



HELSINKI UNIVERSITY OF TECHNOLOGY
Networking Laboratory

Mobile Number Portability: Case Finland

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Outline

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Introduction

- Mobile Number Portability (MNP)
 - = the ability of mobile subscribers to switch between service providers while retaining their original mobile phone numbers
- Number portability types:

Portability type	Service portability	Service provider portability	Location portability
Aka		Operator portability	Geographic portability
Examples	Fixed-to-mobile PSTN-to-ISDN	Mobile-to-mobile, fixed-to-fixed	Fixed number portability inside a local exchange area



MNP and stakeholders

- End-user
 - reduces switching costs
 - makes it more difficult for to know which network one is calling to
- Network operator
 - additional costs: investments and labour
- Service operator
 - increases churn rates



EU regulation

- Universal Service Directive (2002/EC/22):
Member states shall ensure that all subscribers of publicly available telephone services, including mobile services, who so request can retain their number(s) independently of the undertaking providing the service
- Does not apply to fixed-to-mobile portability
- Member countries required to implement MNP by July 25, 2003.

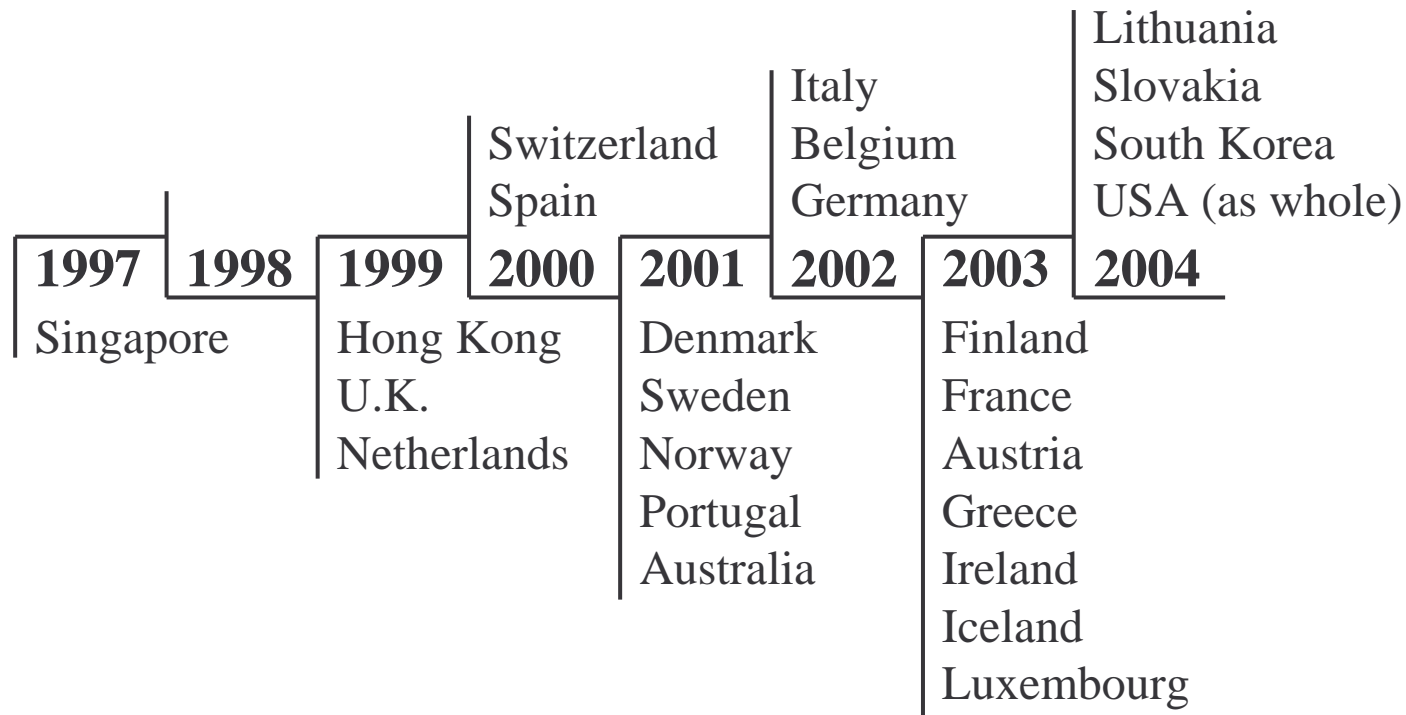


US regulation

- Telecommunications Act of 1996:
 - each LEC has the duty to provide “*the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another*”
 - Wireless Local Number Portability (WLNP)
 - Implemented in November 2003 / May 2004



