Smartphones

What can they really do for you?
An overview of the most interesting
applications and games!

„Smartphone"

- Combines PDA und mobile phone

- **Features:**

    - Office-applications, PDF viewer, …

    - WLAN, UMTS, high-res camera, GPS, …

    - Large Display

    - **Allow to install additional applications (!)**

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History of Smartphones

Psion Organizer II. Source: mobile2day.de

- **1984: Psion Organizer II**

  – 8 bit processor

  – 9V battery, it lasted for several months!

  – Develop own applications (OPL-language)

  – Memory extensions, plug-in modules

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History of Smartphones

- **1994: IBM Simon**

  - First real „smartphone"

  - Touchscreen

  - PIM, Data communication

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History of Smartphones

- **2001: Nokia 7650**

  - First 2.5G phone (GPRS, HSCSD)

  - Light/proximity sensor

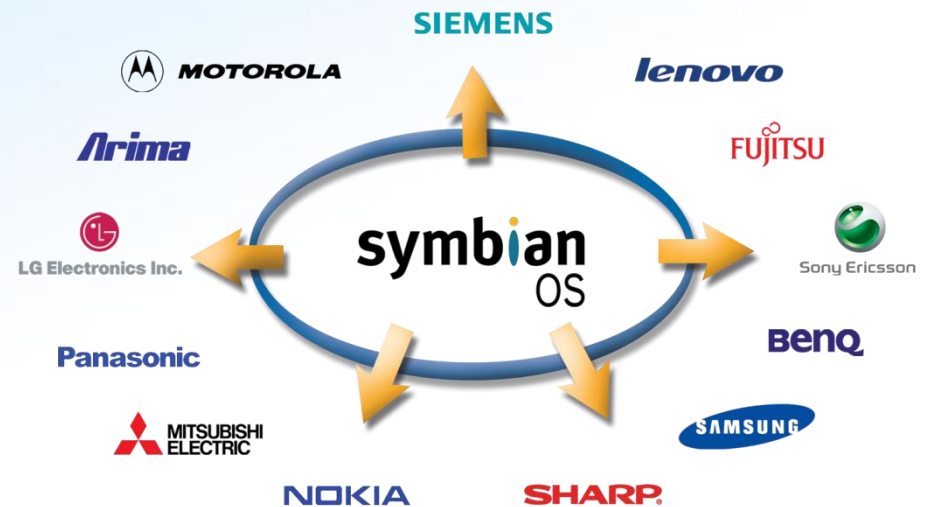 - Symbian OS – Open system!
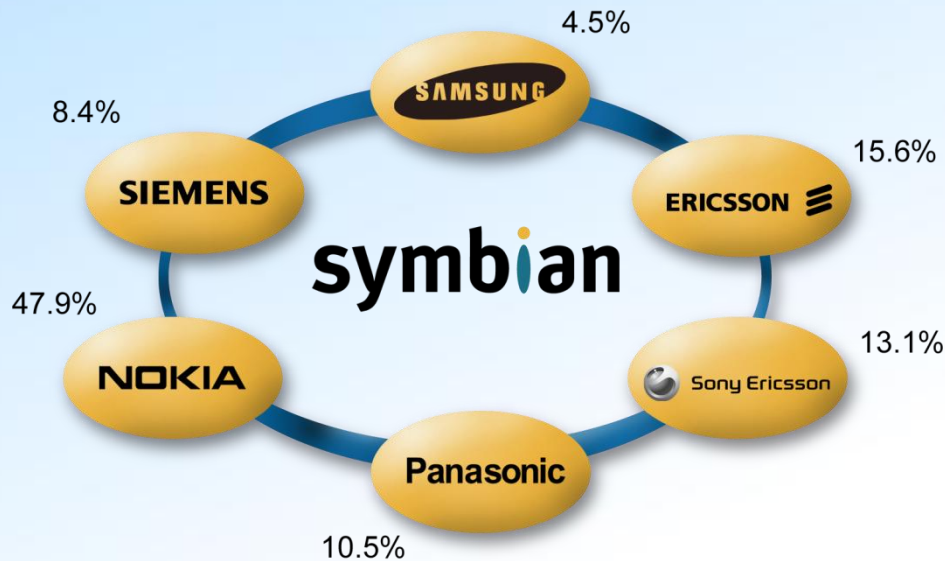
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State of the Art

- **Nokia N95** (March 2007)

- QVGA display (16,7 Mio. Farben, 6,6cm)

- 5 MPixel camera (Carl Zeiss)

- Integrated GPS

- WLAN, UMTS, HSDPA

- USB, 3.5 mm audio connector, radio, TV-Out, MicroSD-support

- 120 g, 99x53x21mm

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Symbian (OS)

- Mobile phone manufacturers are shareholders of Symbian Ltd.

