Goldmedia Mobile Life Report 2012

Mobile Life in the 21st century
Status quo and outlook

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Goldmedia GmbH

Media Consulting & Research

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Goldmedia-Report “Mobile Life 2012“

Content

1. Executive Summary: "Mobile Life 2012"

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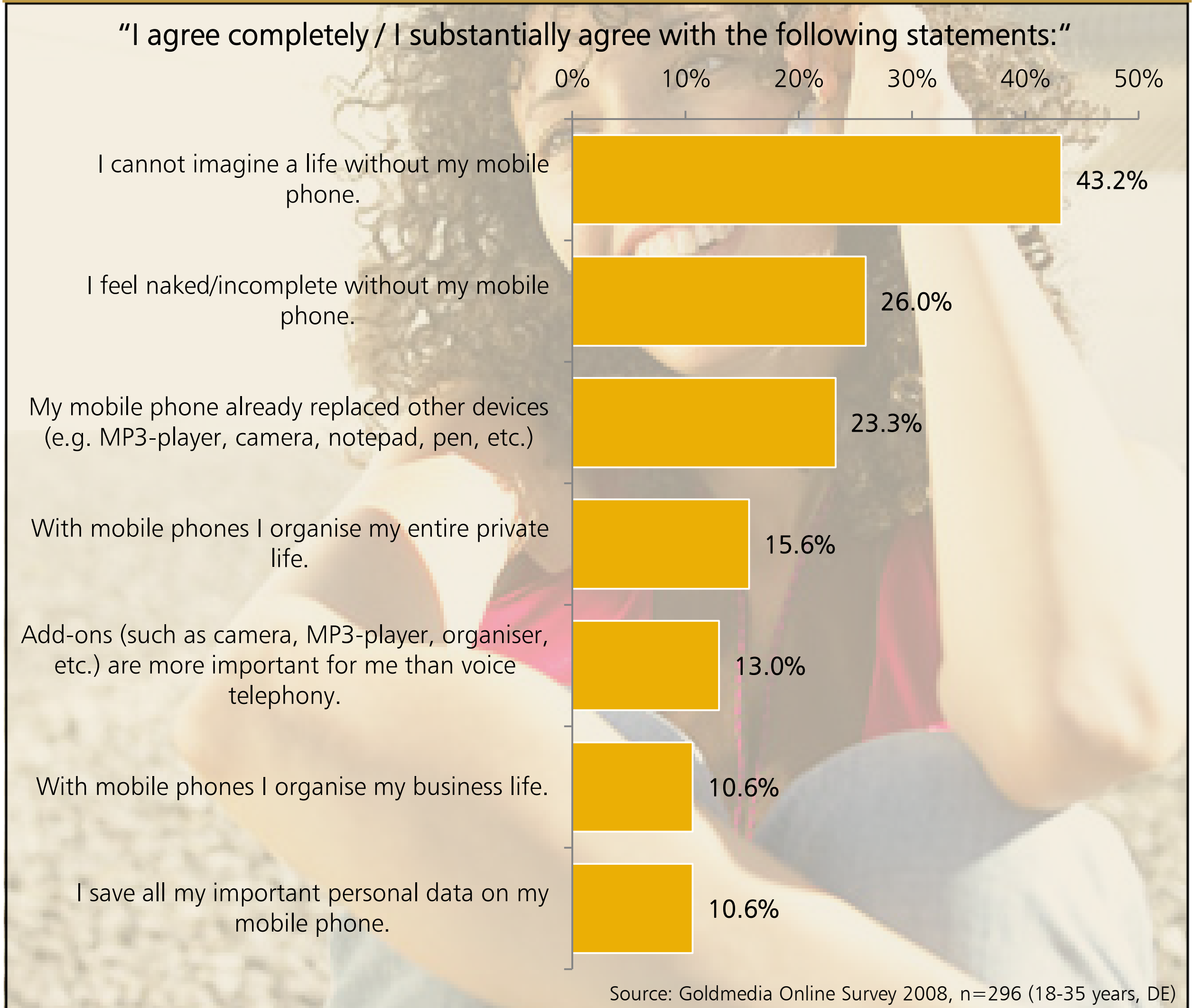
Mobile phones are part of the everyday life!

