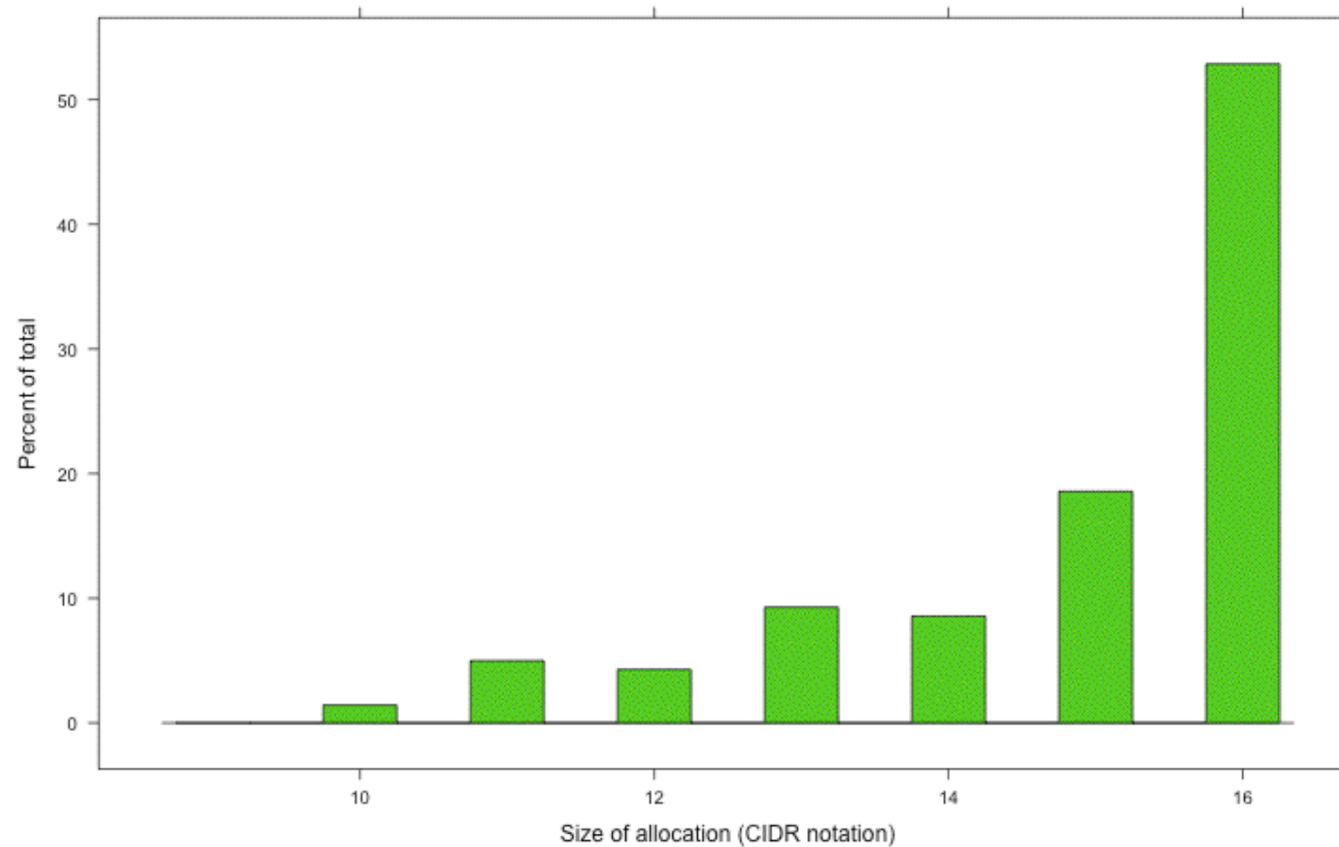
RIPE NCC allocations made in 2006 (/16 and shorter)