MNP Implementation Status



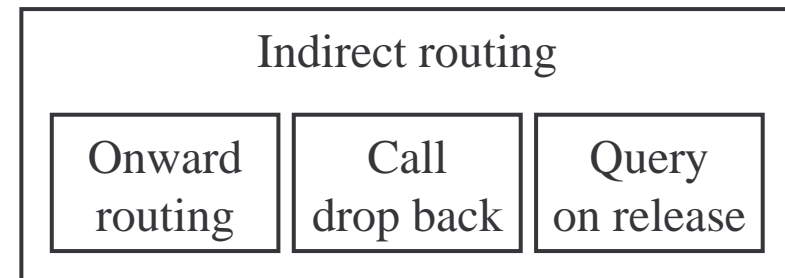
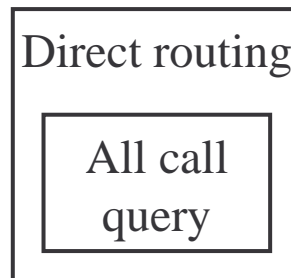


Technical solutions

- Number portability database (NPDB)
 - keeps track of the ported numbers and their respective service providers
 - centralized or distributed
 - typically managed by a consortium of mobile network operators

- Routing methods

- Call routing =>

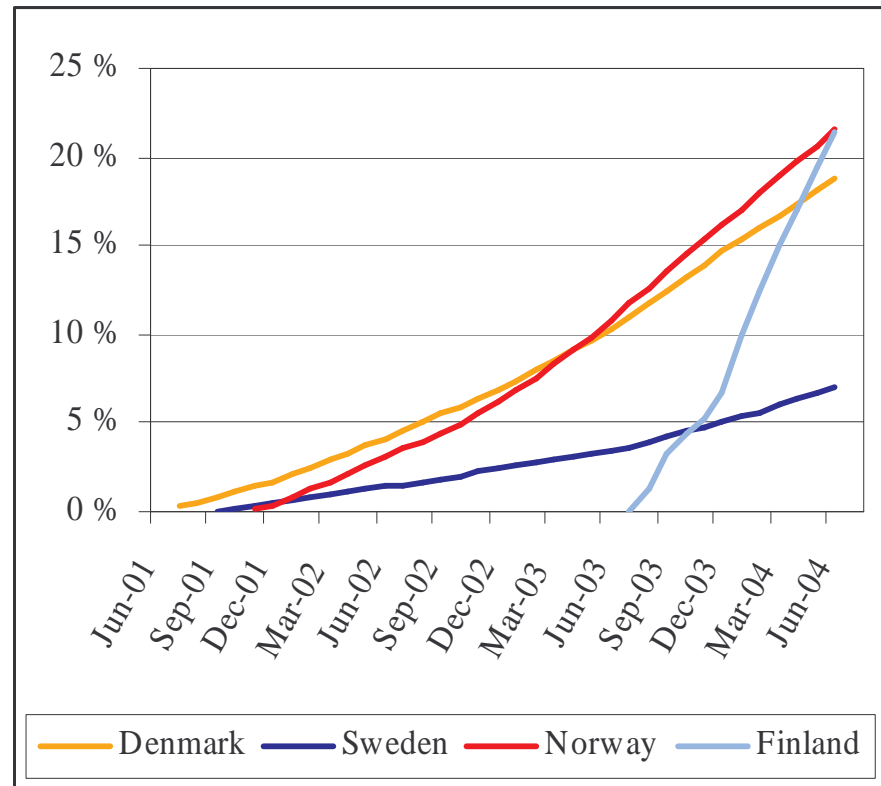


- SMS and MMS differently



Case Finland

- MNP implemented in July 2003
- Exceptionally high number of ported numbers
 - Over 1000.000 in one year
- Market impacts?
- What makes Finland different from other countries?