Importance of mobile handsets in Germany 2008



Online survey

- Almost half of respondents cannot imagine a life without their mobile phone, ¼ feel "naked" without their handset.
- One quarter already replaced different devices such as MP3-players, cameras, etc. by mobile phones.
- Only ~10% use mobile handsets to organise their private and business life!

Conclusion

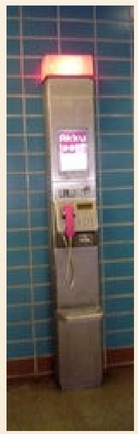
- **Mobile phones are the № 4 medium in Germany right after Internet, PC and TV.**

1. Executive Summary: “Mobile Life 2012“

Communication habits and social behaviour has changed!

Communication environment change

- Being “**always on**“ gives users the feeling of “**being in demand**“ and “**needed**“



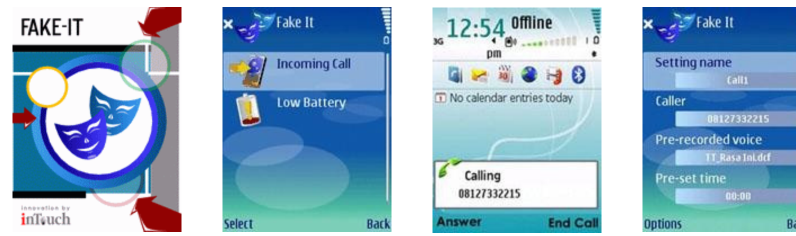
- Artificial creation of “public communication spaces“ helps people to play down insecurity or social isolation: Every 4th confessed to having already simulated a telephone call!*

*Source: James E. Katz „Mobile Kommunikation und die Transformation des Alltagslebens: Die nächste Phase in der Mobiltelefon-Forschung. In: Glotz/Bertschi/Locke (Hrsg.): Daumenkultur.

Impacts on social behaviour

- Rise of new business ideas such as “Fake-It”:

“With Fake-It, now you can make your phone receive important calls from your wife or your boss (shown as Caller ID), when you need an excuse to leave a boring meeting.”



Source: www.clickapps.com/moreinfo.htm?pid=15835&section=S60V3

- Social respect and appropriateness are declining: Talking by phone or listening to music in public transport, checking mails over smartphone in meetings or even answering “urgent calls“ during a romantic candlelit dinner is becoming more and more normal.
- “Acoustic environmental pollution”: 69% annoyed by people talking on their phone in public, 63% bothered by ringtones!*

Source: Survey by Aris for BITKOM 2008, n=1,001 (14+ years in DE)

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2. Overview: “Mobile Life“

Mobile Life encompasses all mobile B2C services & applications!

Services, features and applications

Information services
(push services e.g. news over SMS/MMS, web browser, mobile search etc.)

Communication services
(SMS/MMS, e-mail, (video) telephony, VoIP, instant messaging, chat etc.)

Multimedia
(MP3-player, videoplayer, photo camera, radio, mobile TV, etc.)

Transaction services
(mobile commerce, mobile payment, mobile ticketing)

Personal Assistant
(address books, calenders, etc.)

Special Applications
(barcode scanner, employee locating, etc.)

Location/position-based services
(navigation, fleet management and other location-based services)

Entertainment services
(games, communities, gambling, etc.)

Information memory
(services for data storage such as office documents, eBooks, password managers, etc.)

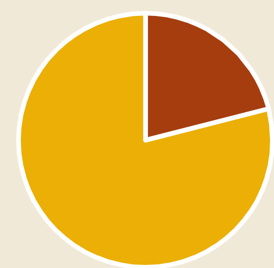
Data transfer/synchronisation
(…with other mobiles or other devices such as computers, laptops, MP3-players, etc. (SyncML, ActiveSync, Object Push…)

Source: Goldmedia Analysis 2008

Status quo & outlook

- Constant development and convergence of mobile features and services
- Traditional services (such as SMS and voice telephony) could be cannibalised by new features and applications (such as mobile instant messaging or Voice2Text)
- Voice telephony still important, but data services will catch up:

Share of data service revenue in Western Europe 2008



Data service ARPU/month: 7-8 Euros

Source: Goldmedia Estimation 2008

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3.1 Technical conditions

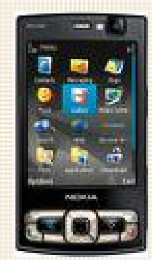
Growing usability, functionality and storage capacity!