# Large Allocations 2005

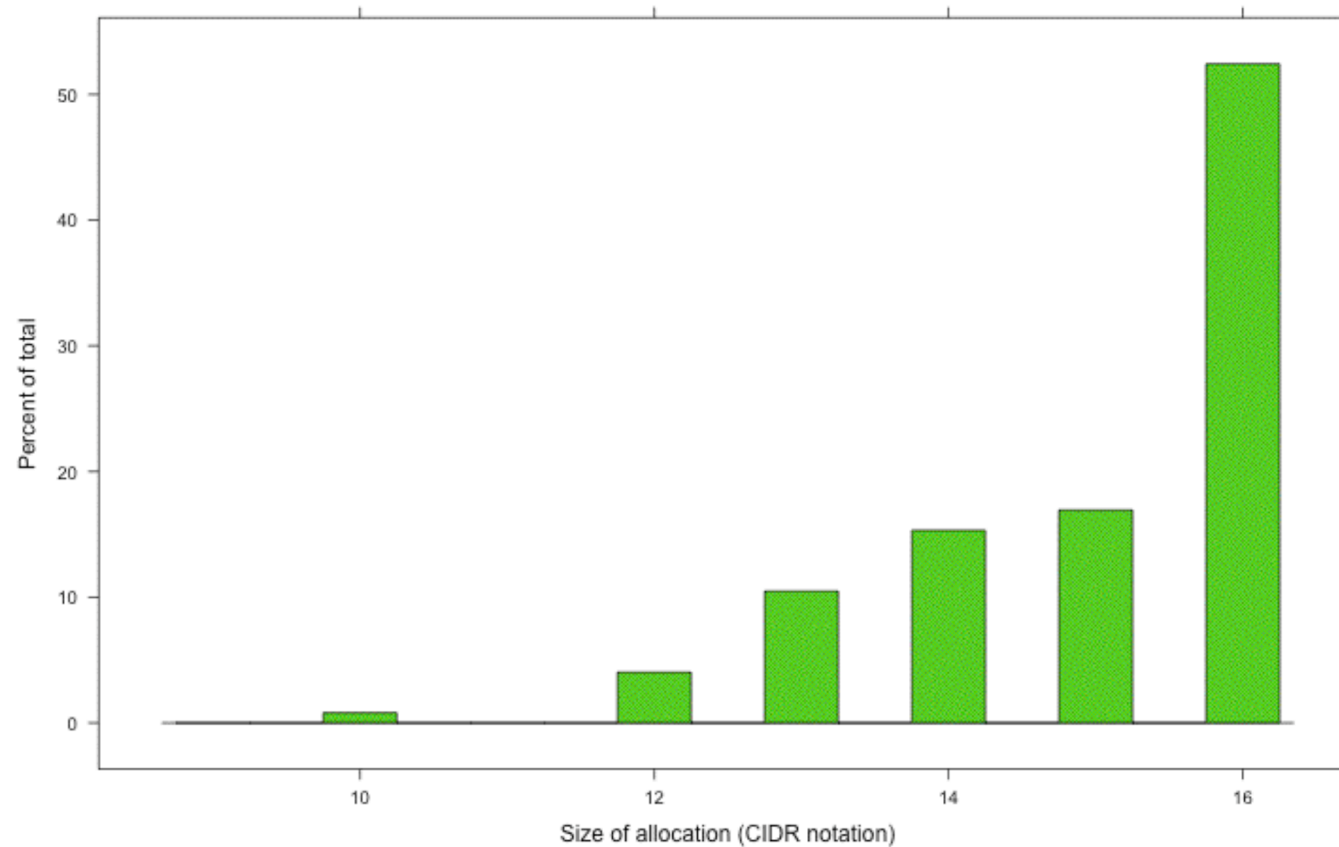
RIPE NCC allocations made in 2005 (/16 and shorter)





