The new world of mobile phones!
Taking a look at the mobile handset evolution

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Drivers for mobile communication

Service innovations

Technological trends

From handheld phone to daily companion
Mobile Data Solutions offer compensation for declines in voice revenue

Industry Trend:
- Open architectures

Operators:
- Deregulation and new business models
- Compensate reduced voice ARPUs and increase subscriber loyalty
- Licence investments for 3G

Enterprises:
- Increase efficiency

Revenue

Market Segmentation

Mobile Voice

Mobile Data

Source: ICM N/Dataquest

• Messaging • Location • Videostreaming • Payment • Presence • Hosted Services • Integration

• 2006 ww market potential* • 2.6
• 1.1
• 0.7
• 2.3
• 0.2
• 2.8
• 2.0

* Mobile data solutions market in billion of €

© Siemens, 2002
What initiates **market growth** in the device industry?

- **2004**: Mobile Multimedia
  - + Audio
  - + Video

- **2002**: Infotainment
  - + MMS
  - + Java

- **2000**: Design
  - +SMS

- **1998**: Size and standby time
  - Voice

© Siemens, 2002
For the operators mobile services will be key

Services
- Entertainment
- Business
- User community
- Information
- Location based services

Success factors
- Ease of use for consumer
- Ease of operation by service provider

Enablers
- JAVA, streaming
- Payment, charging (OTA)
- Location, presence
- WAP, messaging
Evolution until today: From Voice to **Personal Assistant**

**Voice Centric Phone**

- **S10**
  - Launch 1996
  - Multimedia Messaging with flash camera

**Data Centric Personal Assistant**

- **S55**
  - Launch 2002
  - Business phone with assistant functions
  - Bluetooth
  - Wireless headset

Evolution via application/mobile data
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Open standards create a "virtuous cycle"

**User**
- More compelling mobile services
  - New, exciting and efficient services
  - Fun & productivity
  - Easy-to-use, ease of implementation

**Operator**
- Growing usage of mobile services
  - Increased usage & revenue
  - Interoperability
  - Viable business models

**Developer**
- Attractive open market with growing global economies
  - Non-fragmented platform
  - Larger addressable market
  - Stimulation of innovation

**Siemens Mobile**
- Interoperable client-server platform based on global open standards
  - Messaging
  - Gaming
  - Java for personalization
  - Open access to Internet for downloads

"Virtuous Cycle"
- Openness fuels market growth and innovation!
Matching consumer with operator value is key for success

Consumer Value

high

low

Service provider Value

low

high

Unattractive

Speed

Brand

Ease of use

Personalization

Voice

MMS

Ticketing

Direction finder

Audio/video

Payment

Location

Streaming

UMTS

Matching consumer with operator value is key for success
Mobile Payment makes paying goods and services with mobile phones easy, safe, and cost-effective
Mobile Payment Key Issues for Successful Payment Solutions

Consumer Expectations
- Ease of use
- Performance
- Security / trust
- Discount / bonus programs

Architectural & Technical Issues
- Quality of Services
- Scalability, Performance
- Recharging
- Payment Roaming

Regulator, Legal and Commercial Issues
- Bank License
- Money Laundering
- Business Models

**Location based applications will offer 24 hour access to tailored information**

<table>
<thead>
<tr>
<th>Friends</th>
<th>Finder &amp; CityGuide</th>
<th>LocalAds</th>
<th>Resource Ctrl</th>
<th>Parcel Watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find your friends!</td>
<td>What´s cool in town today?</td>
<td>Could I get some discount?</td>
<td>Which employee is nearest to the customer?</td>
<td>How can you avoid losing parcels?</td>
</tr>
<tr>
<td>Don´t get bored, find your friends nearby</td>
<td>Find the events and highlights of the night</td>
<td>Push information when required</td>
<td>Optimized Fleet Allocation</td>
<td>Support of different tracking modules</td>
</tr>
<tr>
<td>Keep in touch with your family members</td>
<td>Find your favourite petrol station and collect your member miles</td>
<td>Initiate campaigns and control success</td>
<td>Improvement of response times</td>
<td>Cross-border tracking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Better level of service</td>
<td></td>
</tr>
</tbody>
</table>
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In the value chain the focus has shifted from Hardware to **Software**.

<table>
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<tr>
<th>Value chain share</th>
<th>1999</th>
<th>2002 onwards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Hardware</td>
<td>70%</td>
<td>30%</td>
</tr>
</tbody>
</table>

- **Open architecture**
- **Cooperation (Symbian, Series 60)**
- **Operator customization**
- **Platformization**
- **Standardization of components**
New **input** concepts revolutionize the usability for consumers

**Talk to your phone**

- Speech control for ease of use
- Miniaturized quadband phone in pendant case and wrist watch

**Write to your phone**

- Use phone as normal pen to write and recognize text on any surface
- Writing accessory or phone with integrated optical sensor
New **output** concepts unlock a whole new world of applications

**Touch the 3\(^{rd}\) dimension**

- A new dimension of ease of use and fun for mobile devices (e.g. 3D-gaming)
- 3D-display with wavelength-selective filter array which does not require glasses

**Beam it on**

- Projects Powerpoint and Photos stored on MMC
- Smallest beamer of the world connected to a mobile phone
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Revolution -
The mobile device as **daily companion**

- Always on network link
- Intelligent personal assistant services
- Push Marketing based on location
- Video streaming
- Payment OTA
- Learning personalization

Checked your email at work – your appointment got cancelled.

The operator is running a promo with the cinema 132 meters NE from here.

Should I buy a ticket? Here is the trailer of a movie that you should like.
But **before** location detection can give you away…
SIEMENS mobile

Exposé more

Say it with 8080 pixels. The new smoothly designed Siemens S55 with optional clip-in camera and flash. Take a picture. Add sound. Add text. Then send all. Instantly.

Be inspired

Don't be shy

Say it with 8080 pixels. The new smoothly designed Siemens S55 with QuickPic Camera and flash. Take a picture. Add sound. Add text. Then send all. Instantly.

Be inspired

Thank you!