Development of mobile devices and technologies in Germany

A-Net	B-Net	C-Net	D-Net	E-Net	UMTS...
1958	1972	1986	1992	1994	2000...

Source: Goldmedia / Focus Handygeschichte 2008

Declining size and weight, affordable prices, intuitive usability & easy handling

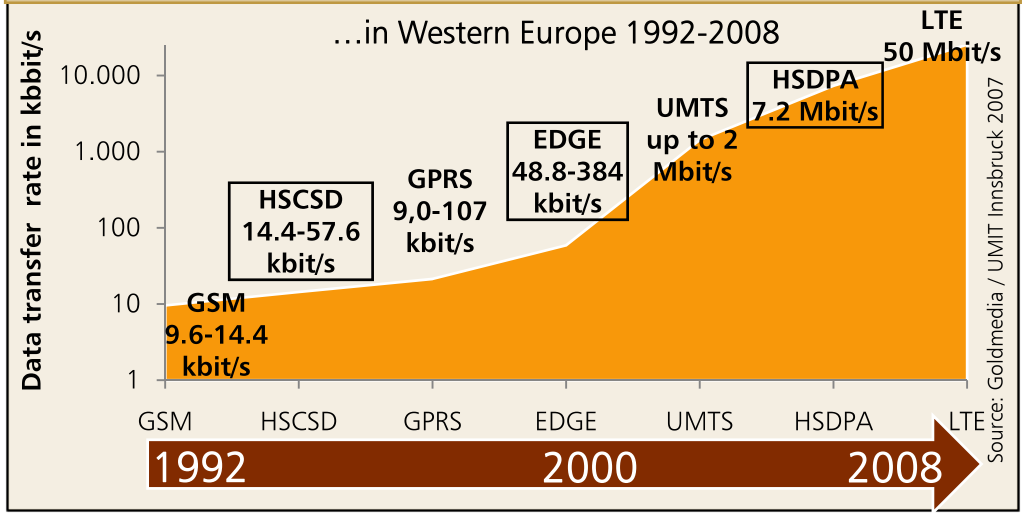


Increasing display resolution, growing storage capacity, integration of multi-media tools (music & video player, cameras, etc.)

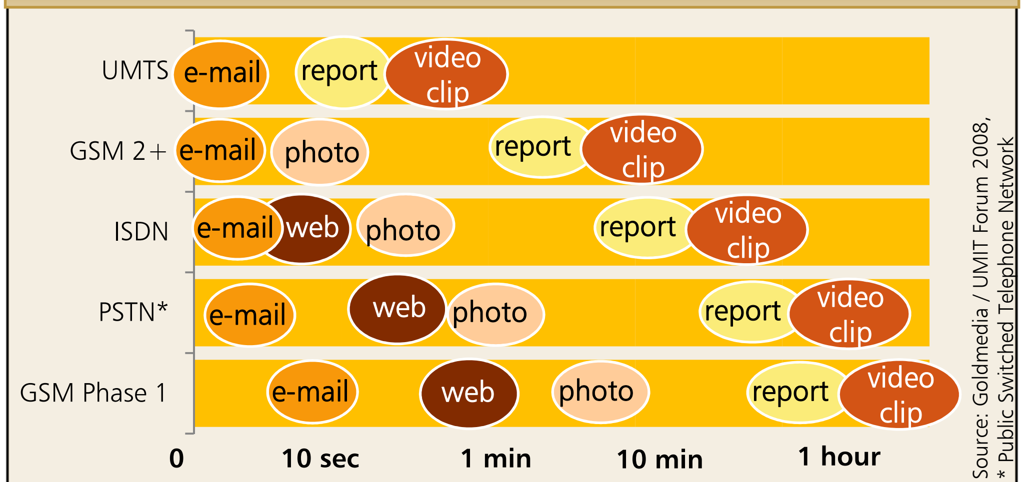
3.1 Technical conditions

Data transfer rate increases as transmission time declines!