# Large Allocations 2004

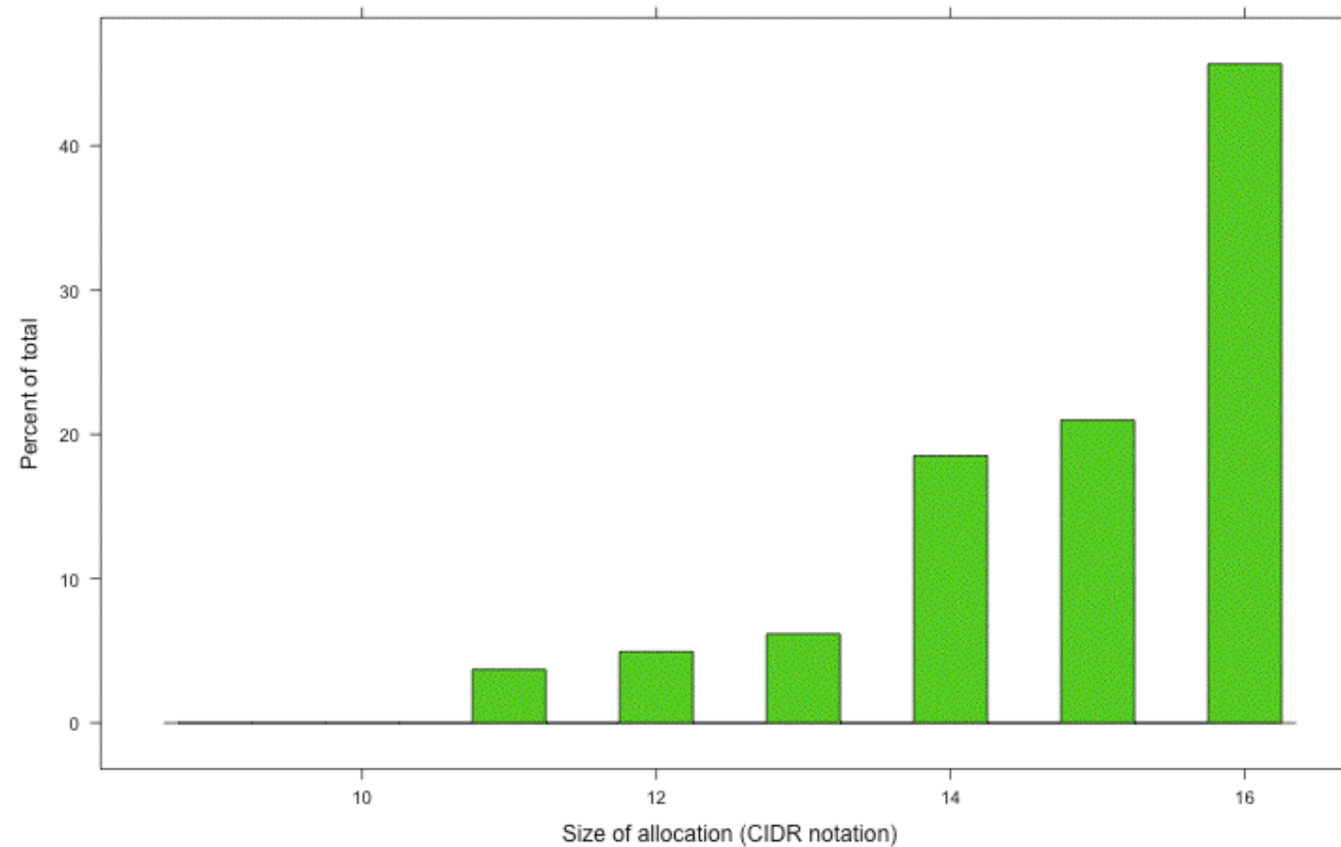
RIPE NCC allocations made in 2004 (/16 and shorter)





