

**warum man aus
einem handy kein
iPhone machen kann**

(auch nicht mit usability)

man +
machine
interface
works ■

peter sikking

principal interaction architect

architect

**fits the building into the
environment, makes it function for
humans, works with engineers**

interaction architect

**fits the software into the
environment, makes it function for
humans, works with engineers**



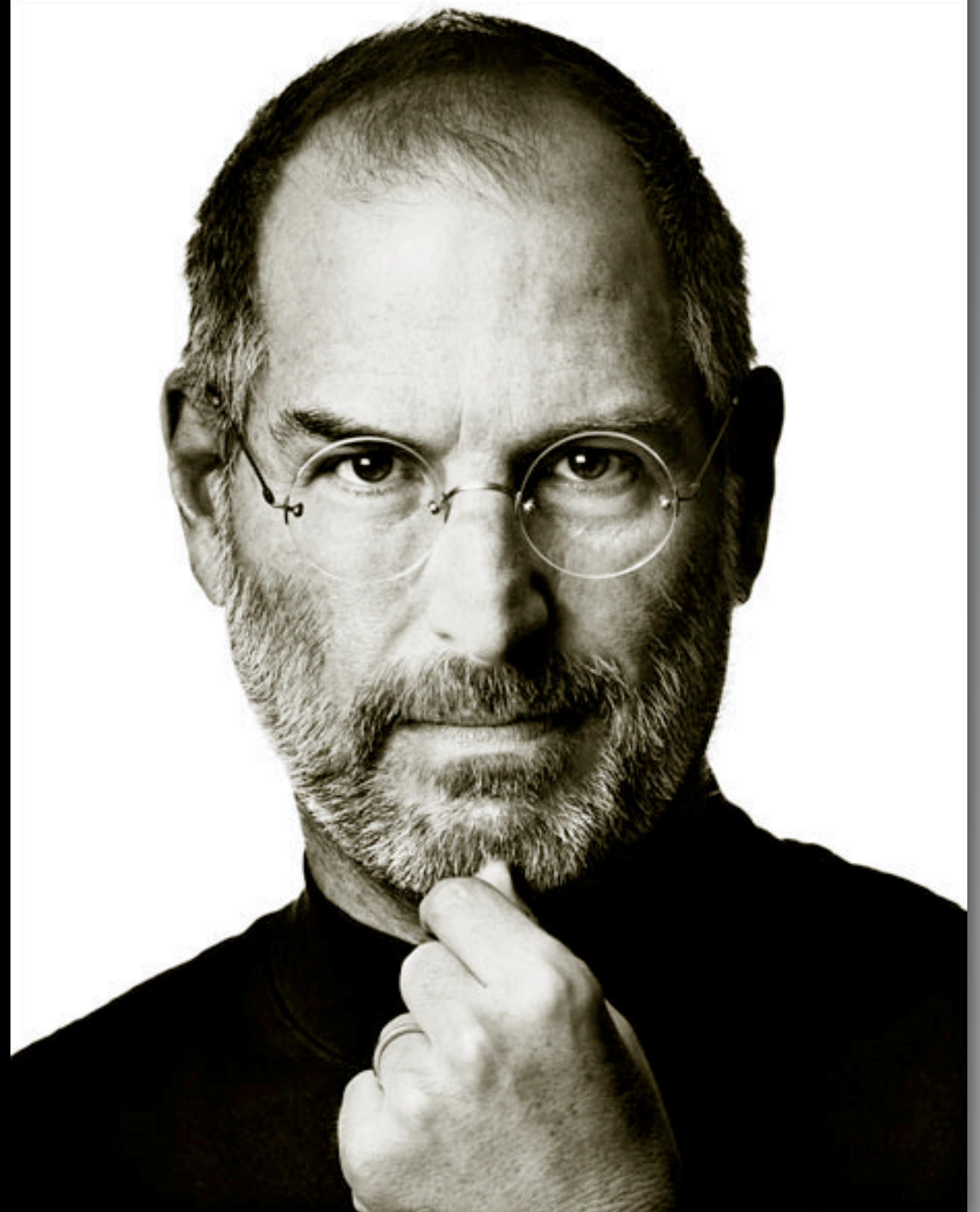
Sea Change
The Golden Age

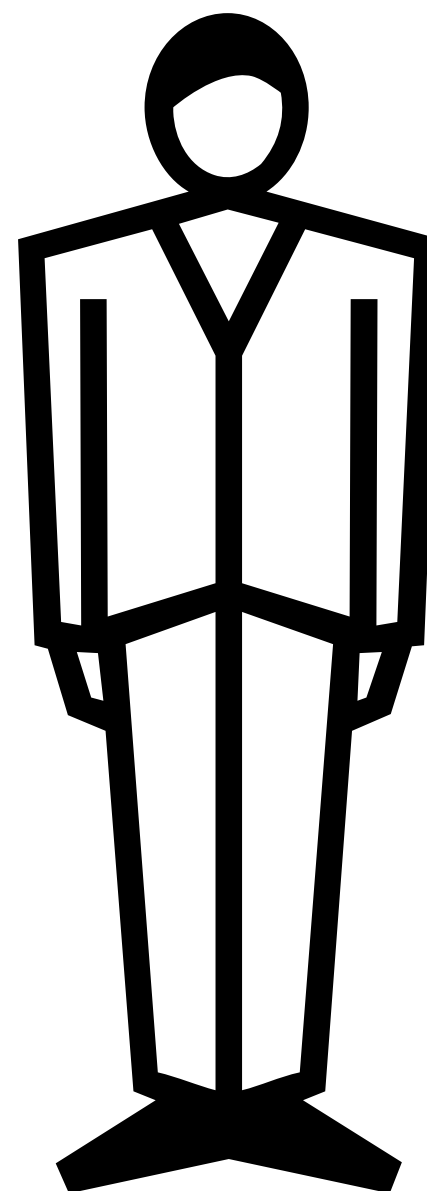
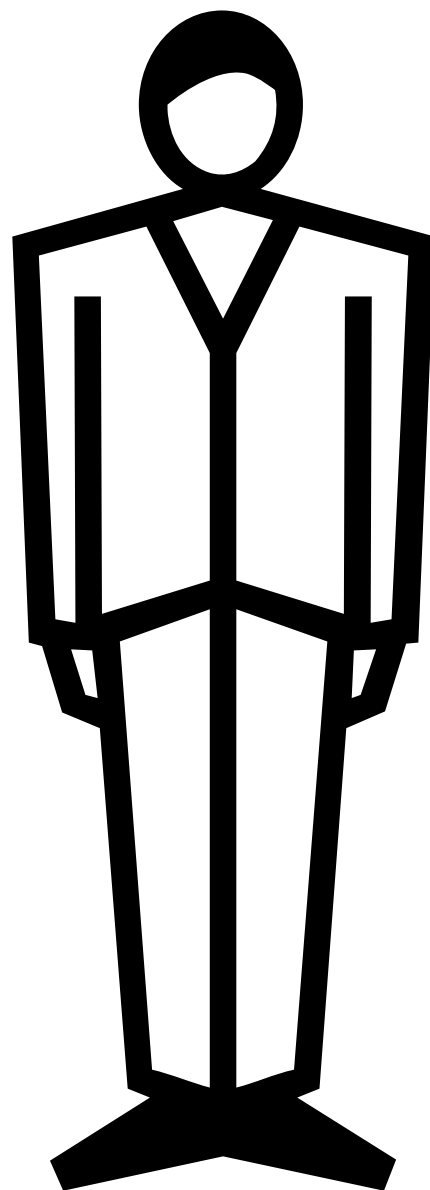
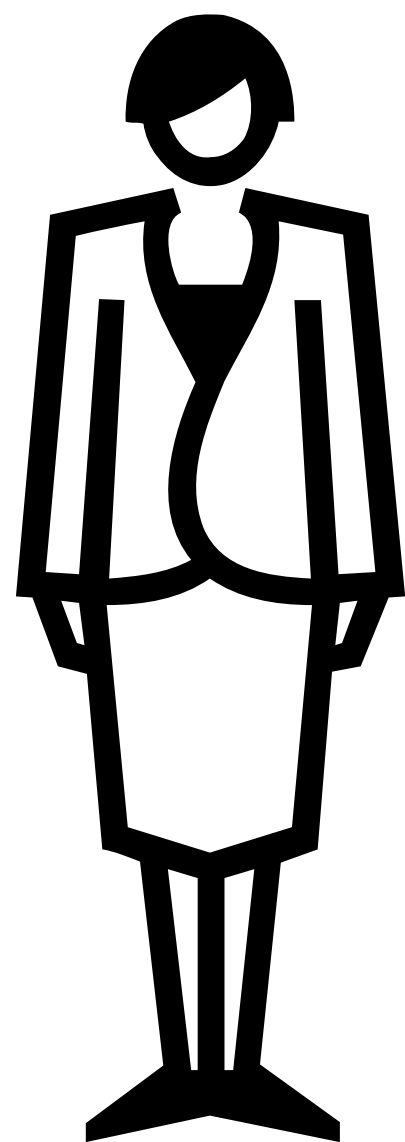
161 000 000

