



&

corporate mobile value added services



JUHA HÄKÄMIES

Case Juha Häkä mies



Juha Matti Häkä mies
Licentiate of Technology
(Helsinki University of Technology)

- Married
- 2 children (3 years daughter & 5 years son)
- Clarinet
- Jazz
- Walking / jogging
- Private hobby investor



Häkä in a physical fitness test 07.12.99

Sonera employee since 1993 -
06/93 - R&D Expert Sonera R&D Center
04/95 - Development Manager Sonera Cable TV Department
12/97 - Technology Manager Sonera Netherlands B.V.
01/99 - Department Director Sonera New Media - Service
Development
01/00 - Development Director Sonera Online Services -
Product Management and Development
06/00 - Chief Technical Officer Sonera zed Ltd / zed for business

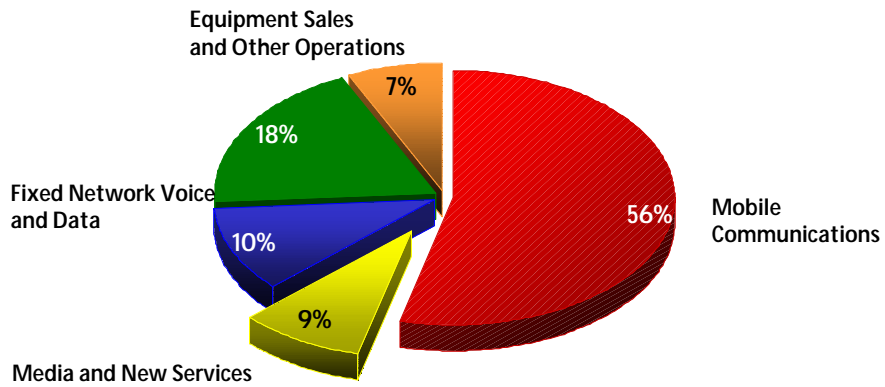
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- About Sonera
- What - MVAS?
- Why - MVAS?
- zed + MVAS?
- How - MVAS?

Sonera ?

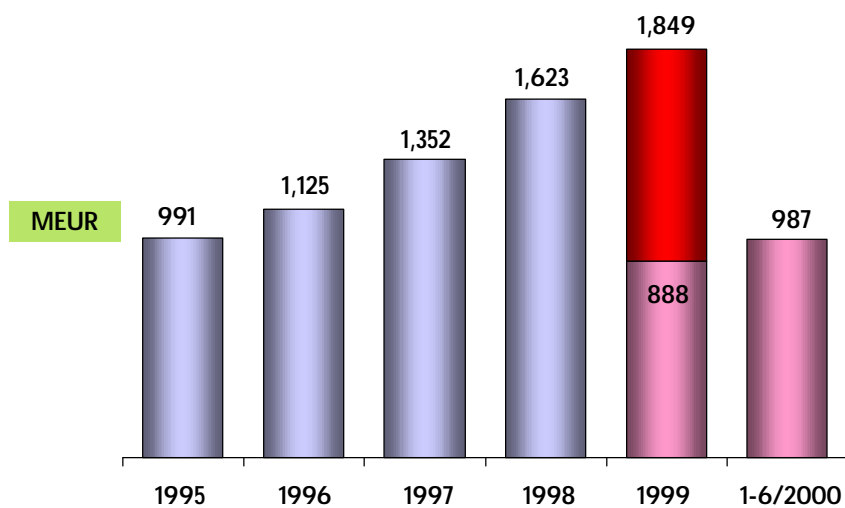
Revenue composition, January - June 2000



- Revenue January-June 2000: EUR 987 million
- Revenue fiscal year 1999: EUR 1,849 million
- Market capitalisation EUR 41 billion (May 17, 2000)

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Revenue composition

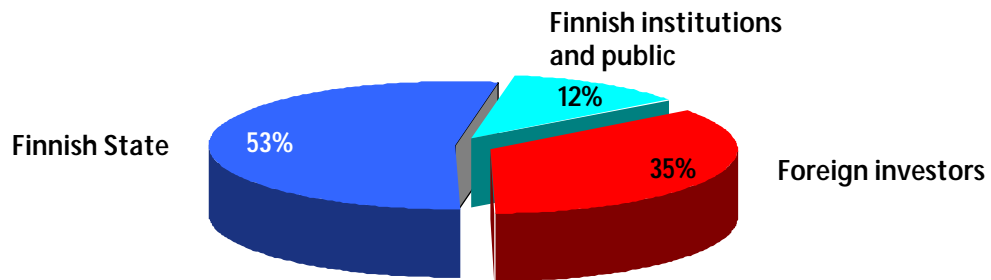


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Sonera ownership

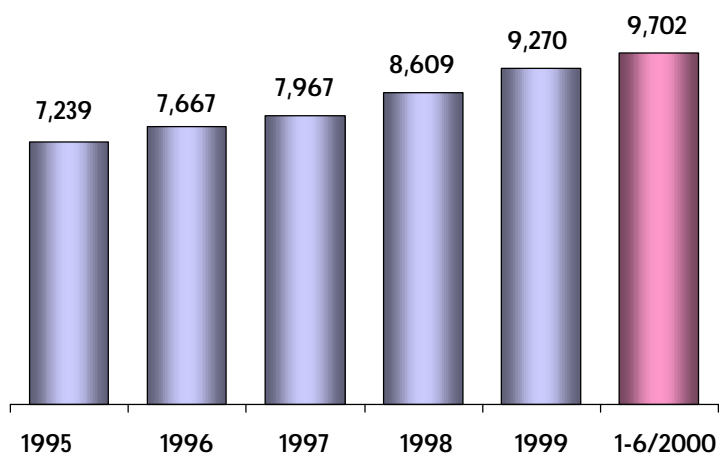


Sonera is listed on the Helsinki Stock Exchange (1998)
as well as Nasdaq (1999)