Development of data transfer rates



Transmission time by channel



Upgrade of standards

- A-, B- and C-net = analogue nets
- D and E-net first digital nets with GSM standard (2G): rollout in 1992 led to a rapid diffusion of mobile telephony. Over 80% (~3bn people in <200 countries) use GSM.
- GSM upgrades: GPRS, EDGE (EDGE Evolution), CSD (HSCSD)
- Launch of UMTS (3G) in Germany:
  → auction of licenses in 2000 (~50bn €)
  → 1st commercial offers in 2004
- UMTS Upgrades: HSPA (High Speed Packet Access), HSDPA, HSUPA, HSPA+
- Coming soon: LTE (Long Term Evolution) and HSOPA (Super 3G and 4G)

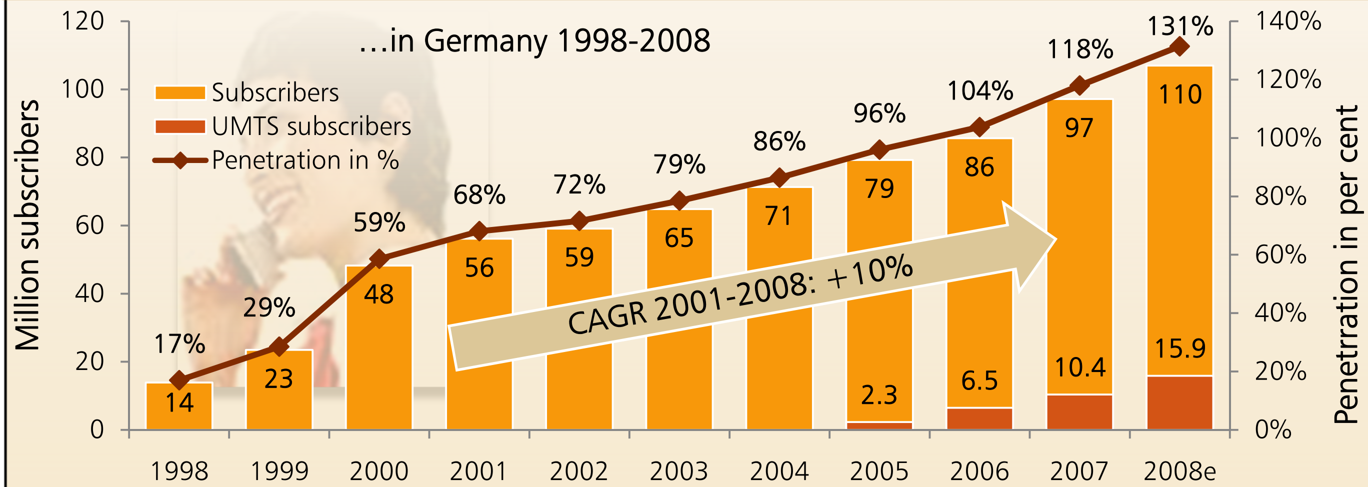
Conclusion

- **Transmission time dropped from hours to seconds! Data transfer rates increased from 9.6 kbit/s to 25Mbit/s within 16 years!**
- **Data rates double every year!**

3.2 Economic parameters: Mobile market

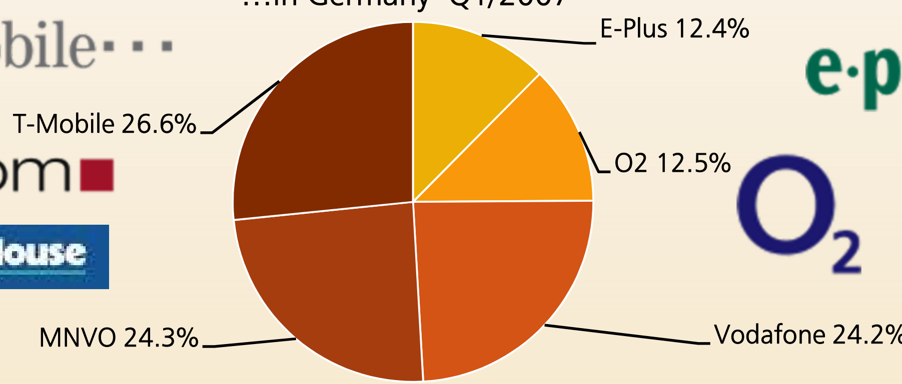
High penetration and strong market power of MNOs in DE!

