



Flat-rate Data Roaming

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Status of Data Roaming

- Regulation proposal by EU commission
 - For wholesale tariffs only
 - Price cap of max 1EUR/MB
- Commercial launches of flat-rate data roaming exist:
 - Bridge Alliance (11 Asian operators) launched a monthly(?) flat-rate of 30USD a month for 15MB and 60USD for 40MB
 - April 2008 Conexus Mobile Alliance (7 Asian mobile operators) launched a daily flatrate varying in the range of 10-22USD
 - July 2007 Vodafone launched a Euro flat-rate service for business travelers with laptops, 12EUR per day, max 50MB (and a wholesale price of 0.50EUR/MB)
 - May 2008 Orange launched a daily Euro flat-rate of 12-15EUR per day, max 50MB.
- Conclusion: limited commercial experimentation of daily flat-rate (with max block) for business users is happening



Research Hypothesis

- Market-based mechanisms are not likely to create competition on roaming prices including data roaming
=> regulatory intervention is needed
- EU's regulation of max 1EUR/MB volume tariff on wholesale is not likely to encourage the roaming use of Internet
=> some kind of flat-rate-based price cap is needed in wholesale
- How about a regulated daily flat-rate? How exactly could this be implemented?



Flat-rate Preference in Internet Access

- Residential fixed Internet access has adopted flat-rate pricing successfully: does it prove the case of flat-rate?
- Mitomo et al. have defined flat-rate preference and found evidence about it among Japanese mobile users through questionnaire studies
- Observations from the Finnish mobile market
 - mobile Internet usage is rapidly growing
 - flat-rate tariff drives the usage growth (evidence of flat-rate preference?)
 - laptops generate most of the traffic (via USB stick modems)
 - difficulty of differentiating laptop vs. handset traffic (different tariffs?)
 - mobile operator profitability is improving (flat-rate is not an immediate problem?)



Flat-rate Preference when Roaming

- Flat-rate preference obviously should also exist while roaming
- How to find evidence?
 - Vodafone and Orange: roaming usage (flat-rate) vs. roaming usage (volume-based tariff)?
 - Finland: roaming usage (volume-based) < non-roaming usage (flat-rate)



Obstacles of Flat-rate Data Roaming

- Mobile operators may fear Internet-based Voice-over-IP as a substitute for circuit-switched voice roaming? This may still reduce interest toward flat-rate data roaming
- Data capacity of mobile networks continuous to be a limited resource (spectrum, number of sites, site costs)
- Small mobile operators benefit from regulation while the big ones would lose
- EU roaming regulation is likely to increase local tariffs and non-European roaming tariffs
- Regulator may not be able to impose an unlimited flat-rate (blank check problem!)
- Transport value network is a complex part (GRX-operators, SLA)



European Solution?

- Daily flat-rate for data roaming looks promising
- Regulation of wholesale tariffs seems sufficient
- The wholesale price cap could be set relative to the tariff basket of corresponding European national mobile flat-rates
 - e.g. daily flat-rate < average national monthly flat-rate / 10
 - price cap for each speed level (e.g. 384kB, 1MB, etc)
 - price caps could be for lower speeds only
 - maximum daily capacity may be needed
- Pricing structure is the key, not pricing level
- Price cap should clearly cover the additional roaming costs of operators (home routing/GRX, double book-keeping, etc)



Conclusion

- Flat-rate roaming access to Internet is needed for making the European-wide mobile Internet services to happen
- Flat-rate roaming is not likely to happen without regulatory enforcement