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Sonera personnel

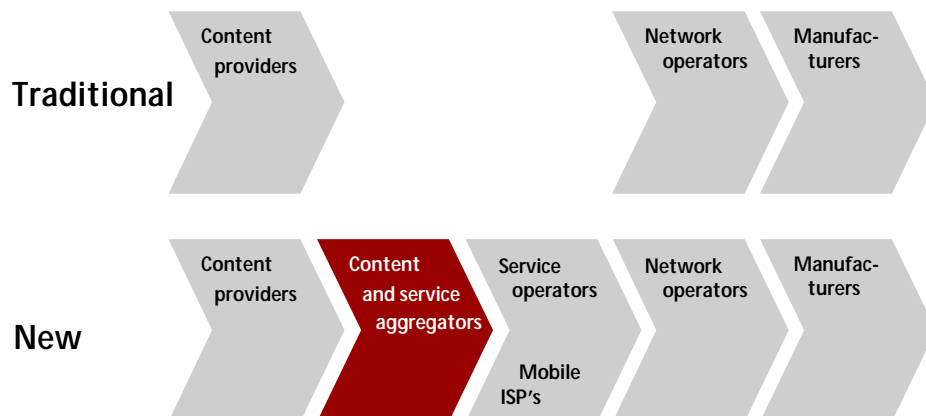


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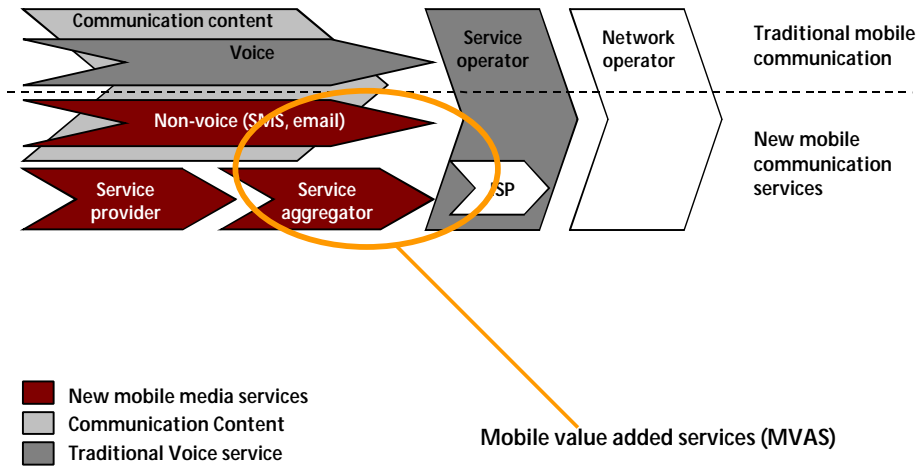
Mobile value added services -

WHAT ?

Mobile media value chain is changing



Mobile media value chain will be reconstructed



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Mobile value added services - success -

WHY ?

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1) The usage of mobile value added services



WHERE ARE WE TODAY ?

- Basic text messages sent by 68% (58) of GSM customers
- Content services used by 32% (24) of GSM customers
- Number of registered zed users totalled 195,000 at the end of June (March 31, 2000: 170,000)
- Average number of text messages sent from a GSM subscription per month was 24 (18)

Figures as of June 30, 2000

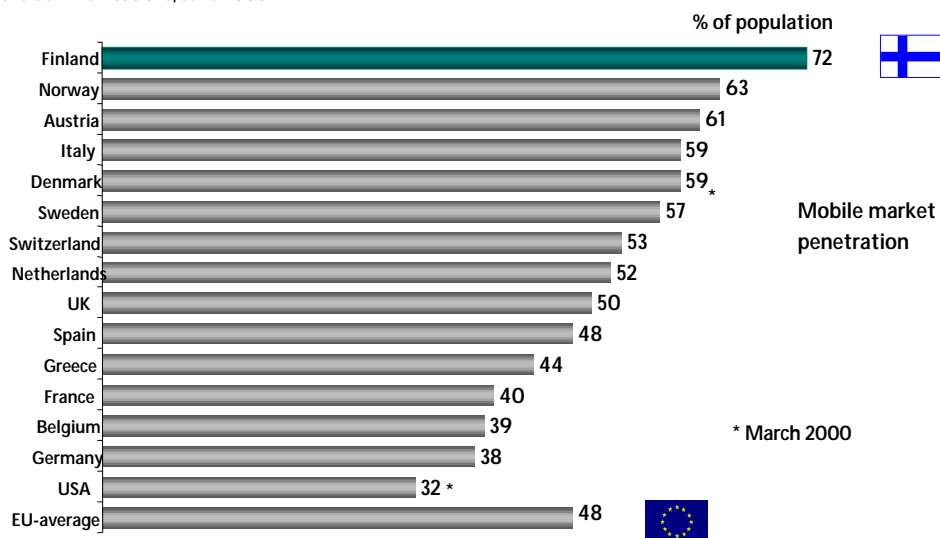
(Figures in brackets indicates situation on March 31 2000)

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2) The best possible mobile market to start from