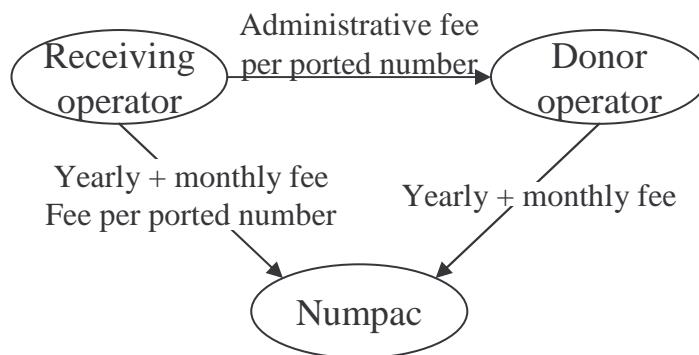
Sources: Numpac 2004, SNPAC 2004, NPT 2004, ITST 2004



Case Finland: Numpac Oy

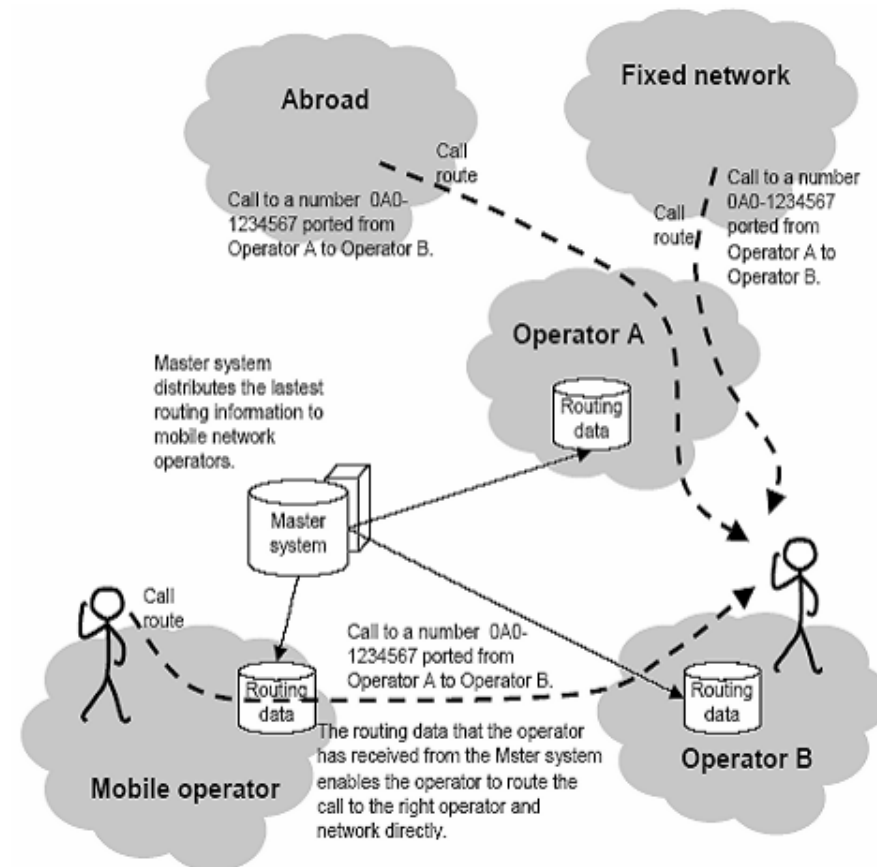
- Manages the "Master system", i.e. the NPDB
- Owned by TeliaSonera, Elisa, Finnet, and Saunalahti

MNP-related fees:



Source: Numpac, 2004

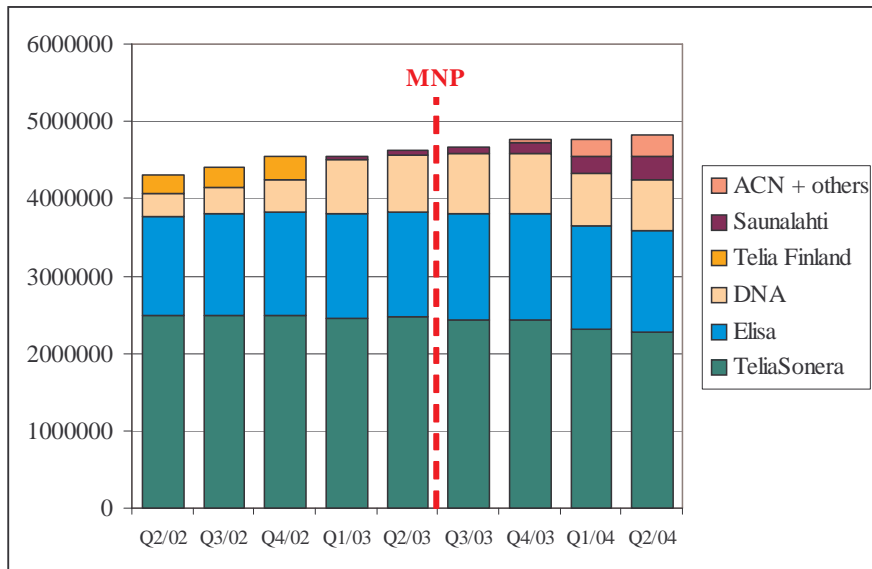
Call Routing (Number ported from A to B):



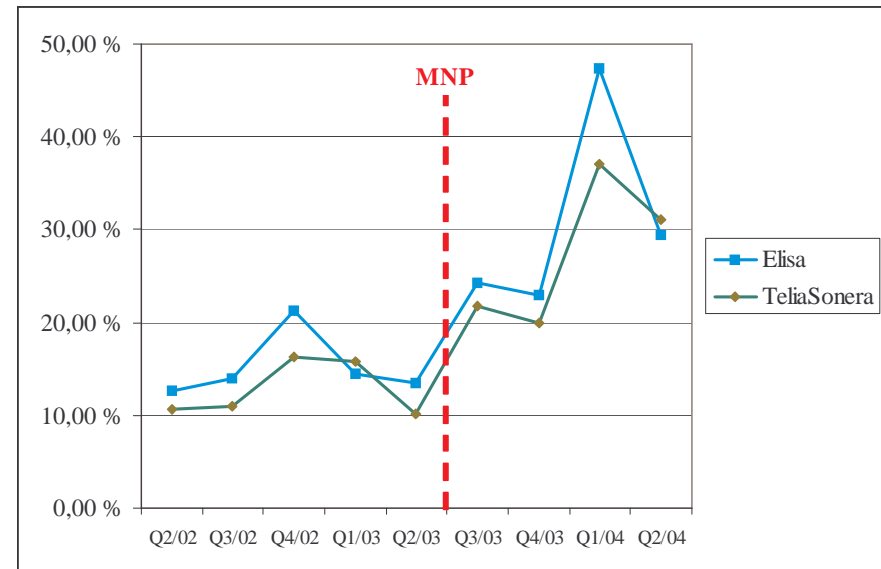


Market impacts

- Increased service operator market share
 - from 98.7% to 87.9%



- Increased churn
 - from 15% to 25% annual churn



Sources: Operator annual and quarterly reports



Reasons behind the MNP effect

- Price war
 - Competition on price instead of differentiated services
 - Heavy marketing campaigns, free giveaways and airtime
- Ban on handset subsidies
 - As well as SIM-locked phones and long service contracts
- Single-rate call plans
- Small number of prepaid customers
- Easy and costless MNP process for end-users



Conclusion: Differentiate!

- MNP does not generate churn, it only removes one barrier from the way of free competition
- To keep the churn rates low, operators should offer unique and valuable mobile data services rather than carry on the price war
- Easier said than done?



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Thank you!

Comments and questions, please J