top 10

10

hardware





10

leadership or bust

9

product vision





9

no vision, no product

8

(really) **hardware**



8

software + hardware = one

7

features

1/3

features

Imaging and Video

- Up to 5 megapixel (2592 x 1944 pixels) camera, Carl Zeiss Optics, Tessar lens, MPEG-4 VGA video capture of up to 30 fps

Connectivity

- Direct connection to compatible TV via Nokia Video Connectivity Cable (CA-750, included in box) or wireless LAN/UPnP
- Integrated wireless LAN (802.11 b/g) and features Universal Plug and Play
- Front camera, CIF (352 x 288) sensor, DP speaker, independent name
- Bluetooth wireless technology with A2DP (Advanced Audio Distribution Profile) support
- Video call and video sharing support (via GPRS or network services)

Data Transfer*

- WCDMA 2100 (HSDPA) integrated flash memory and mass storage support (support drag and drop functionality)
- Dual Transfer Mode (DTM) stereo in-ear headphones and 3.5 mm stereo headphone plug and 3.5 mm stereo video in/outputs
- Multi slot class 11, max speed 100/107, automatic receive reduction
- EGPRS class B, multi slot class 11, max speed 236 kbps
- Local synchronization of contacts and calendar to a compatible PC using compatible connection
- Remote over-the-air synchronization
- Navigation
- Integrated hands-free speaker

Other Applications

- Personal Information Send and receive images, video clips, graphics, and business cards via Bluetooth wireless technology
- Advanced S60 PIM features including calendar, contacts, to-do list, and PIM printing
- Settings Wizard for easy configuration of e-mail, push e-mail and video sharing
- Data transfer application for transfer of PIM information to a compatible Nokia device or PC
- Wlan wizard
- Java Applications
- Nokia Web Browser with Minimap
- Audio with Nokia WAA Class keyboard (sold separately)
- Java MIDP 2.0, CLDC 1.1 (Connected Limited Device Configuration (J2ME))
- Camera: download of Java-based applications and games
- Contacts: advanced contacts database with support for multiple phone and e-mail details per entry, also supports individual pictures and groups
- Speed dialing
- Logs: keeps lists of your dialed, received, and missed calls
- Automatic redial
- Visual Radio*
- Macro focus distance 10-50 cm
- Digital music player - supports SDDS automatic macro, AAC, WMA/M4A with playlists and equalizer 1/1
- Color tones: normal, sepia, black & white, negative, vivid
- Integrated handsfree speaker
- Find out what song is playing, who sings it, and other artist information
- QMA DRM 2.0 & WMDRM support for music up to 10x (VGA up to 4x)
- Push to talk (PoC)
- Stereo FM radio (87.5-108MHz /76.90MHz)
- Enter contests and answer surveys, vote for your favourite songs
- Find out more about [Visual Radio](#)

Mobile Photography

- Image resolution: up to 5 megapixel (2592 x 1944 pixels)

