



Aalto University
School of Electrical
Engineering

Developments in the Finnish mobile handset population

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MoMIE project results seminar

May 14th, 2013

MoMIE task: Modeling of diffusion in Finnish mobile market

Purpose:

- understand Finnish mobile devices and device market

Datasets:

- Handset sales data (GfK)
 - *January 2003 - September 2012 (monthly)*
- Handset population data (operators)
 - *September 2005 – September 2012 (annual)*
- Handset feature data (GfK and public sources)

Development of handset population

How has handset population evolved since 2005?

Fragmentation and diversification

- More device models (and device types), top models less popular
- Vendor & platform concentration decreased

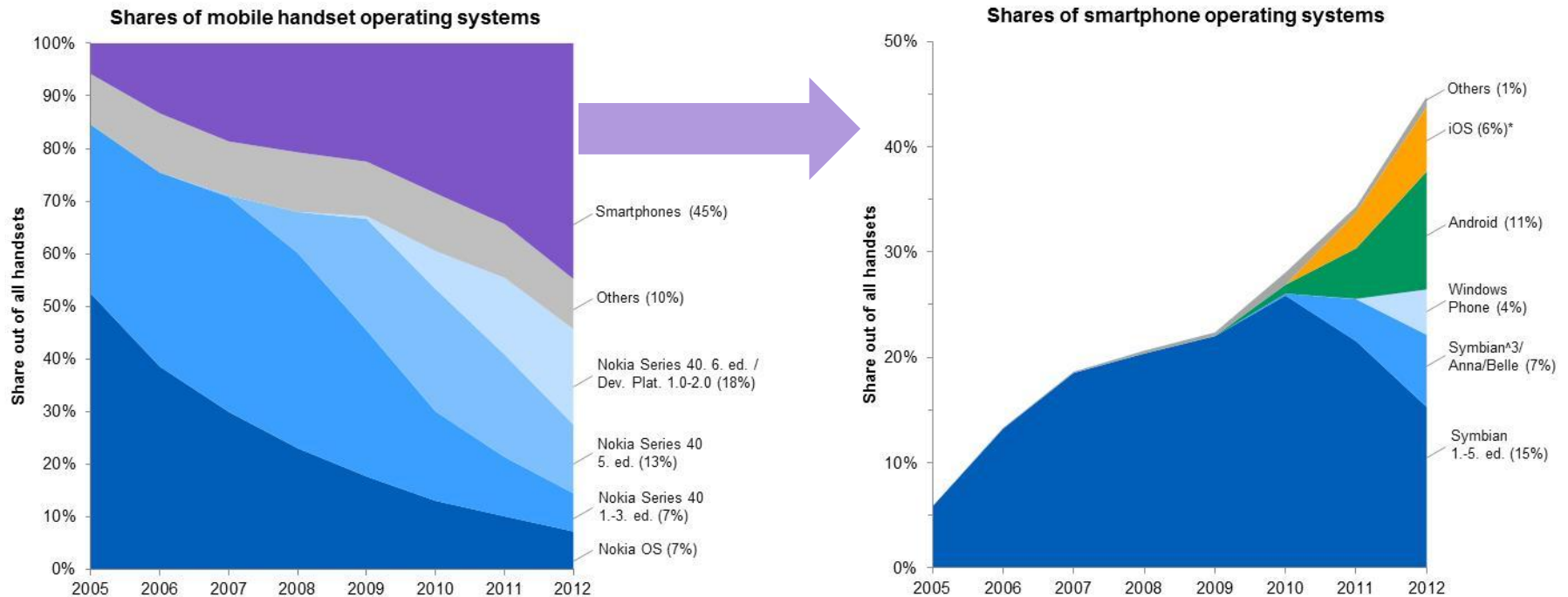
Handsets equipped with more advanced features

- Top models not basic phones anymore
- Packet data connectivity in >90% of handsets in use (2012)
 - *Smartphone OSs and touch screens also spread fast*

Project report at MoMIE website:

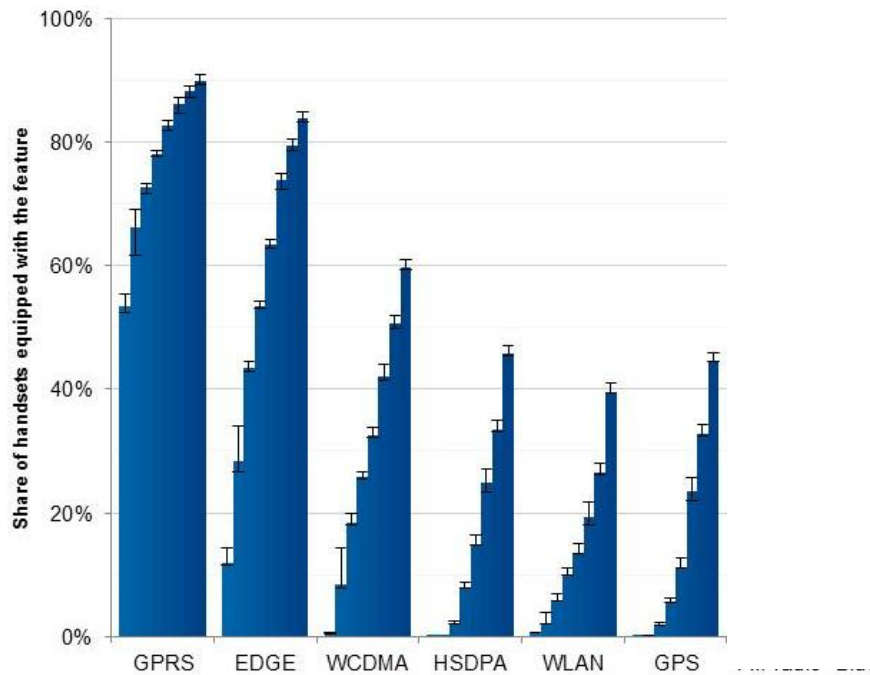
- momie.comnet.aalto.fi/wp-uploads/Mobile_Handset_Population_2005-2012.pdf

How has handset population evolved since 2005: Operating systems

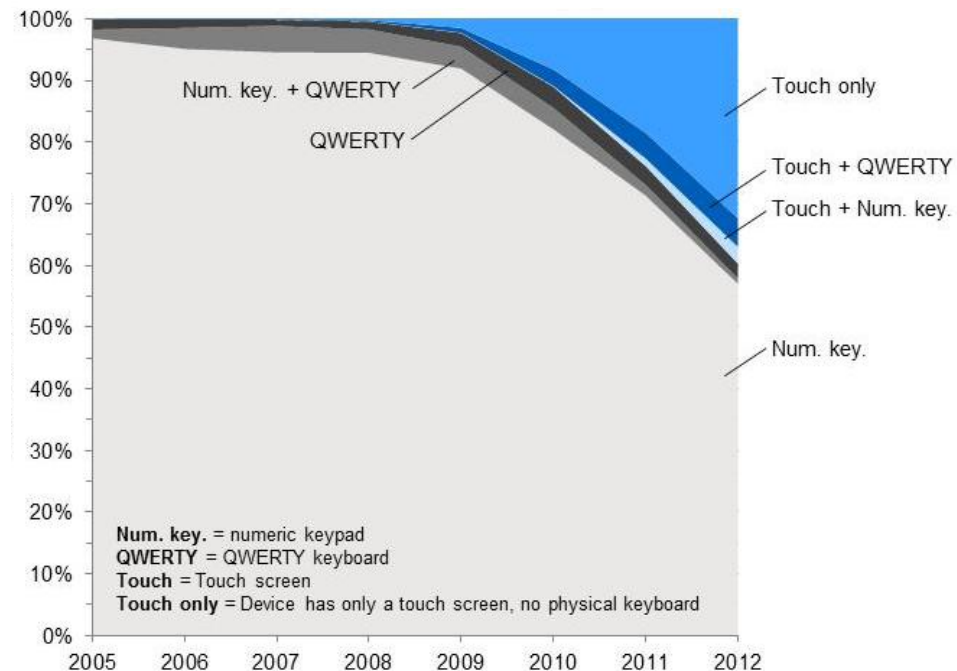


How has handset population evolved since 2005: Handset features

Radio interfaces:



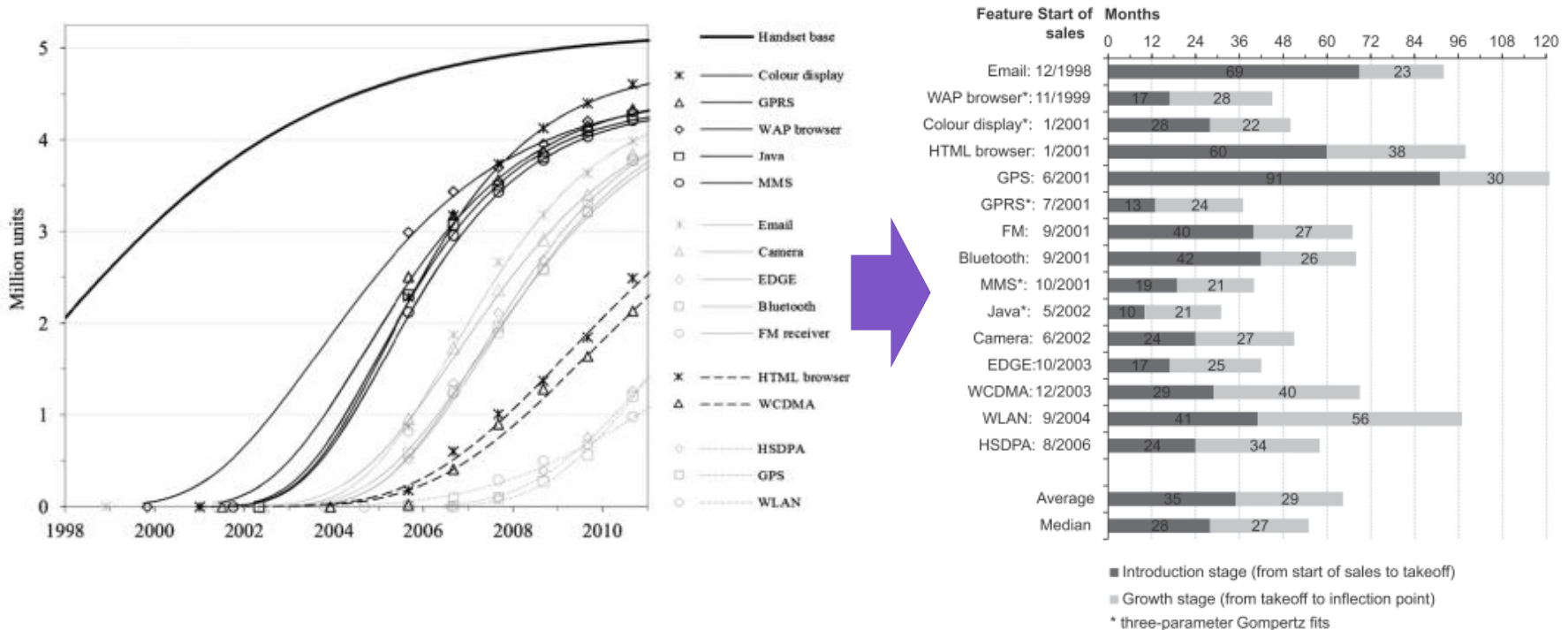
Input methods:



Research

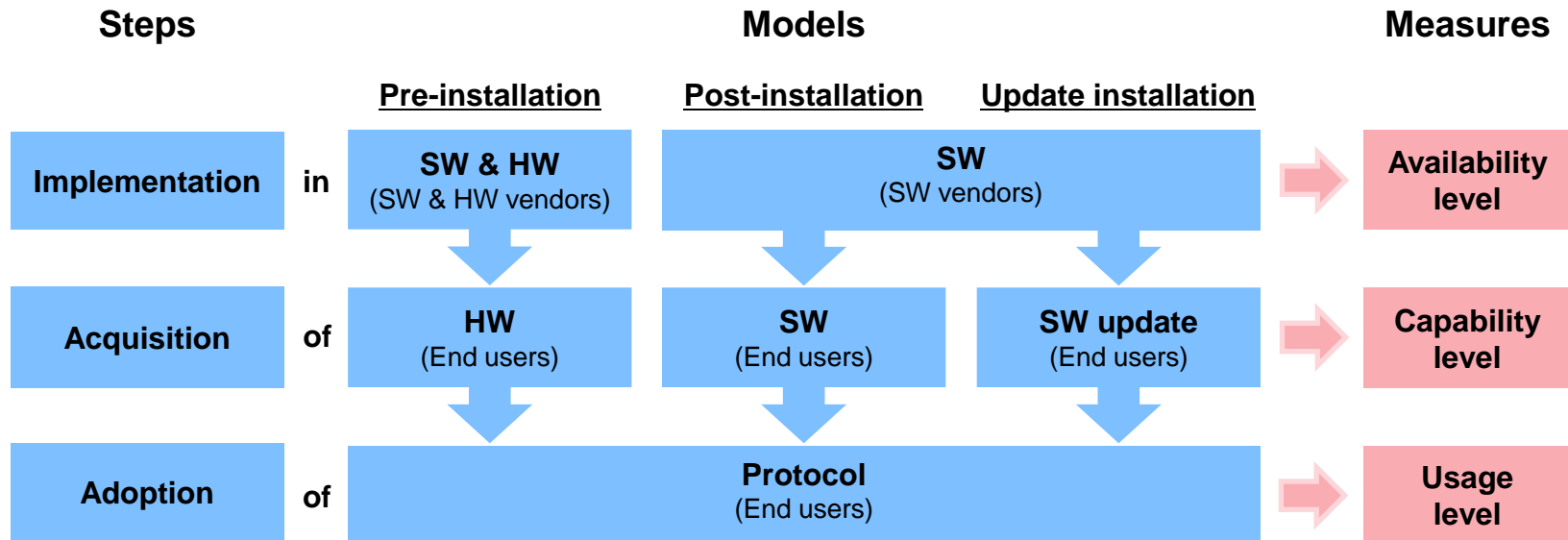
Modeling feature diffusion: example

- 1) Fit traditional diffusion models to handset feature penetrations
- 2) Calculate durations of diffusion stages



Diffusion of Internet protocols

Deployment models



Forecasting feature diffusion: Logic

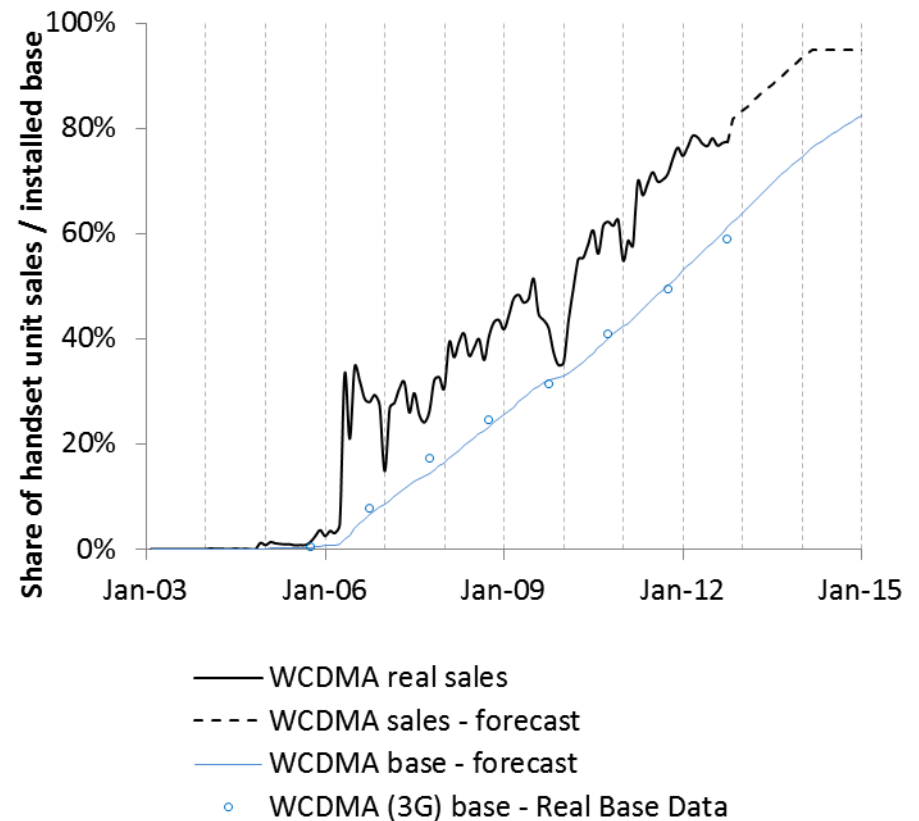
Combination of handset sales and installed base data

Three datasets utilized:

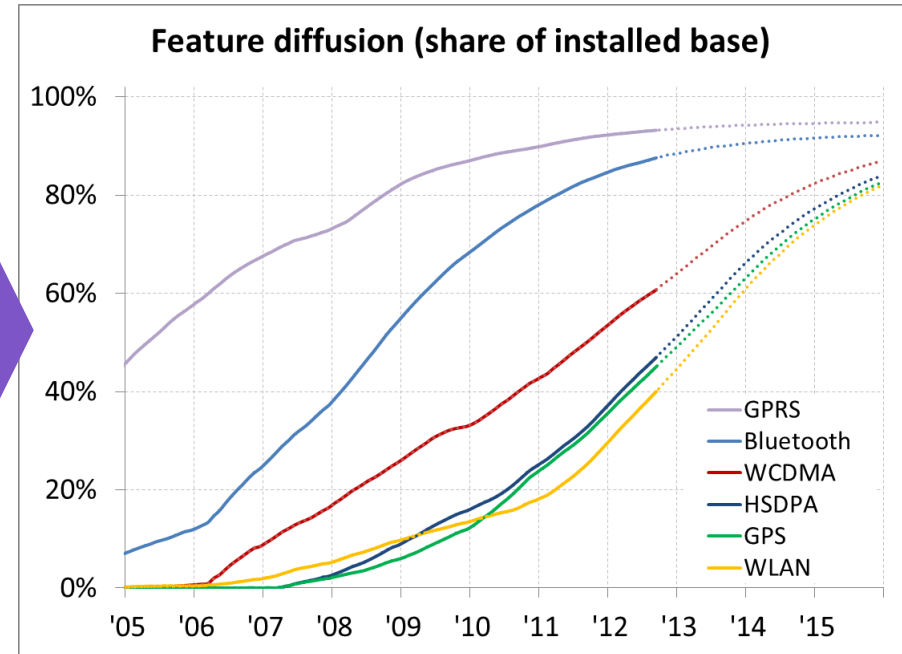
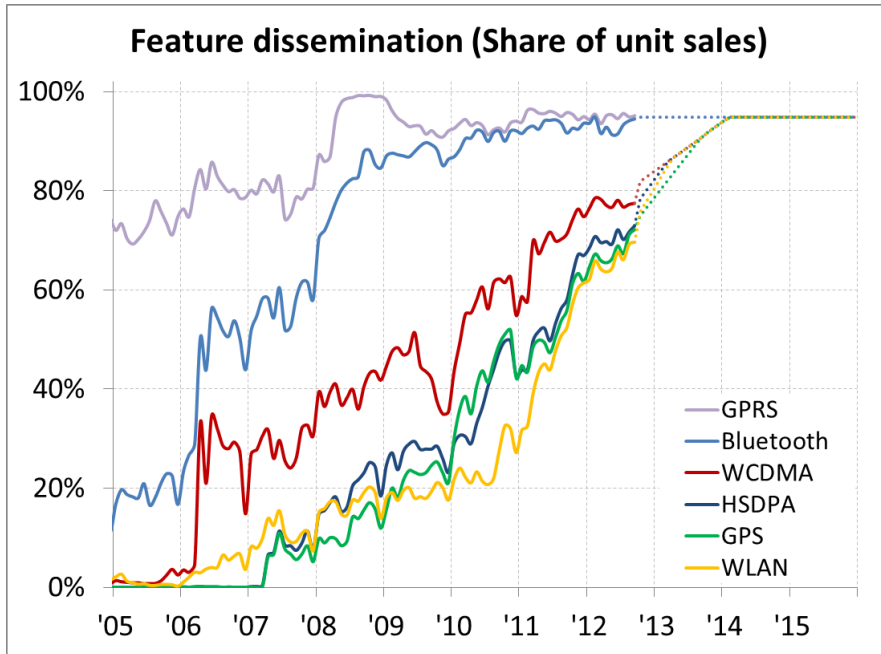
- Mobile handset population
- Mobile handset sales
- Database of handset features

Forecasting process:

- Handset unit lifetimes estimated using a) and b)
- Shares of features in sales predicted
- Diffusion of features estimated based on 1) and 2)



Forecasts for diffusion of selected features



Conclusions

Finnish mobile device population followed & studied in MoMIE

- Focus on device feature diffusion

MoMIE:

- feature diffusion analyzed, modeled, forecasted

Future research topics:

- Analysis of handset replacement
- Handset sales and prices, features vs. prices
- Diffusion of mobile payment methods

Further information

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MoMIE project:

Modeling of Mobile Internet Ecosystem

momie.comnet.aalto.fi

Mobile handset population report:

momie.comnet.aalto.fi/wp-uploads/Mobile Handset Population 2005-2012.pdf