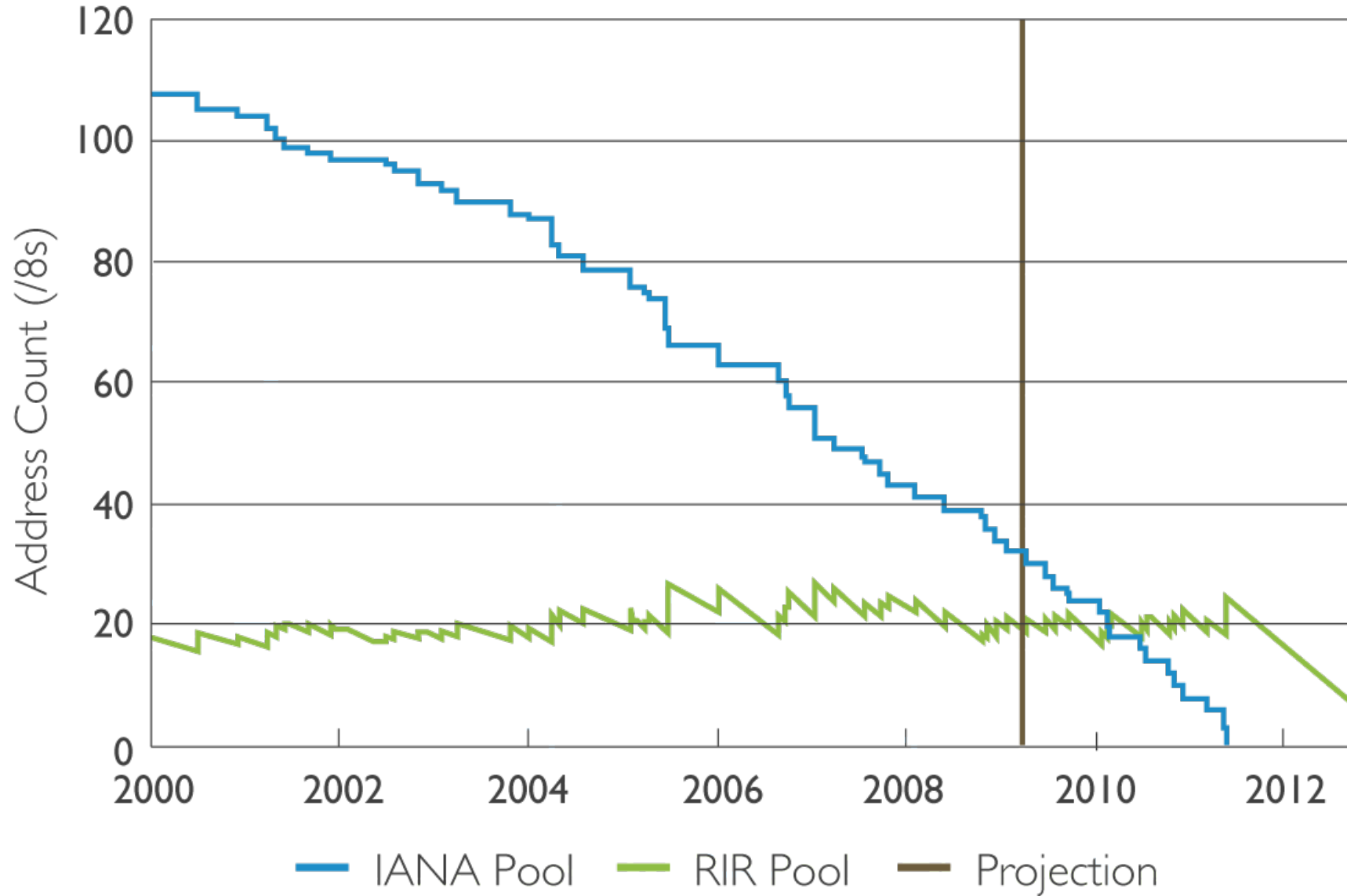


# IP(v4) Address Transfers

# Background

- IPv4 shortage is looming
  - IPv4 demand will outlast unallocated pool (2012)
  - IPv6 deployment by this time is not guaranteed
  - Where will addresses be found for new networks?
- Options
  - Sorry, “No more IPv4”
  - RIR recovery of un(der)used addresses
  - Register transfers under approved policies
  - Unregistered “blackmarket” transfer

# IPv4 lifetime



# IPv4 Address Transfer

- Currently:
  - RIRs allocate address to requestors on request
  - According to demonstrated need
  - According to agreed policies
  - While resources are available
- Possibly in future:
  - Addresses can be transferred between parties
  - From one with addresses to spare
  - To another who needs addresses

# Transfers - Cons/Risks

- Stockpiling
  - Limited by IPv6 deployment
- Routing fragmentation
  - Self-limiting due to ISP filtering
- Price escalation
  - Self-limiting, encouraging IPv6 deployment
  - Choice of “Expensive” vs “unavailable”?

# Transfers - Pros

- Markets optimise use of resources
  - Resource priced according to its value
  - and the cost of alternatives (NAT, IPv6...)
- Well understood mechanisms
  - By regulators, service providers, community
- Rebalance global IPv4 address distribution
  - Assist in transition to IPv6
- Maintain accuracy of registration
  - Assuming that transfers will take place anyway

# Transfer policies: Variables

- Limit size of transfer
  - To avoid excessive fragmentation
- Limit access to RIR allocations after transfer
  - For seller and/or buyer, specified period of time
- Timing of policy
  - Before or after exhaustion of IPv4 supplies
- Require justification by recipient
  - According to normal allocation policies
  - To enforce “need-based” approach

# Thanks

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