- Still image file format: JPEG/EXIF

- Connectivity Cable (CA-750, included in box) or

- RealPlayer Media Player Auto focus

- Screen video playback Auto exposure, locked, streamed or

- Exposure compensation: +2 ~ -2EV at 0.5 step

- Supports drag and drop functionality

- Scene: automatic, sunny, cloudy, incandescent, fluorescent

- Color tones: normal, sepia, black & white, negative,

- Zoom: Digital up to 20x (5 megapixel up to 6x)

- Video resolution: up to 640x480 at 30

- Video format: H.263, H.264, MPEG-4

- Video playback: H.263, H.264, MPEG-4

- Video sharing: H.263, H.264, MPEG-4

- Video call: H.263, H.264, MPEG-4

- Video recording: H.263, H.264, MPEG-4

- Video playback: H.263, H.264, MPEG-4

- Video sharing: H.263, H.264, MPEG-4

- Video call: H.263, H.264, MPEG-4

- Video recording: H.263, H.264, MPEG-4

- Video playback: H.263, H.264, MPEG-4

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- Video playback: H.263, H.264, MPEG-4

7

mature on features

6

joy of use

no gimmicks

please

fluent interaction

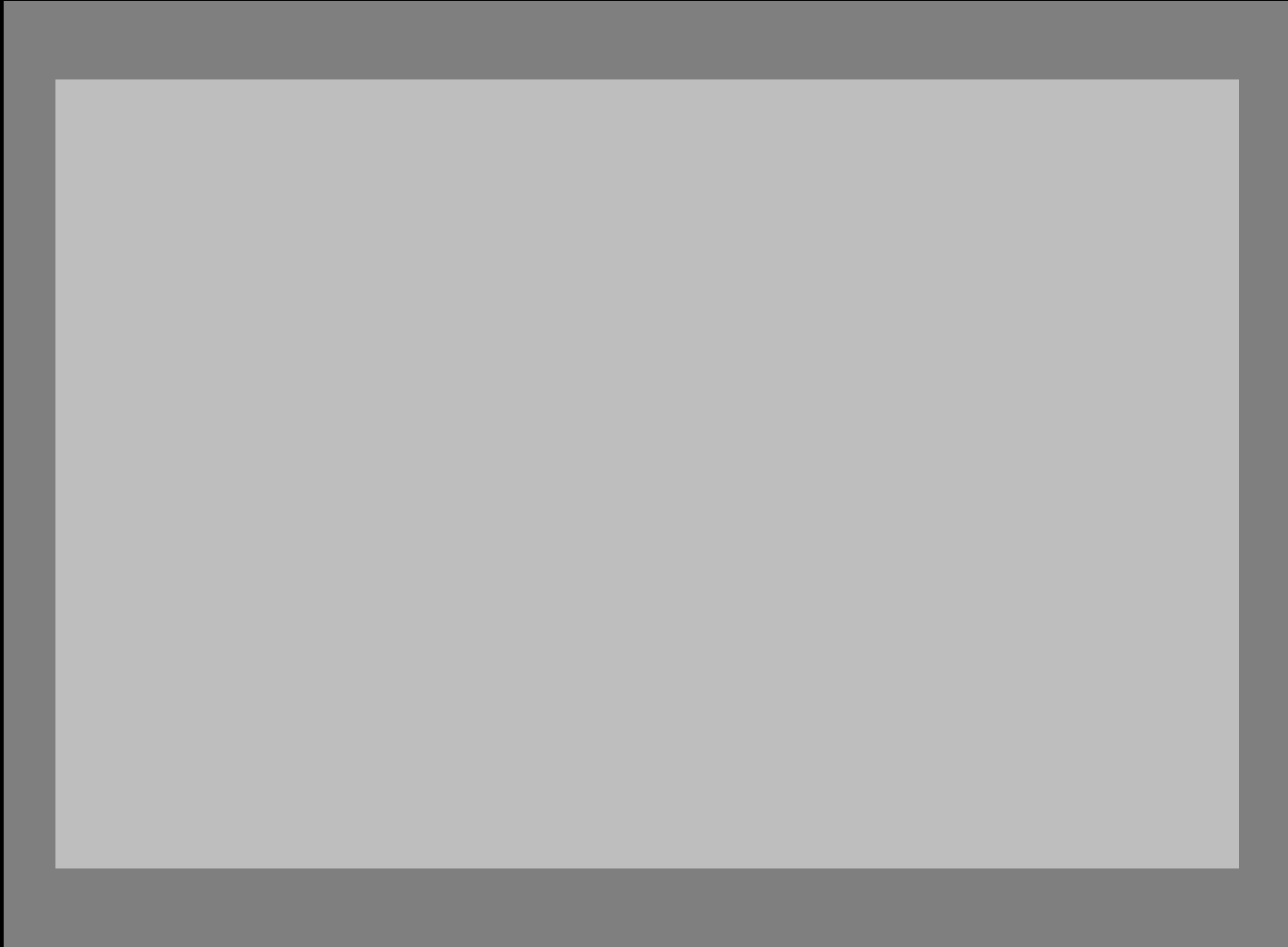
clear flow

6

functionalism is not enough

5

display



computer or mobile?

5

ambiguous device

4

paradigm shift

**lists, grids +
options menus**







4

full use of full-screen

3

telephone?



secondary

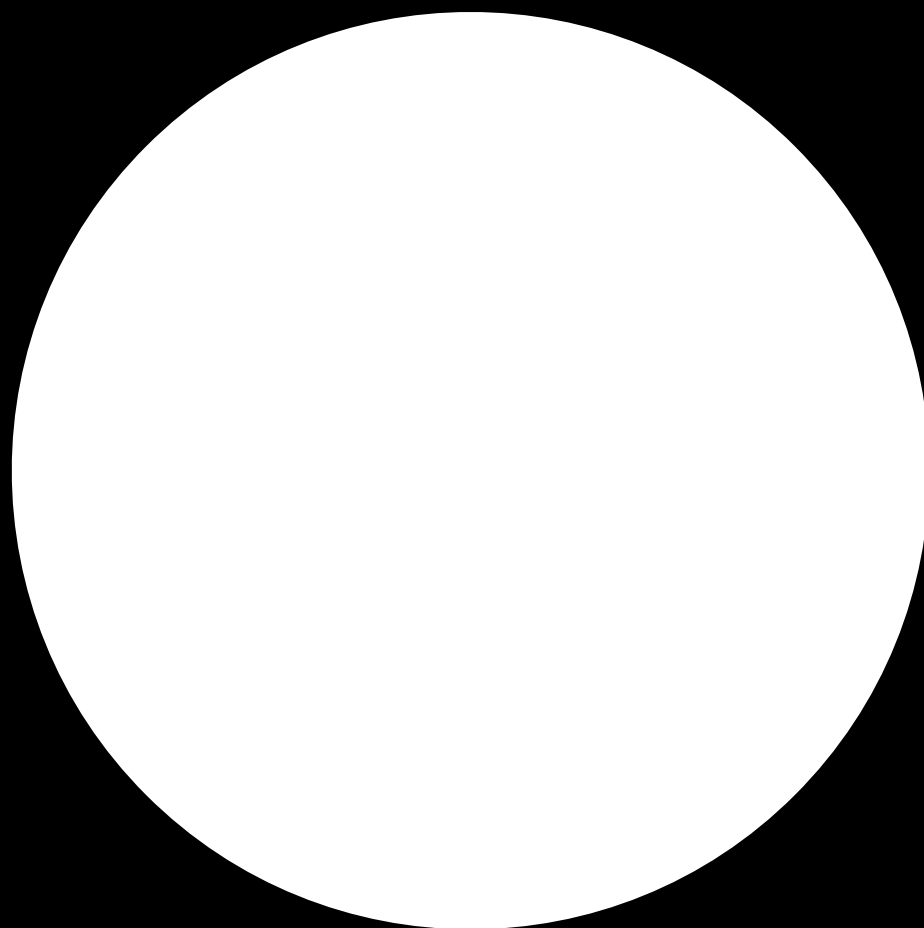
iPhone?

3

don't call it a...

2

holistic



2

einfach, holistisch, gut

1

jump factor



innovation

conceptual



usability

empirical

**usability +
interaction design**

alles

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