Mobile Communications, June 2000

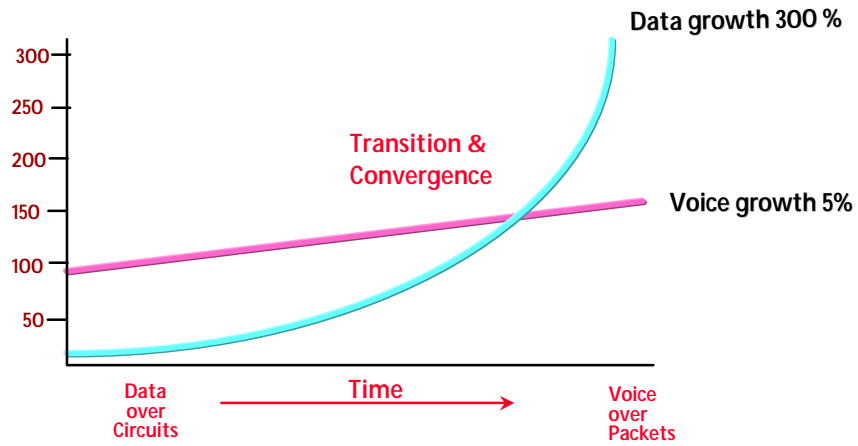


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3) The mix of customer traffic is changing

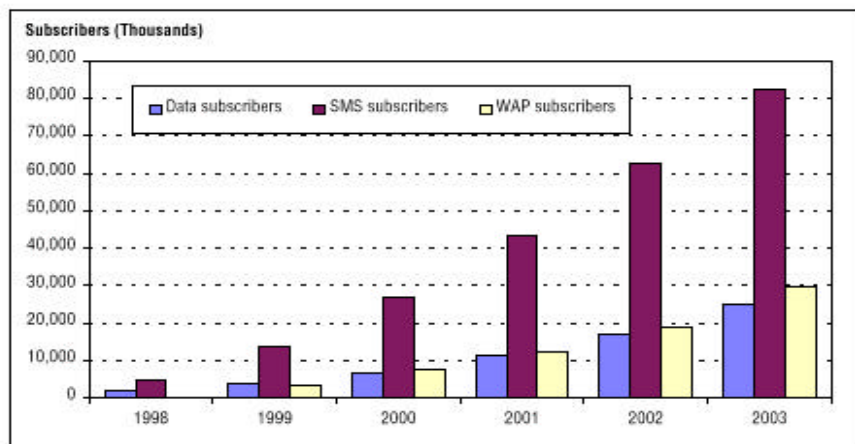


Relative Traffic



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4) The usage of 2G MVAS is growing fast

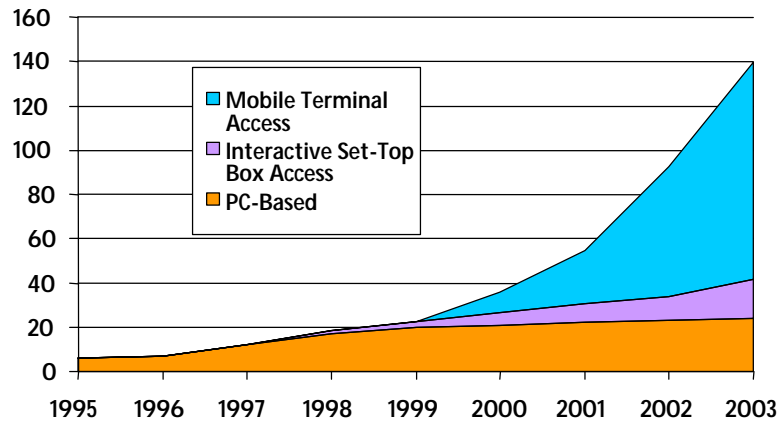


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5) Mobility is coming to Internet



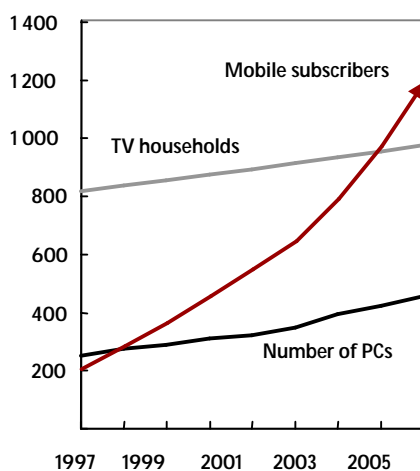
New shipments (millions)



Source: Gartner Group 2000

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6) The amount of mobile subscribers is grow fast



Source: Dataquest, EMC

Mobile Handsets:

Will become the dominant communications device

Will supersede fixed-line telephones

Are personal communications devices, offering customized services

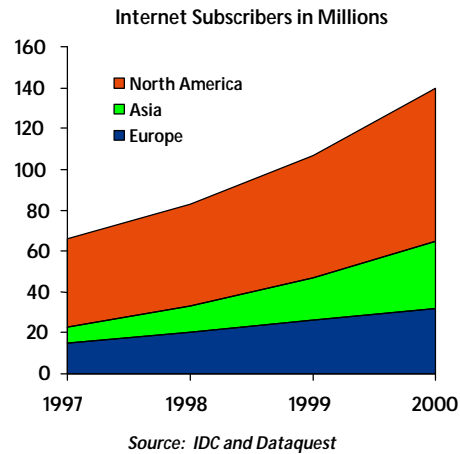
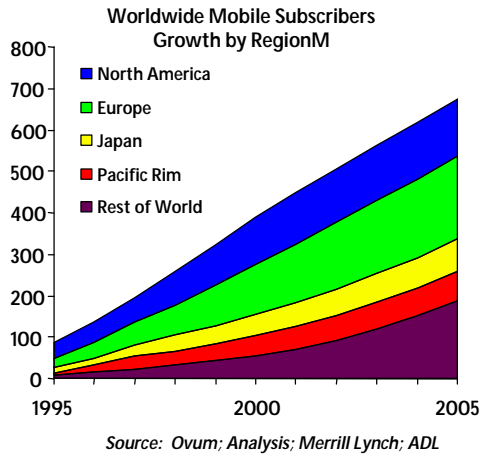
Will be used for a variety of communications and commerce applications