# Large Allocations 2003

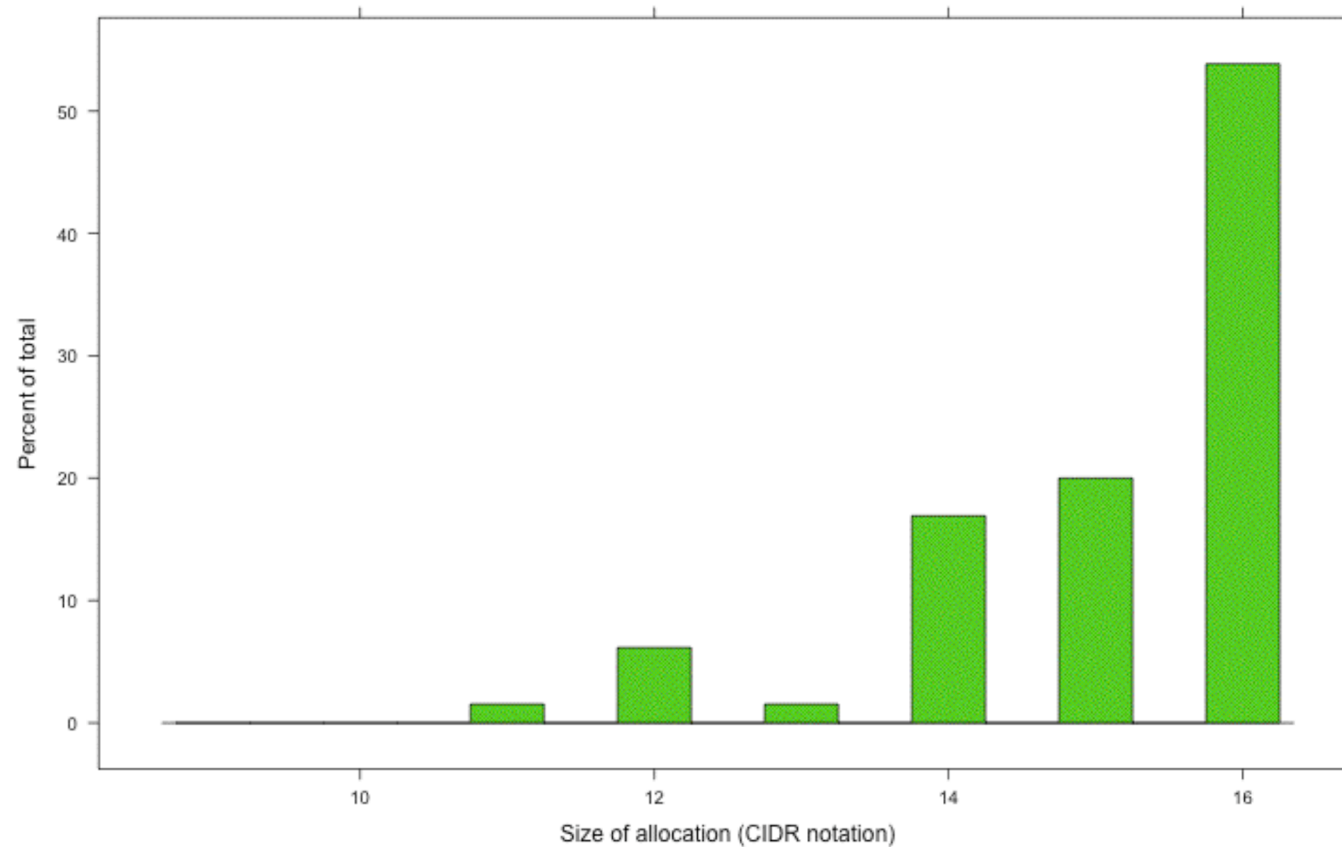
RIPE NCC allocations made in 2003 (/16 and shorter)





