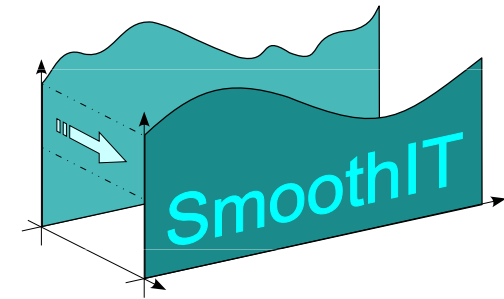


Simple Economic Management Approaches of Overlay Traffic in Heterogeneous Internet Topologies

European Seventh Framework STREP FP7-2007-ICT-216259



BitTorrent Measurements: Challenges of Locality Promotion

Zoran Despotovic,
DOCOMO Euro-Labs, Munich, Germany
Tobias Hoßfeld
University of Wuerzburg, Germany

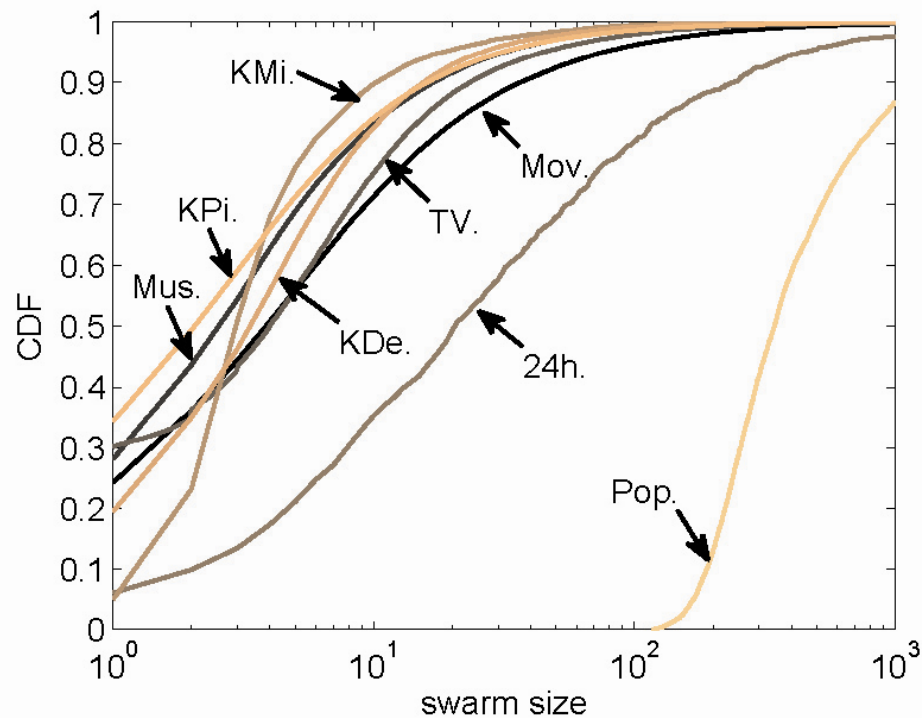


Overview of Measurements

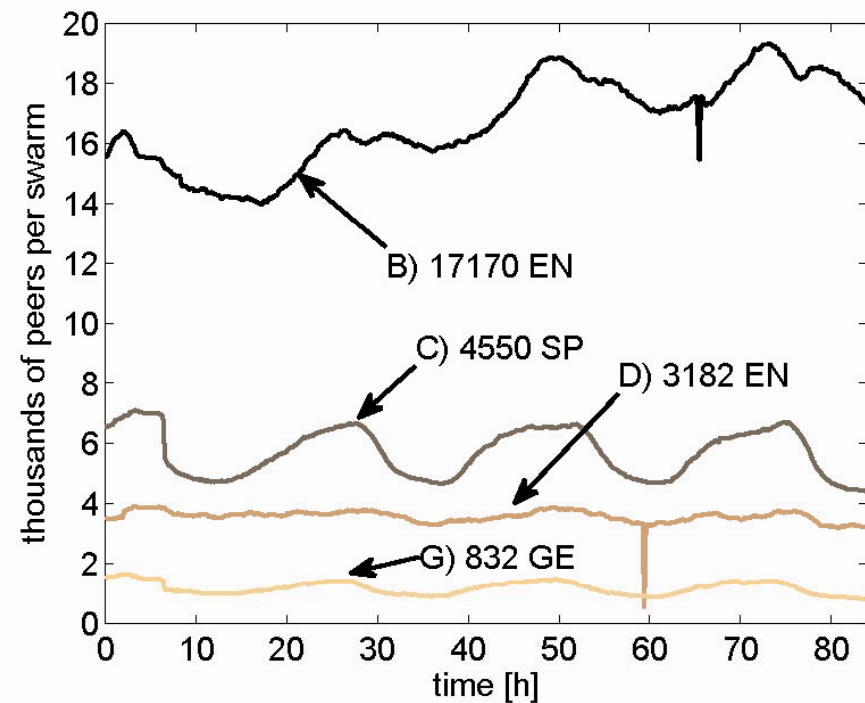
ID	torrent index	selection criteria	type of content	meas. per swarm	#torrents	methodology	observed	meas. date
TV.	PirateBay	all available	TV series	96 samples over 36 hours	63,867	website parsed	swarm size	Jun. 2008
Pop.	PirateBay	most popular	movies	snapshot	4,463	tracker monitored	swarm size	Mar. 2009
24h.	PirateBay	last 24 hours	all media	snapshot	1,048	tracker monitored	swarm size	Mar. 2009