Will utilize many networks, including 2G, 3G and Bluetooth

More focus by operators on VAS as subscriber growth trails off

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7) Growth is happening in all markets



Evolve to satisfy the increasing demand for information anytime, anywhere

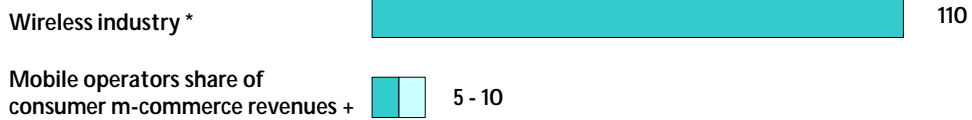
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8) The customer base will generate revenues & market



Projected Revenues

US \$ billion, 2002 estimates



Projected Value of the market



* Major operators and device manufacturers + 35% of all m-commerce revenues

Source: McKinsey Telecommunications Spring 2000

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9) New enabling technologies are coming



Mobile wireless networks of the future

Telecommunication networks

Mobile IT support of the future

Operator hosted services

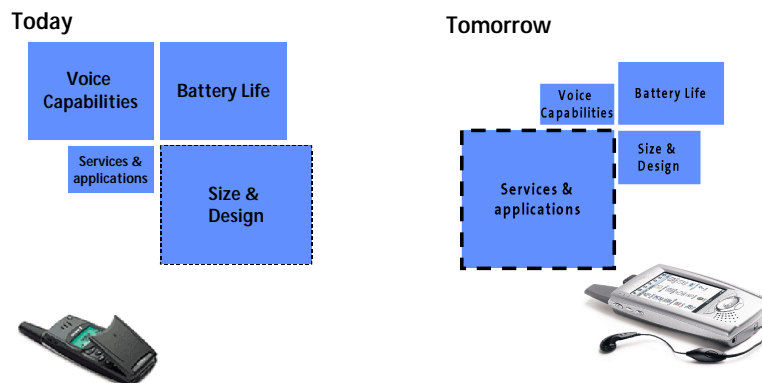
Short range techniques	Bluetooth (1Mbit)				
Wireless LAN	W-LAN (IEEE 802.11 b) (2Mbit)		HiperLAN2 (2 – 50Mbit)		
Telecom networks	GSM (9.6 k)	HSCD (30 – 40 k)	GPRS (30-140 k)	EDGE (384 k)	UMTS (384k-2Mbit)

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10) Advanced terminals are coming



Main functionality / factors in terminals today - tomorrow
Can't afford to have another WAP start !



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zed ?

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zed, a genuine mobile portal



zed is a global mobile value added service concept conceived, designed and built to support and promote true mobility in both consumer and corporate environments

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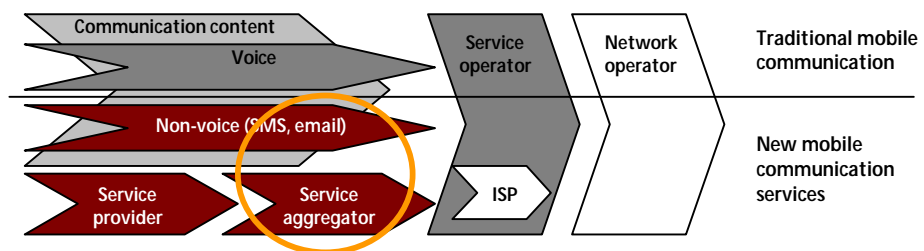
The zed Vision



“ Being connected to relevant people, services and information on the move”

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Mobile media value chain will be reconstructed



- New mobile media services
- Communication Content
- Traditional Voice service

Sonera zed's placement in mobile communication value chain

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Main ingredients of Sonera zed services



True mobility

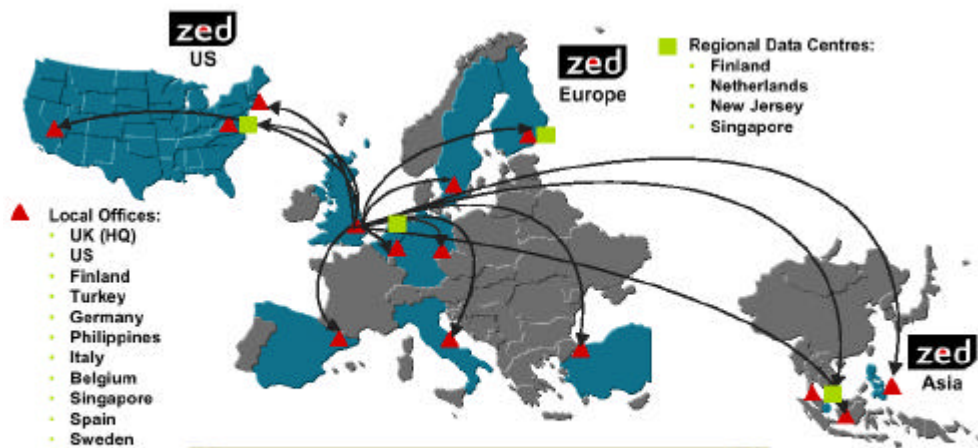
- location based services
- time based services