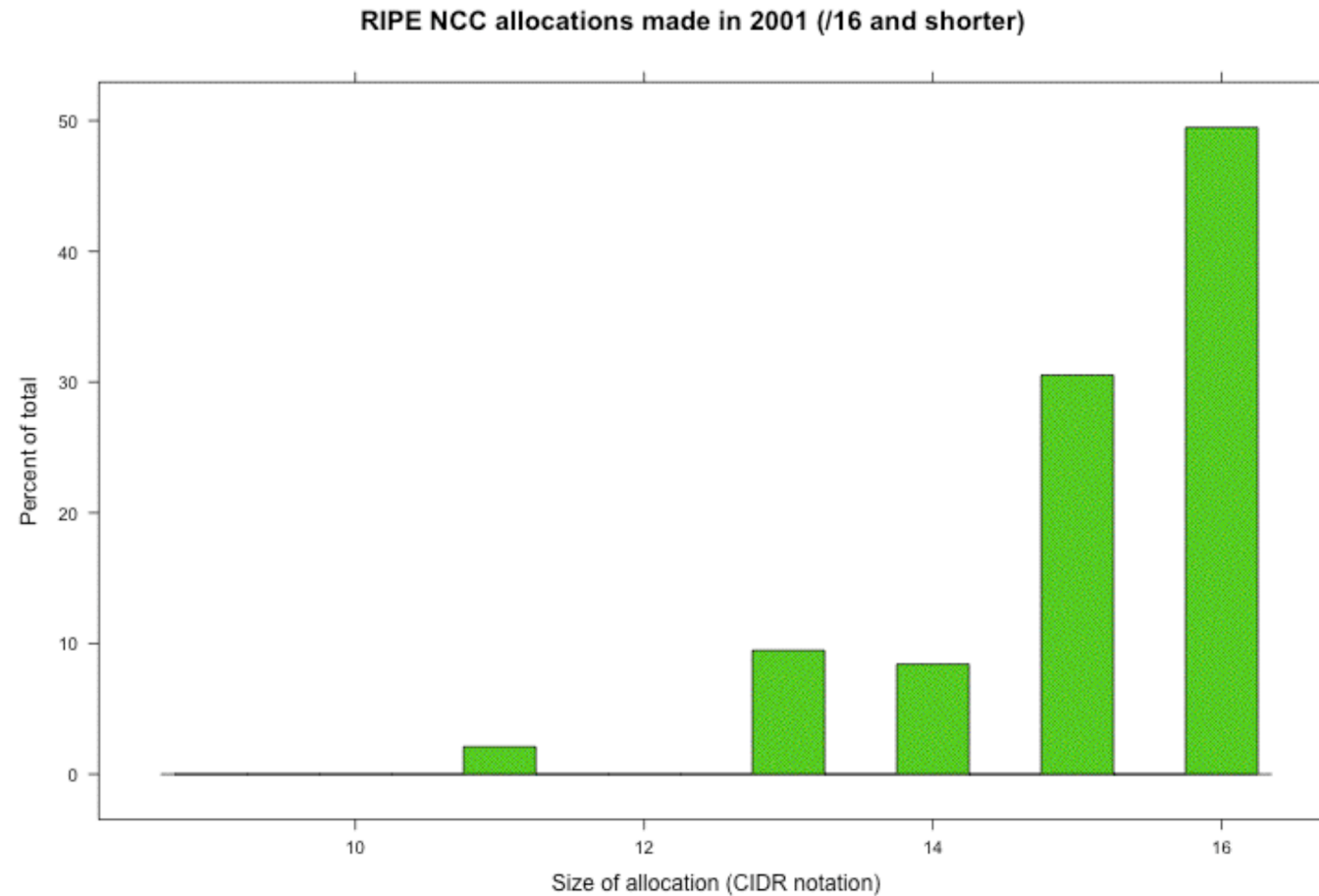
# Large Allocations 2002

RIPE NCC allocations made in 2002 (/16 and shorter)





# Large Allocations 2001





# Repeat

- This is about ***perceived unfairness*** and its potential consequences
- It is ***not*** about
  - “real” unfairness,
  - allocation efficiency,
  - making the IPv4 free pool last longer,
  - various previous “soft landing” proposals





# Possibilities for Policy Action

- Max allocation size with waiting period
- Reduced planning horizon
- ..... or a combination of these, or ... ?

Examples (made up by this non-expert):

- “No allocations  $> /14$  and 6 months before coming back”
- “For all allocation requests  $> /16$  only the needs for the next 6 months will be filled”
- “No allocations  $> /14$  and come back when 80% used”



# Pro's for Policy Action

- Avoids some *really bad* outcomes
- Improves predictability of end-game
- Additional signal of urgency



# Con's against Policy Action

- Could be interpreted as deviating from “needs based” principle
- Reaching consensus may be difficult



# Issues to be Addressed

- Codification of policy needs to be practical
- Implementation needs to be timely



# Discussion

- Are the scenarios realistic ?
- Will they cause competitors to fight in courts, by regulators, by government ?
- Are governments concerned about the scenarios and the perceived unfairness ?
- Do we need to develop policies to address this ?

Three hands of different skin tones are raised in a gesture of agreement or voting. The hands are positioned in the lower half of the slide, with the text "No discussions about policy details (yet) please !" overlaid on them.

• ***No discussions about policy details (yet)  
please !***