Grp.	Mininova	groups w.r.t. size & language	movies	440 samples over 88 hours	16	distributed monitoring	AS topology	Apr. 2009
Mov.	Mininova	all available	movies	snapshot	126,050	distributed monitoring	AS topology	Apr. 2009
Mus.	Mininova	all available	music	snapshot	135,679	distributed monitoring	AS topology	Apr. 2009
Reg.	PirateBay	top 30	regional movies	snapshot	120	distributed monitoring	AS topology	May 2009
KPi.	PirateBay	all available	all media	snapshot	1,682,355	data taken from [10]	swarm size	Mar. 2009
KDe.	Demonoid	community selected titles	all media	snapshot	11,759	data taken from [10]	swarm size	Mar. 2009
KMi.	Mininova	legal torrents promotion	all media	snapshot	4,514	data taken from [10]	swarm size	Mar. 2009
Ele.	open movie "Elephants Dream"			8,640 samples over 24 hours	1	distributed monitoring	AS topology	Apr. 2009

Results: Size & Time Dynamics

Swarm

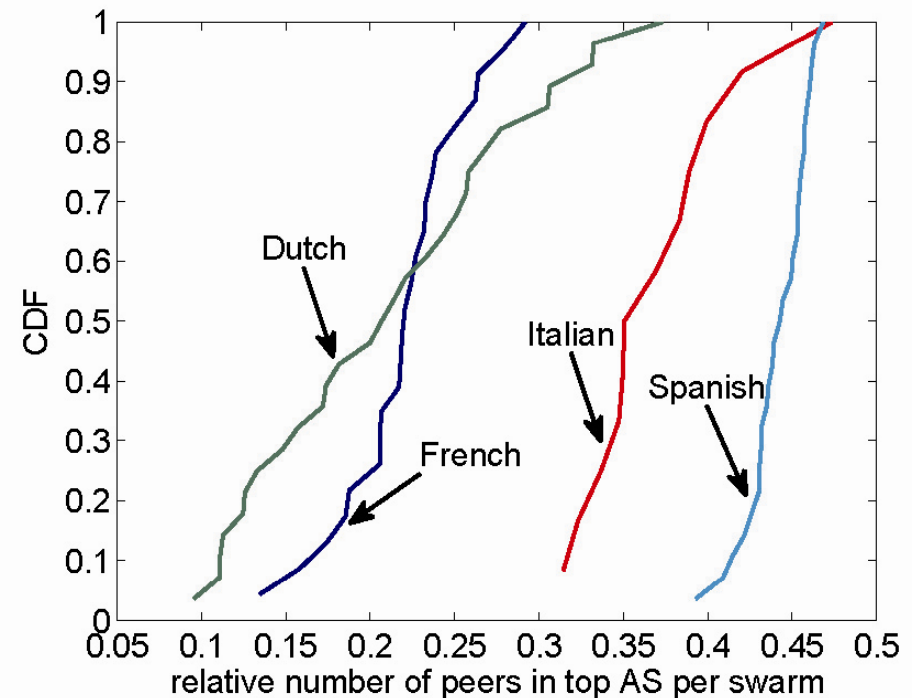
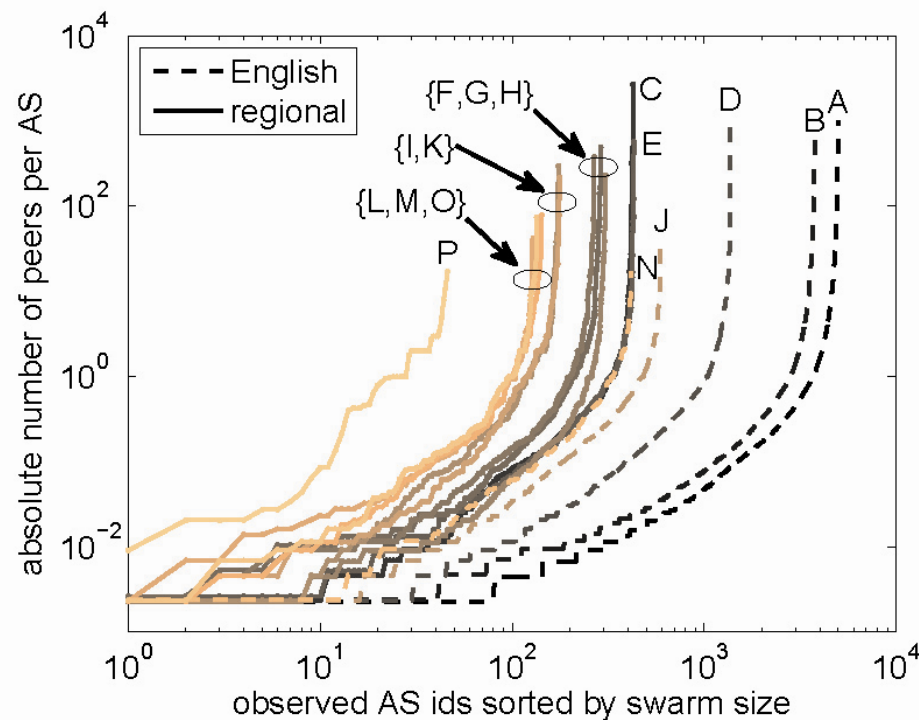