Mobile media environment

- on the move
- tool
- relevant and timely
- personality

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Global zed operations - 09/00

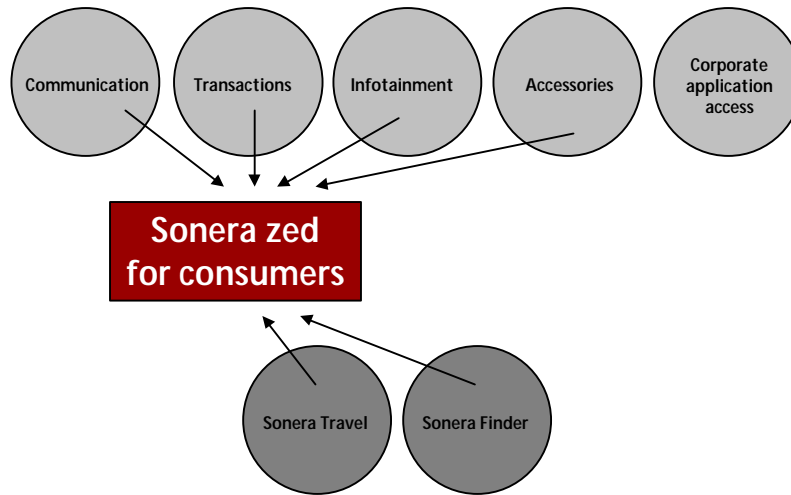


No-one has zed's global scope

- Operators work within their own network but rarely outside of them*
- zed is the only organisation who is operating data centres in US, EU and Asia*

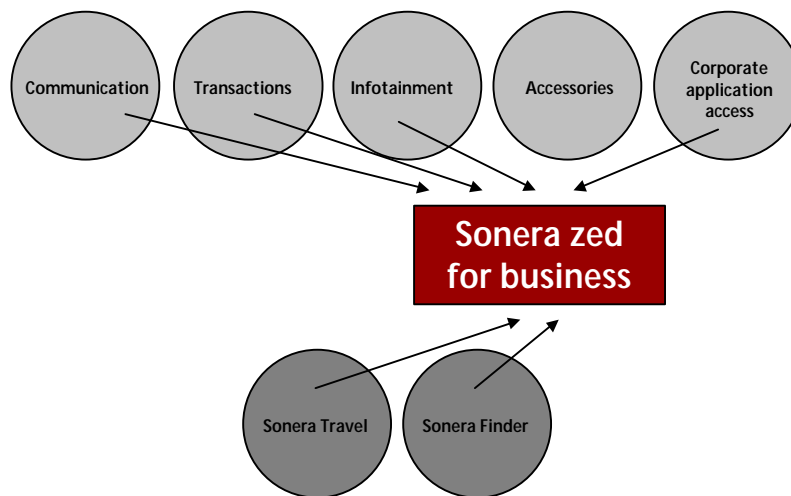
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Global mobile portal service concept:
Sonera zed for consumers



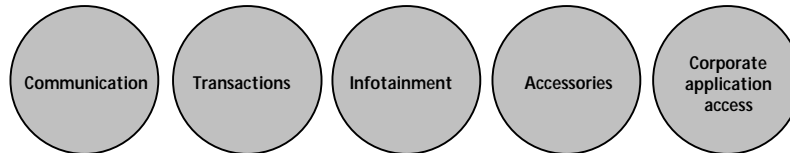
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Global mobile portal service concept:
Sonera zed for business



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Sonera zed components



Email
Calendar
Contact Book

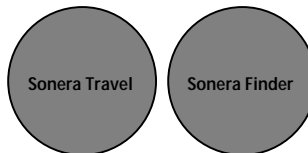
Digital signature
Mobile auction
Shopping

Local and lifestyle
based information
Entertainment

Ringing tones
Icons
GSM-postcard

Customer relationship
management
Enterprise resource
planning

Flight tracking
Booking



Global yellow
and white pages

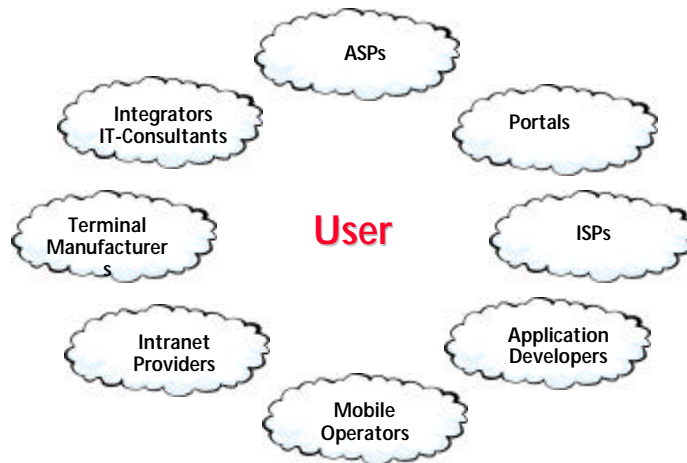
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zed for business - example



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Competition - players in the MVAS field



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Mobile Value Added Services

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'Killer applications' of GPRS/UMTS



E-mail
Calendar
Web browsing
Content/information/commerce
Corporate intranet access on the move.
BUT

- Are applications (printing schedulers, etc) still too office centred?
- Are the capacity and security issues well enough understood?
- Are current Intranets 'fit for purpose'?
- Does the network scale to 24/365 connections?
- How to price the services?