- Its product (Symbian OS) is licensed to many mobile phone companies

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Symbian OS – UI

- **S60 (Series 60)**
  - Developed by Nokia
  - Licensed to other manufacturers
  - Optimized for one-handed use

- **UIQ**
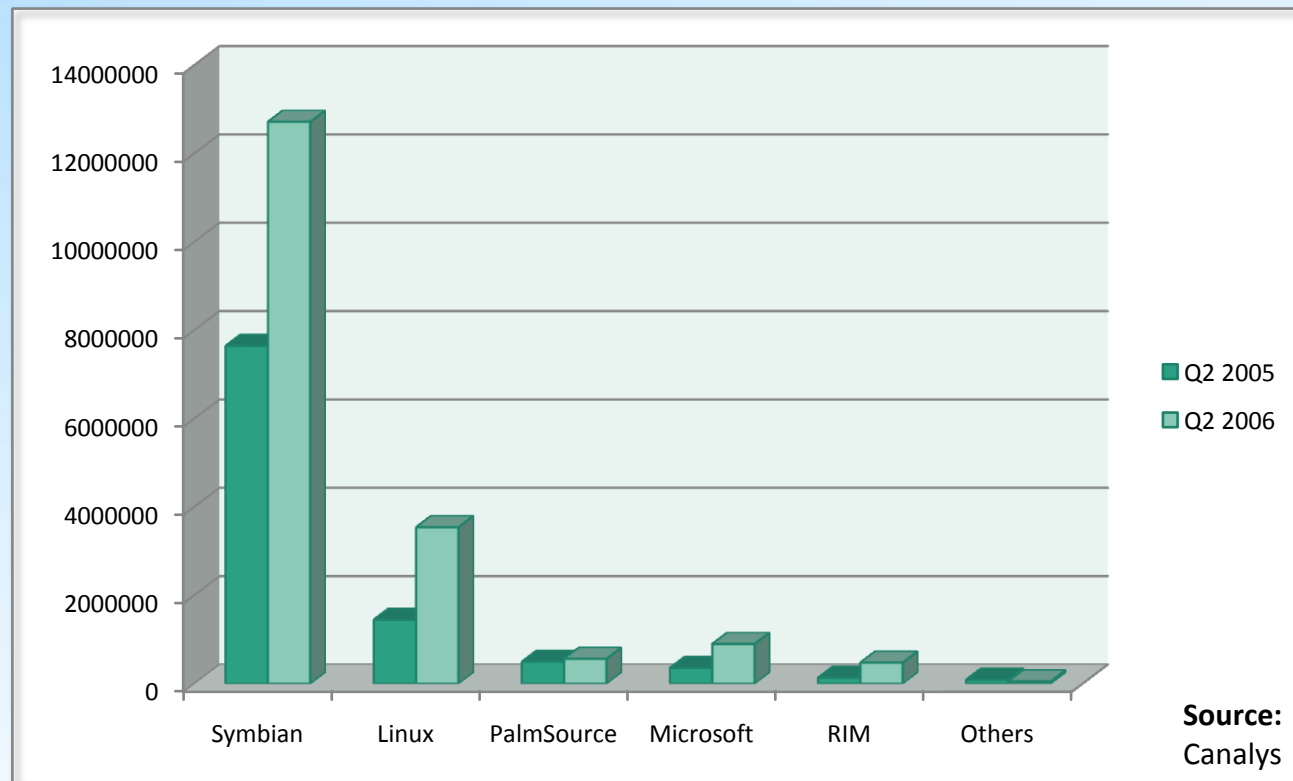 - Has just been bought by SonyEricsson
  - Mainly touch screen interface (+ combinations)

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Smartphone Market Share

World wide market – market share of Smartphones*

* Includes closed Linux-phones in Asia, excludes PDAs

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What can these devices do for you?