Dynamics



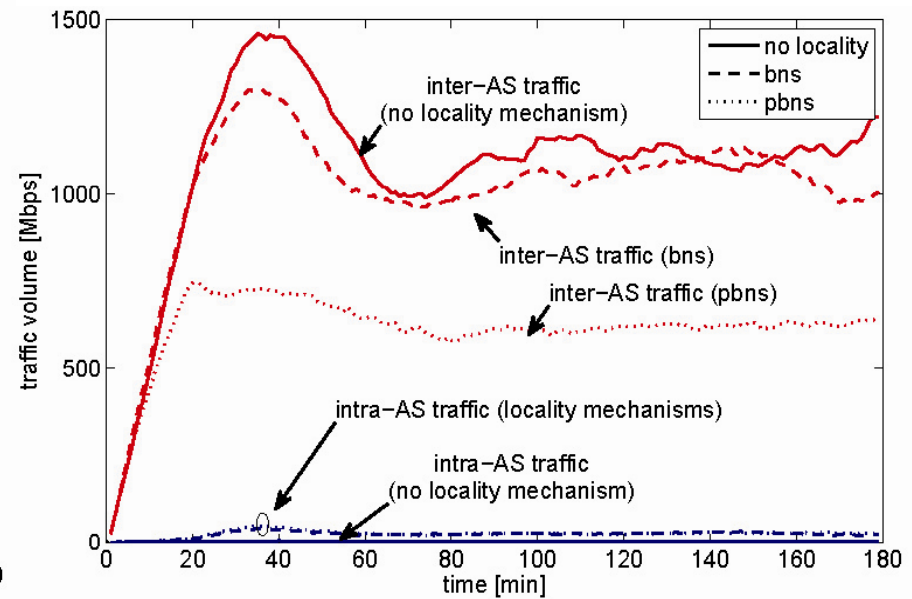
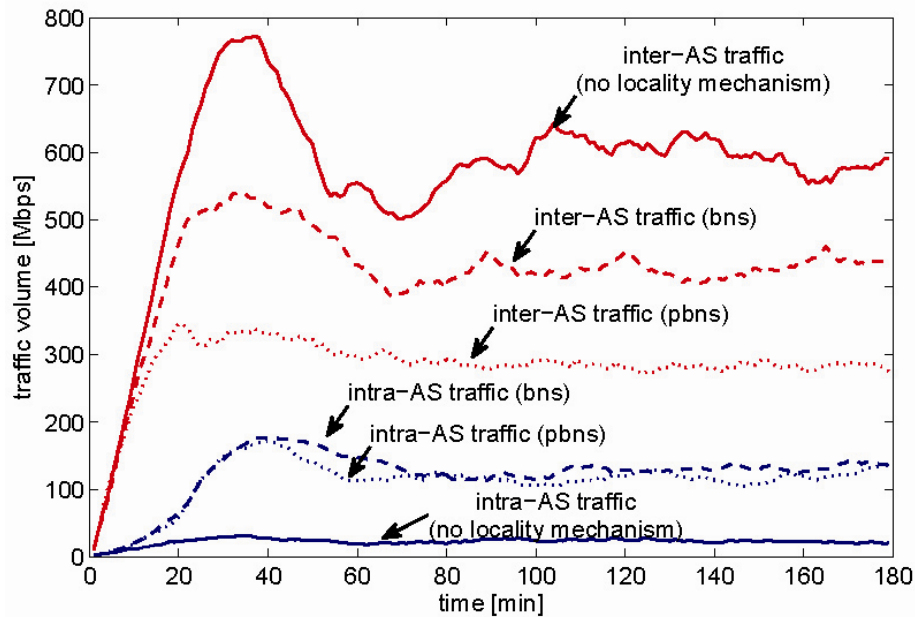
Results: Peer per AS Distribution