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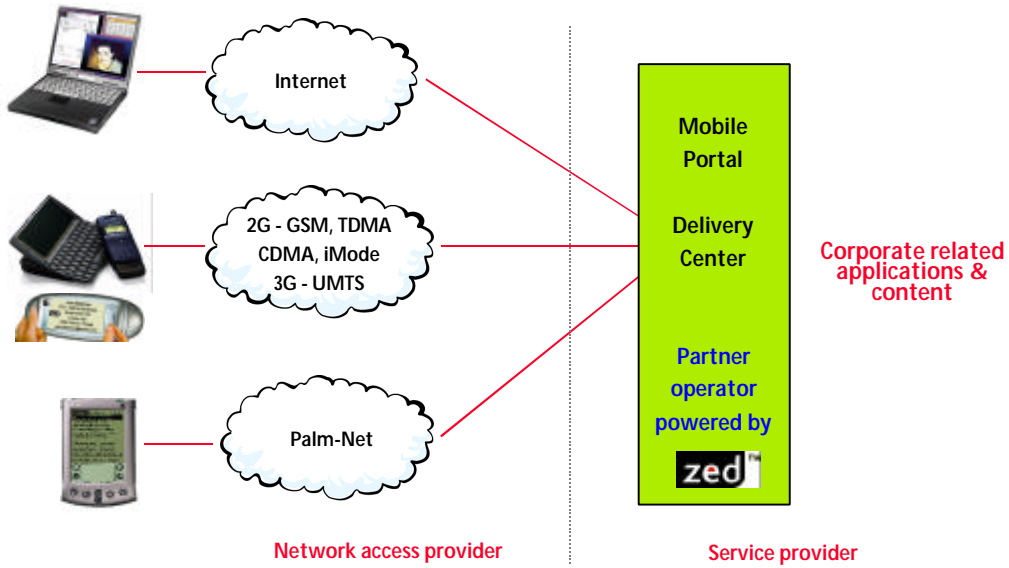
The killer applications depend much on the operator billing



- The IT experts neither the customers are not experienced on byte based billing
- This gives operators much responsibility on being able price their new products right.
- Bad pricing will effect also on the usage on the value added services.
Even the standard corporate e-mail and schedule applications can see multi Mb per month transfers with MS office files and AV files the fastest growing 'bandwidth hogs'.
- Fixed price per user would be the ideal buyers model in the beginning but what about later?
i.e. Network empty - it's a bargain for the customer
Network full - reduced service level

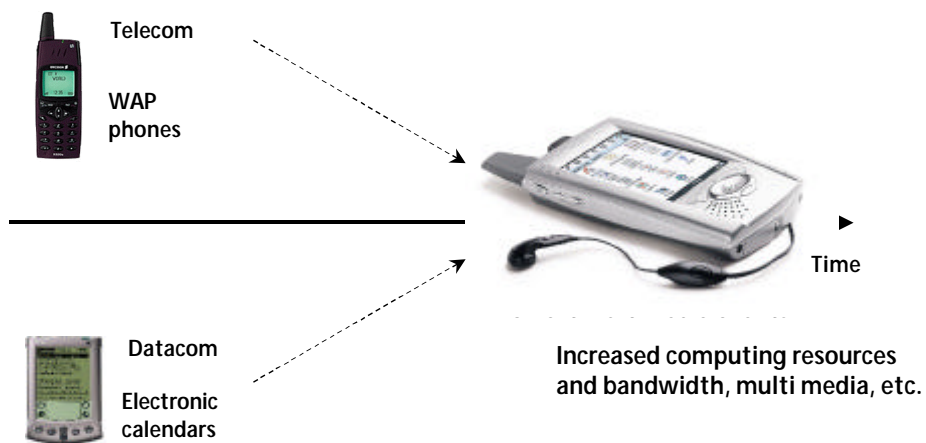
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MVAS for consumers - applications + content



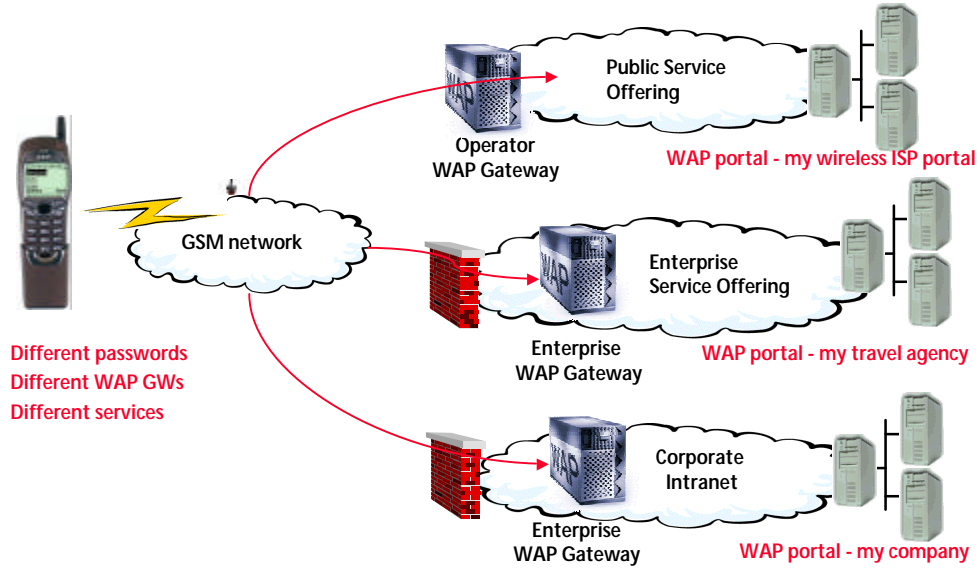
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Wireless terminal development



