

P2P and ISPs - The users' take

Fabián E. Bustamante
EECS, Northwestern U.



AquaLab

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*

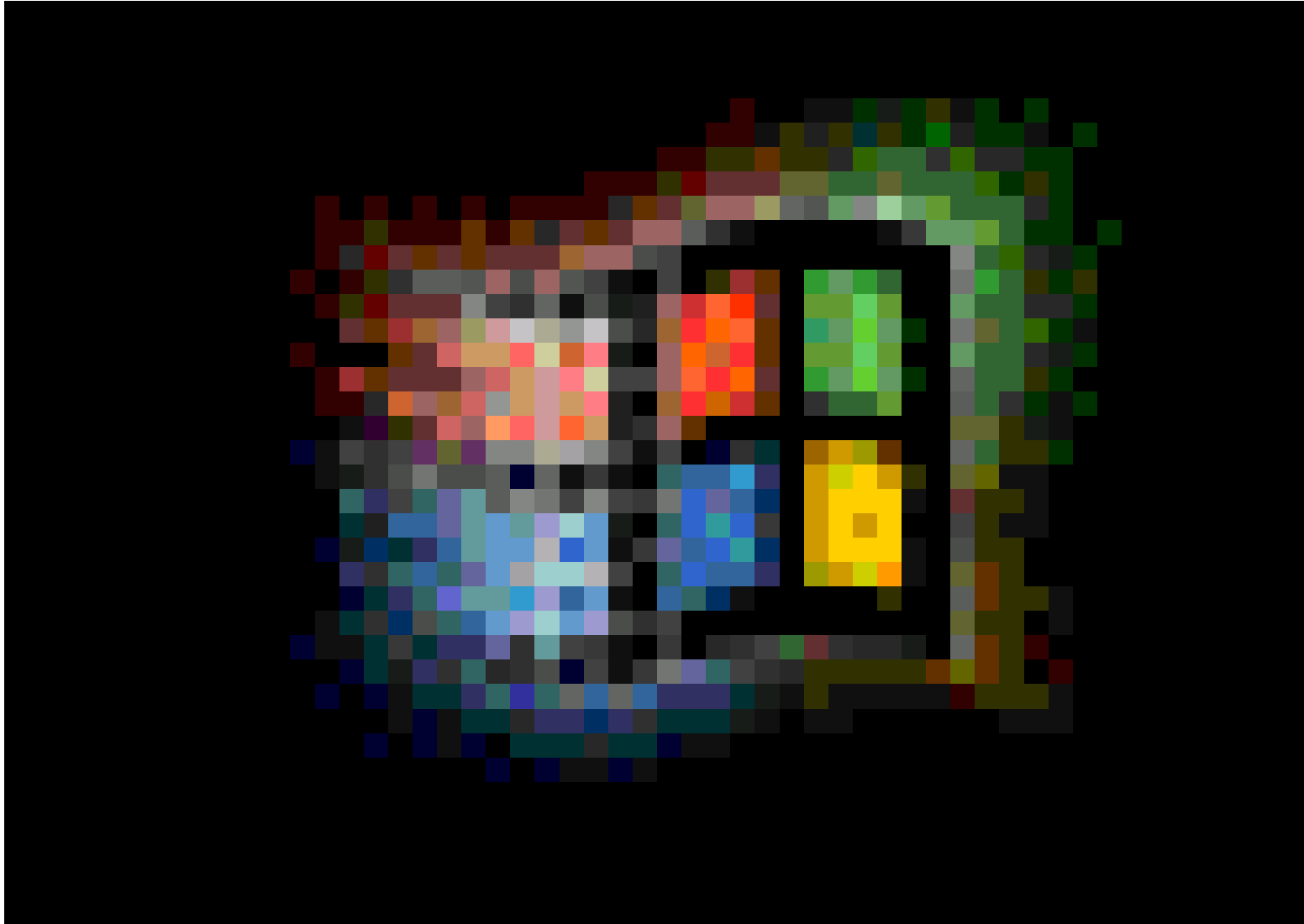


