

# P2P and ISPs - The users' take

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# The ISP/P2P *dance / chase*

- ISPs shape traffic directed to standard ports
  - P2Ps move to dynamic, non-standard ports
- ISPs turn to deep-packet inspection to identify & shape P2P flows
  - P2Ps encrypt their connections
- ISPs place caches and/or spoofs TCP RST msgs
  - Lawsuits + bad publicity
- A clear lesson
  - *An effective solution needs use*

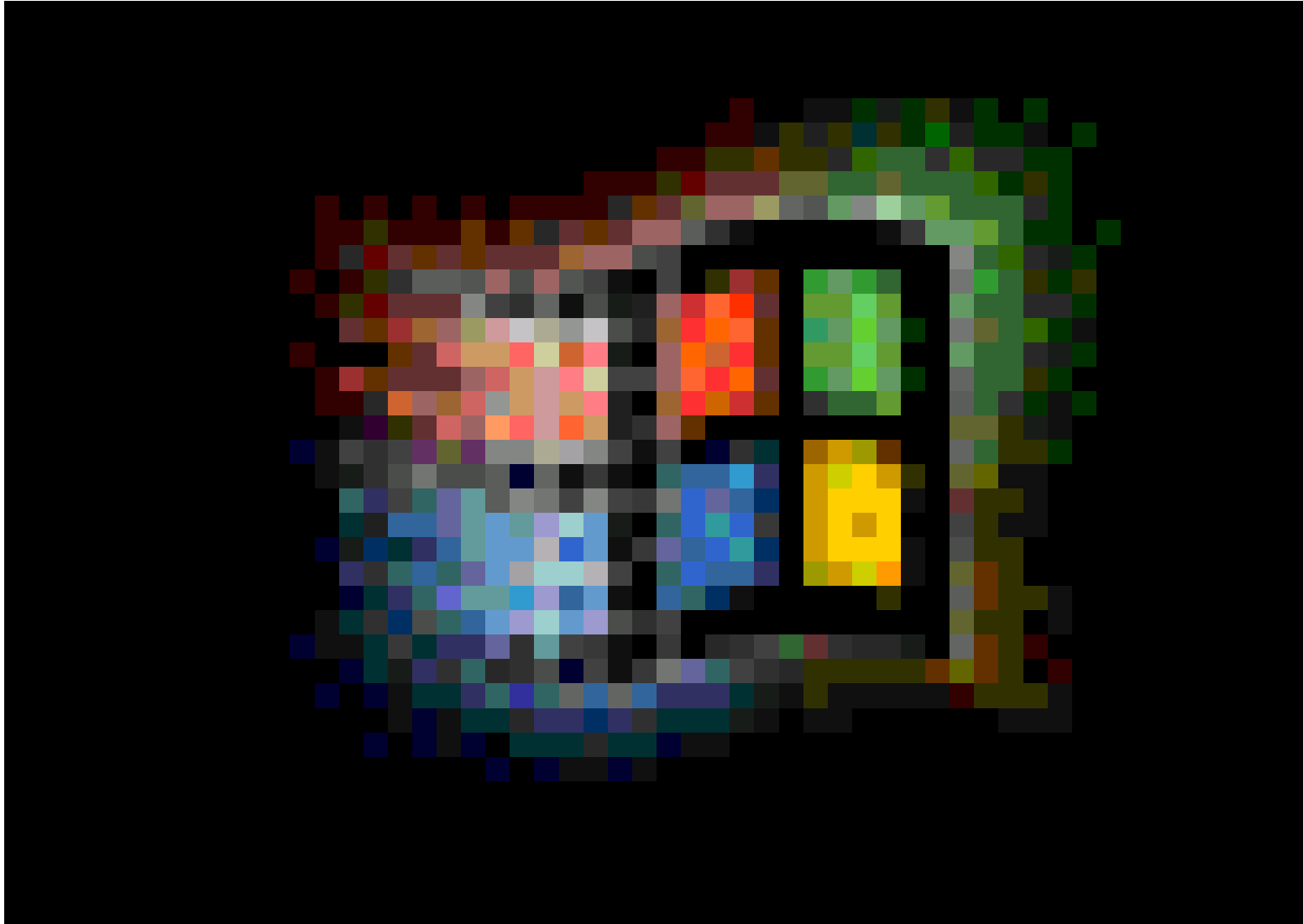


# An alternative & practical approach

- Reuse CDNs' net views for peer selection
  - CDNs have an up-to-date view of the network
    - To redirect web-clients to web content replicas
- How? Simply comparing DNS redirections
  - No additional infrastructure
  - No topological information
  - No trust relationship
  - Reduces cross-ISP traffic ...
  - *while improving users' downloads*
- Ono - extension to Azureus/Vuze BT client
  - Out since April 2007, now > 272,000 users