Mobile Possibilities

Business

- Complete Office-suites available
- Edit Office documents on your phone
- Plus: Adobe PDF Reader, …

Quickoffice Premier – Quickoffice, Inc.

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Email / BlackBerry

- **Symbian S60**

  – **IMAP** and **POP3** mailservers supported

  – Access to **BlackBerry** (you don't need a BlackBerry anymore)

  – **MS Exchange**, ActiveSync

Nokia E61

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Internet Services

- **Example: Yahoo Go!**

  - Flickr, weather, news, sports, **push** email, …

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Blogging

VoxBlog,
Nokia

Nokia Lifeblog

- **Blogging supported**
  - Flickr, Vox
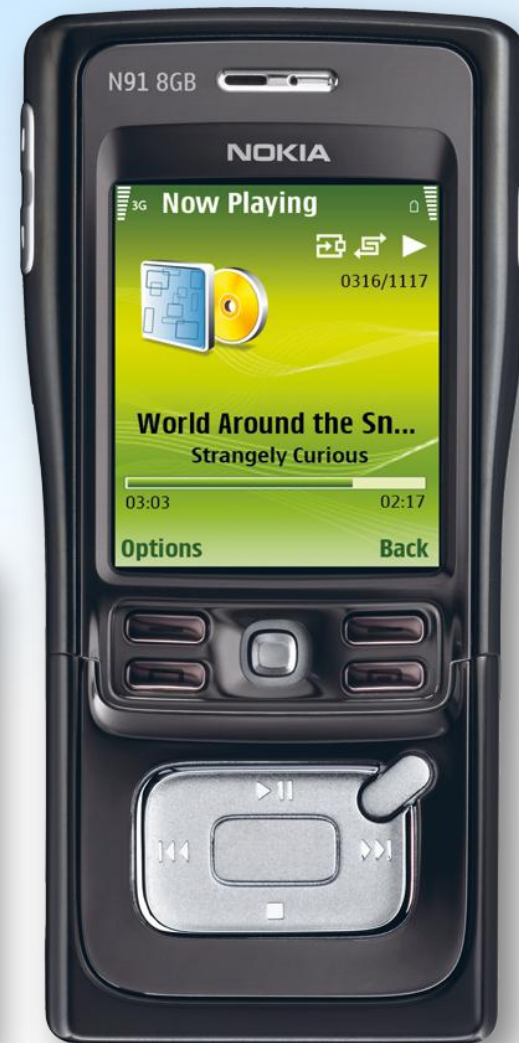 - Nokia Lifeblog
  - …

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Music

- **Integrated music player**

  - Mp3, AAC, M4A, WMA

  - Not just one or two like some dedicated players

- Podcasting

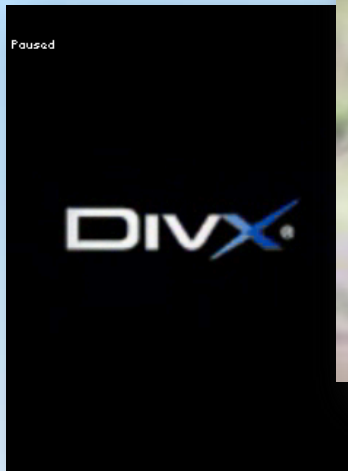- 3rd Party-Player (Ogg Vorbis, …)