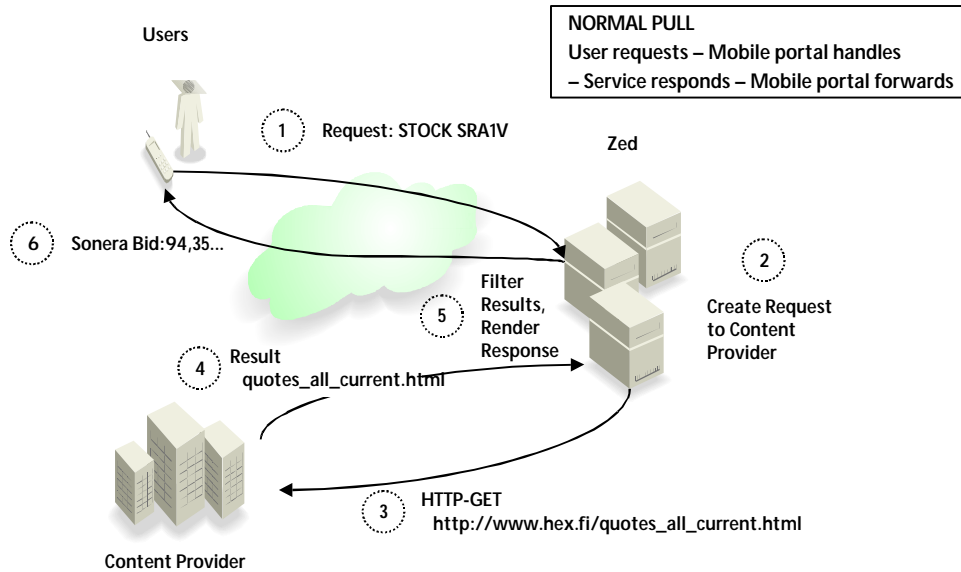
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WAP scenarios for a corporate user



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Content pull service - stock rate request



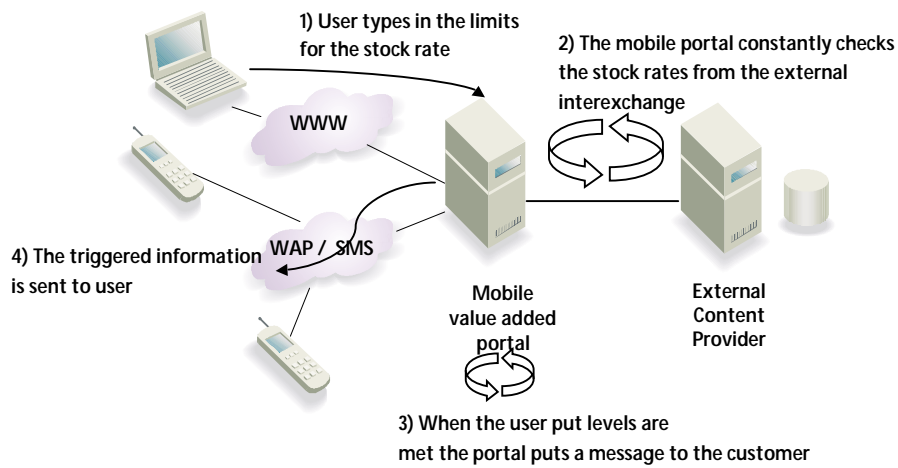
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Content push service - stock rate trigger



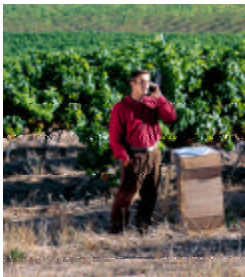
NORMAL PUSH

Service (PushServer) pushes - Portal forwards to the appropriate service (NAMP) - Service response - Portal sends the triggered information to user



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Corporate MVAS - mobile sales - an example

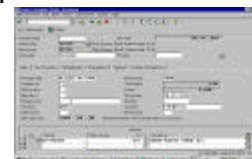


- Product info
- Price information
- Availability
- Solution configuration
- Ordering information
- Customer data
- Project status info

The benefits:

- ? Reduced cost
- ? Instant answer to client
- ? Improved service
- ? Improved quality
- ? Reduced delivery time

- 1) Salesman makes a query to Intranet sales database through a wireless device
- 2) Database provides the information
- 3) Salesman feeds in the order with the wireless device
- 4) He gets the confirmation on the done sales transaction



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Corporate MVAS - field personnel tools - an example



- Work coordination
- Troubleshooting Updates
- Material Confirmation
- Installation Information Service
- Contract Info
- Warranty Information

The benefits:

- ? Improved Service
- ? Improved Quality
- ? Reduced lead times
- ? Reduced costs

- 1) Field personnel has finished a job and confirms it done with a mobile device
- 2) The intranet work management programs receives the confirmation and sends the next suitable work order to his mobile
- 3) The field person receives it and acknowledges it
- 4) The work manager maintains the work order stacks



Field personnel



Intranet work management program



Customer care /
work manager

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Corporate MVAS - mobile office - an example