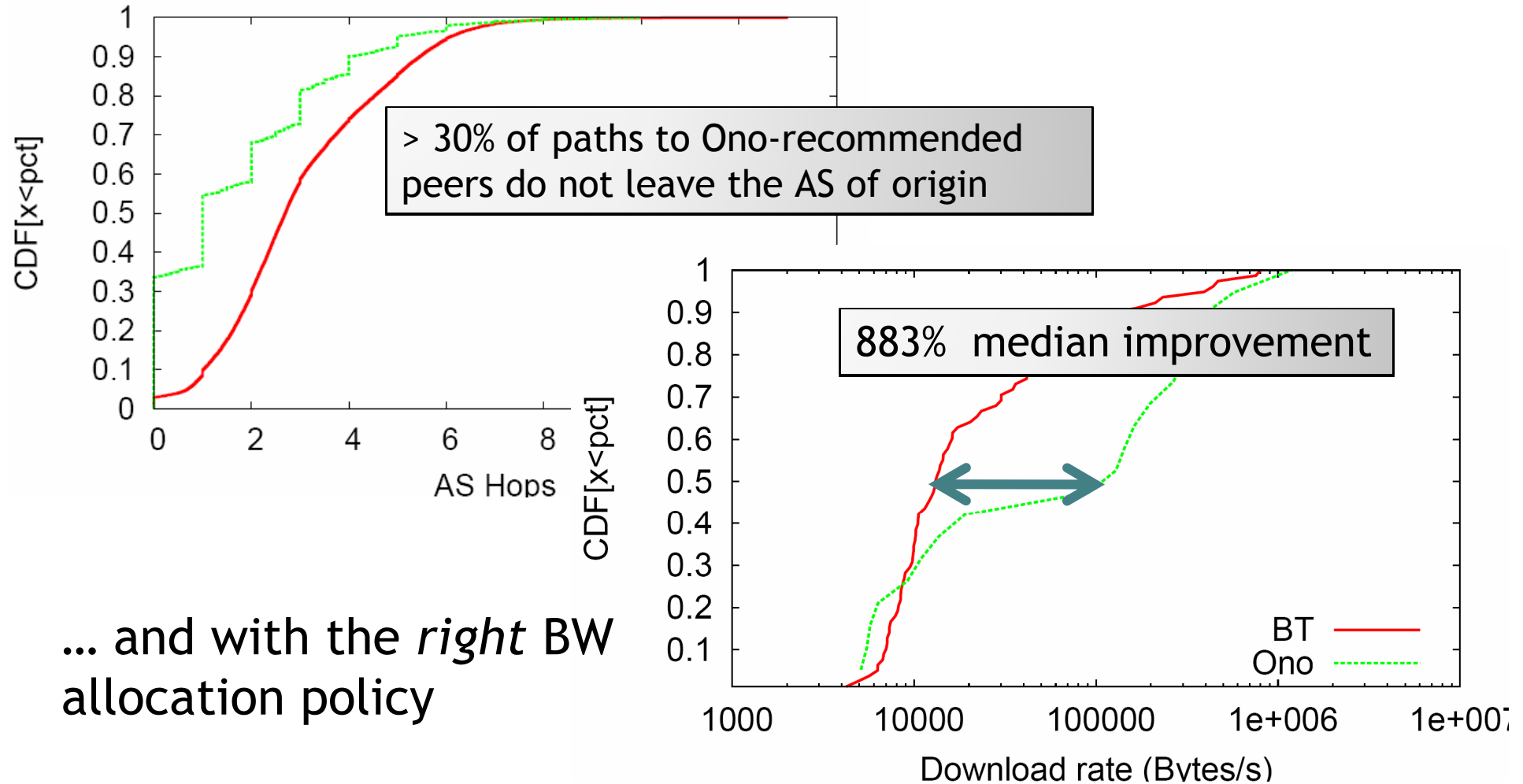


# Coverage



# Let's work together

- Number of AS hops to reach (Ono-recommended) peers



## ... and help each other

- NEWS - the new thing
  - *Network Early Warning System (NEWS)*
  - Reuse P2P aggregated views & natural traffic
    - Detect network anomalies locally
    - Use corroboration to confirm them globally

*Join the >9,000 users who have already done so!*

<http://aqualab.cs.northwestern.edu/projects/NEWS.html>