Nokia Podcasting, Nokia

OggPlay

Nokia N91 Music Edition

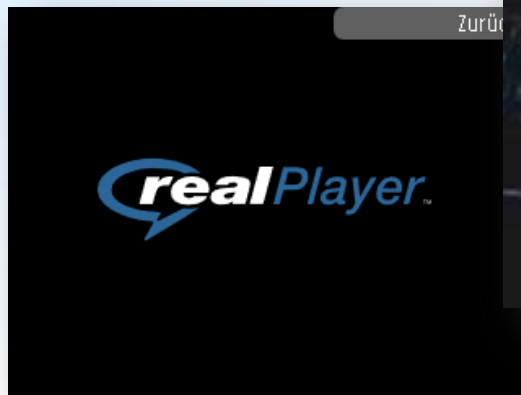Andreas Jakl, 2007

eBooks

MobiPocket – MobiPocket.com

Andreas Jakl, 2007
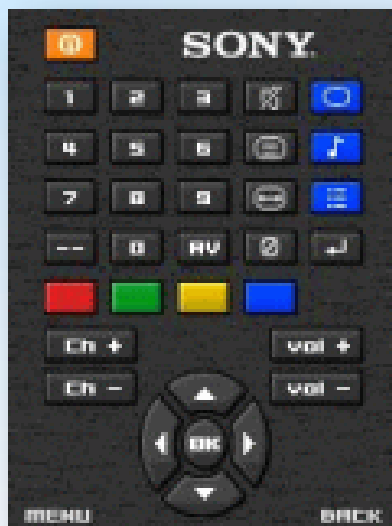
Video
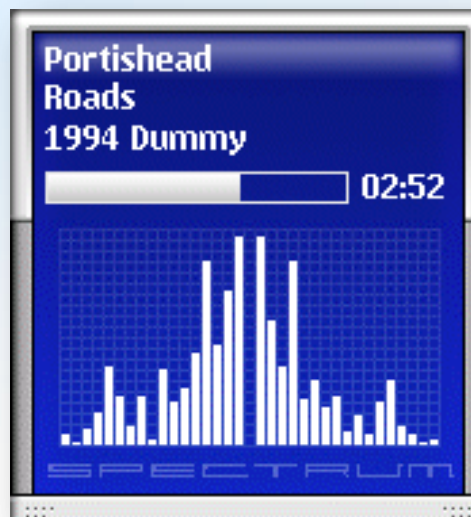

DivX Mobile Player, DivX.com

RealPlayer

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Remote Control

- Control devices from your phone

  – Using Infrared (TV, HiFi, …)

  – Bluetooth (PowerPoint, Winamp, your whole PC, …)
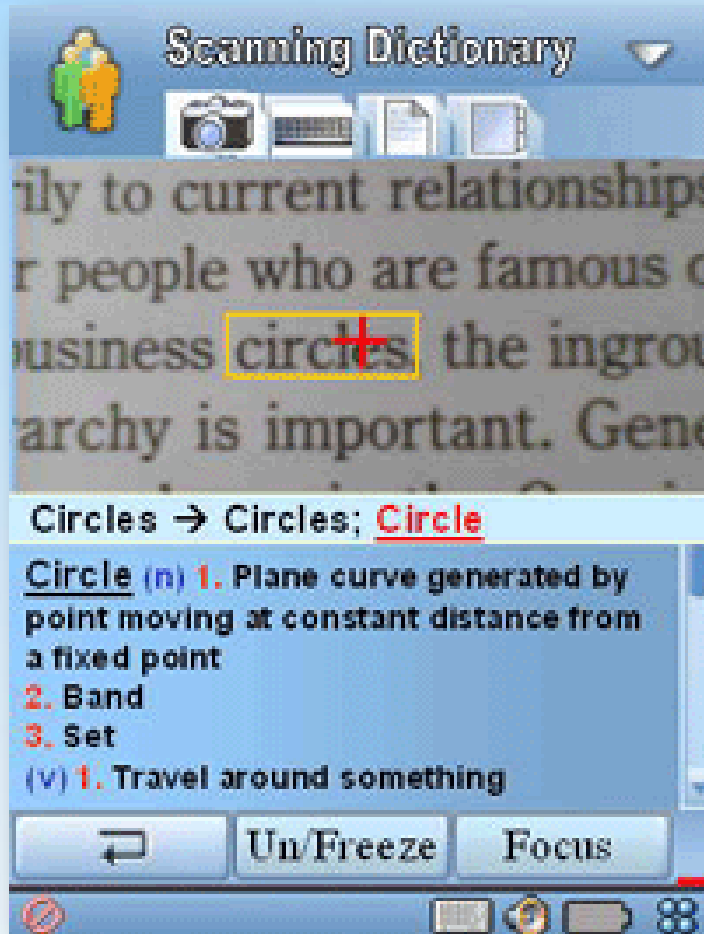

Total irRemote, Psiloc

ControlFreak, mtvoid

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Business Card Reader

SonyEricsson P990 Business Card Reader, Image Copyright Esato
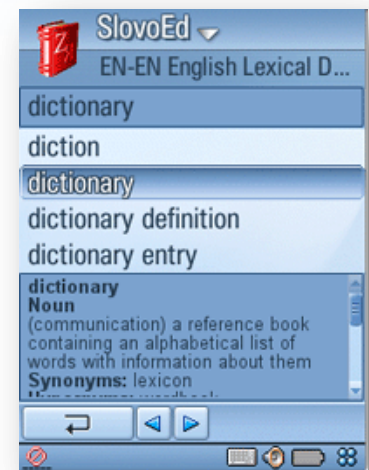
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Dictionary

Scanning Dictionary, 3G Vision

- Point the camera at any word

- Automated detection + character recognition

- → Instant translation!