- Skewed distributions of peers across AS's



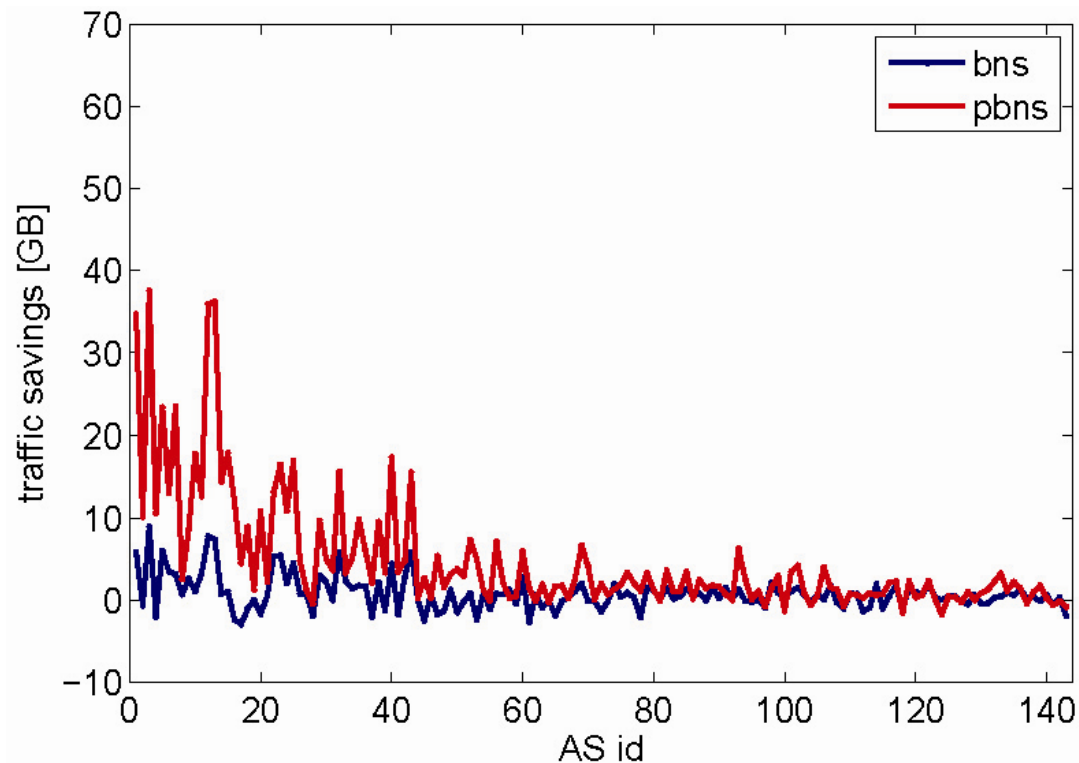
Results: Inter-AS Traffic under Locality

- AS hop distance much better than 'binary'



Results: Inter-AS Traffic under Locality per AS

- General trend: Inter-AS traffic reduction. BUT: some AS's increase their traffic when using locality
- Interesting research question: investigate where this leads



Thank you for your attention!