- E-mail access
- Corporate Calendar
- Directories
- Project management
- Corporate Intranet
- Information collecting

The benefits:

- ? Improved Service
- ? Improved Quality
- ? Reduced lead times
- ? Reduced costs

- 1) Employee takes a wireless connection to his MVAS provider
- 2) Through application tunneling he gets all the same applications to his PC/mobile as if he would be in the office
- 3) Additionally he has access to all the MVAS portal content as like at work



MVAS portal



Corporate email, calendar
Intranet content, sales DB,
CRM applications, directories

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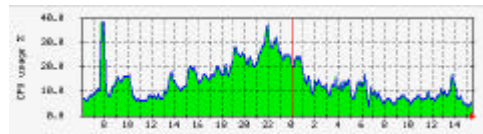
Corporate MVAS - mobile supervisor - an example



- Network monitoring
- Applications management
- Real time system information
- Alarm systems
- Delivery systems

The benefits:

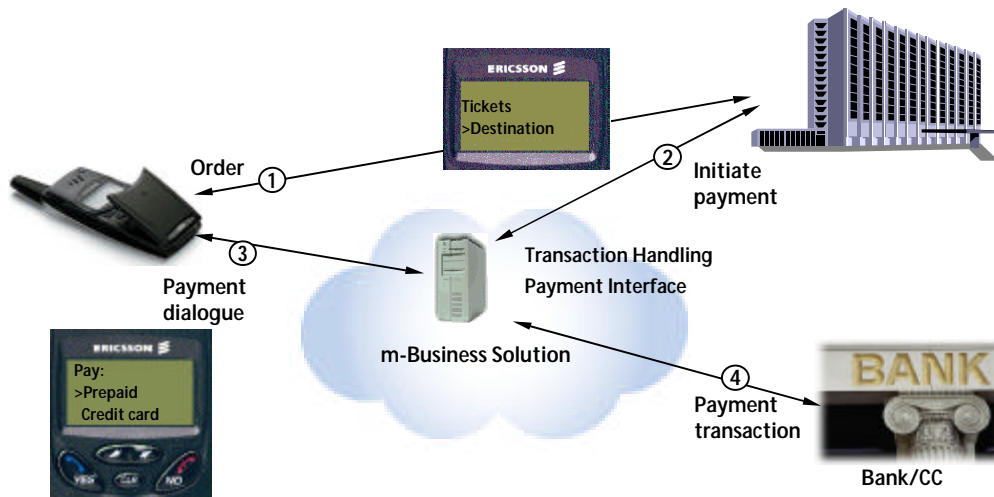
- ? Improved Service
- ? Improved Quality
- ? Reduced down time
- ? Reduced costs
- ? Prohibitive management



System alert - PF184 stopped
Warning - system usage level at 97%
...

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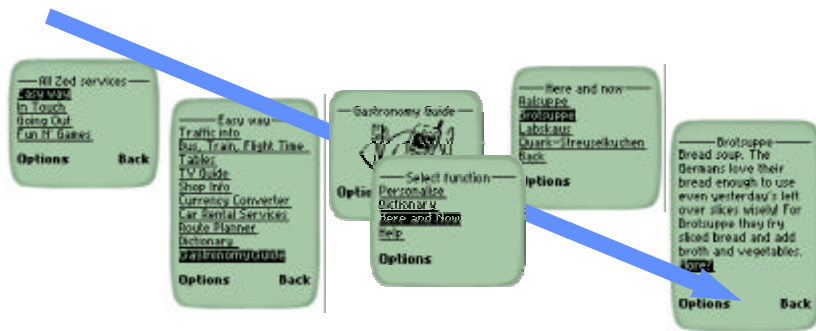
Corporate MVAS - mobile commerce - an example



Source Ericsson

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MVAS - gastronomy service - an example



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MVAS - location based map service - an example



- How do I get to XXX?
- Where is the next bus stop?
- Where can I find the closest Chinese restaurant?
- Where am I?
- What is the shortest route to YYY?
- Bananas only 7,90FIM/kg at O-Shop!
- All pants for sale at P-Shop!
- I want to get a taxi here.
- My car broke down.
- ...

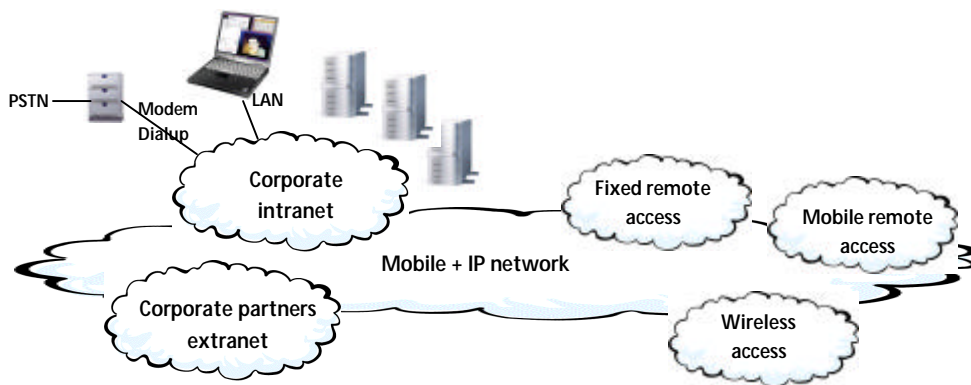
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MVAS - many more to come



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MVAS for corporations - building a virtual corporation



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Thank you for your time !

juha.hakamies@sonera.com