- Of course – traditional dictionaries:

SlovoEd, Paragon Technologie GmbH

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Barcodes

Nokia Barcode Scanner

- 2D-Barcodes can contain text/URLs

- Real time recognition

„2D barcodes will rule the earth."

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Entertainment

ScummVM

Day of the Tentacle, Monkey Island,
Simon the Sorcerer, …
With sounds, music and speech!

Emulatoren

GameBoy, SNES,
GameGear, …

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3D Games

One – Who's Next?, Nokia

Asphalt Urban GT2, Gameloft

C2Doom, Markus Mertama
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Pandemonium,
Eidos Interactive
(2003)

- **3D hardware acceleration**
- Even without that powerful enough to run:
  - Doom, Quake, Pandemonium

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Augmented Gaming

Mozzies, Siemens Mobile

- First game: **„Mozzies"**

- Mosquitos fly around in the live camera picture

- Move your phone to target and shoot them

- Motion estimation through real-time image analysis

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Sensors

- **Nokia 5500: Acceleration sensor**

  – Built-in training application with step counter

  – **Groove Labyrinth:** Move a marble through a labyrinth – through tilting your phone!
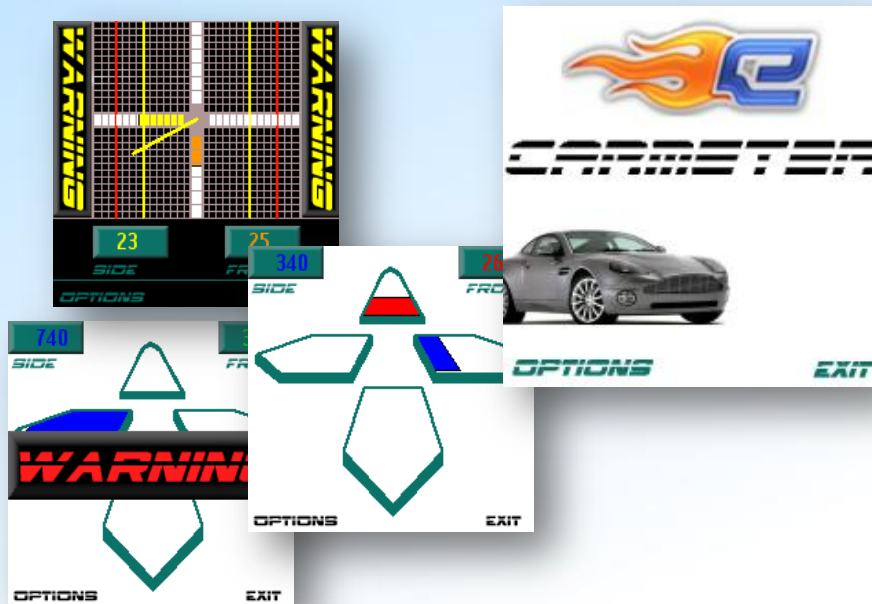

Groove Labyrinth, bit-side

Nokia 5500 Sport

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Acceleration Sensor

- **Carmeter**
  - Displays your acceleration and drift in „g"
  - For SUVs: Calculates tilt

- **gBoarder**
  - For ultimate snowboard competitions
  - Counts your jumps, crashes, ...

Carmeter (Alexander Erifiu, Mario Grammer, Martin Legath)

gBoarder (Stefan Damm, Benjamin Gmeiner)

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GPS navigation

TomTom Mobile, TomTom International BV

- Integrated GPS or external Bluetooth GPS module

- Traditional navigation software on your phone:

    - TomTom Mobile

    - Route66

    - Wayfinder

    - ...

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Immersive GPS Software

ViewRanger, Augmentra Ltd.

- Augment your surroundings

- For hiking tours, …

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Virtual Competitions

- Record race tracks with GPS (by car, running, …)

- Automatically publish them through the Internet

- "Which race tracks are available in my surroundings?"

Creates new social possibilities

- realreplay.mopius.com

RealReplay, Mopius

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That's it!
Thanks for your attention!