An alternative & practical approach

- 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

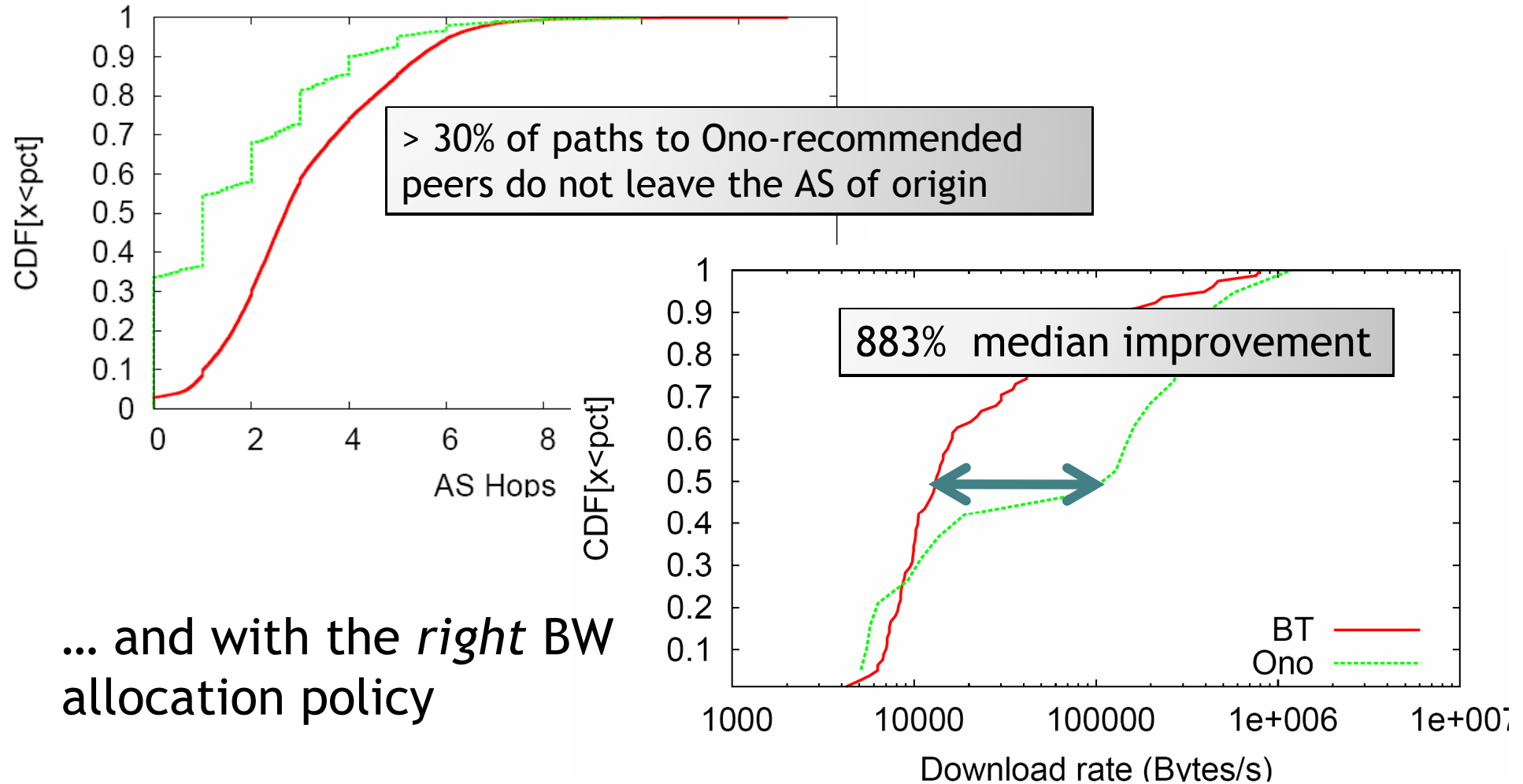


Coverage



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>