№ of subscriptions & market penetration



Source: BITKOM 2008/Goldmedia, e=estimation

MNO & MVNO market share



Source: Federal Network Agency 2007

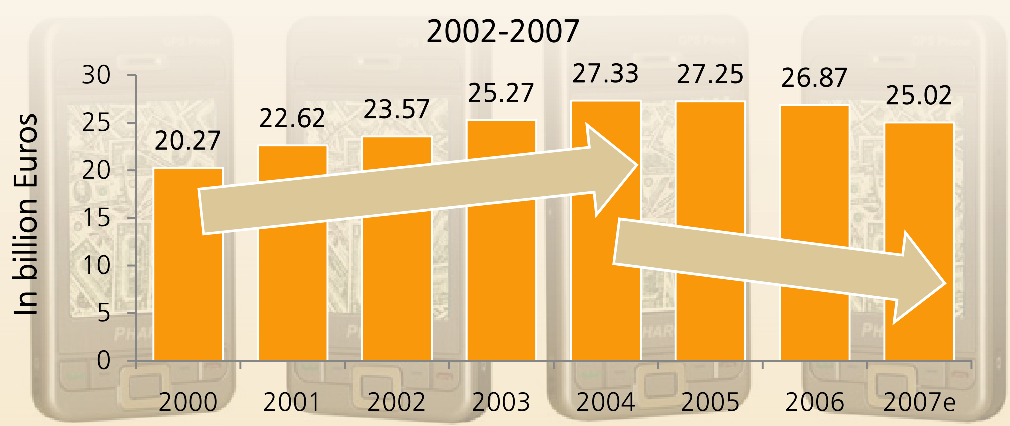
Summary

- Mobile subscriptions doubled within seven years (2000-2007).
- Mobile penetration: more than 125% in Q2/2008!
- Figures of inactive members (e.g. un-used but registered SIM cards from prepaid providers) are included.
- Significant growth in 3G subscriber figures since rollout of UMTS services in 2005 in Germany.
- Strong market power of the MNOs: E-Plus, T-Mobile, Vodafone and O2 share 75% of the entire market!

3.2 Economic parameters: Mobile market

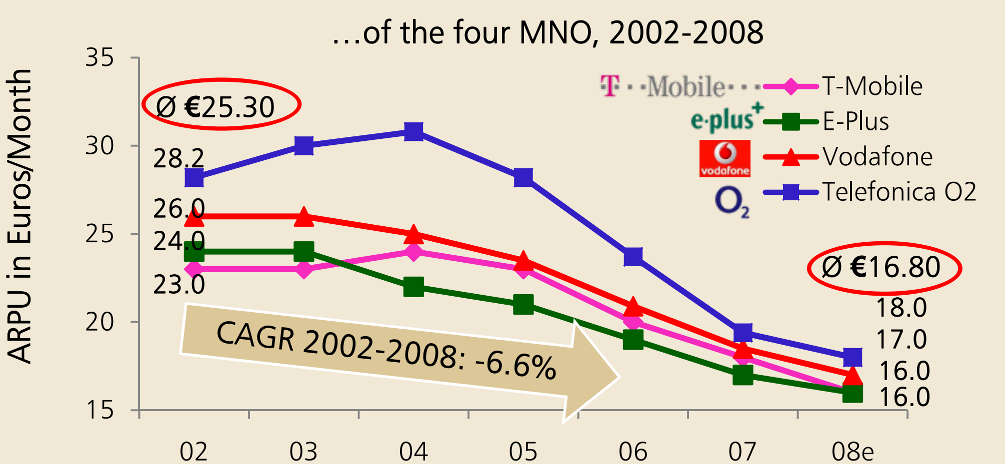
Shrinking ARPU and revenue in Germany!

Total mobile revenues in Germany



Source: Federal Network Agency 2007, e=estimation Federal Network Agency

Development of ARPU in Germany



Source: Goldmedia 2008 (averaged, weighted APRU based on nº of subscriptions (company data), e=estimation)

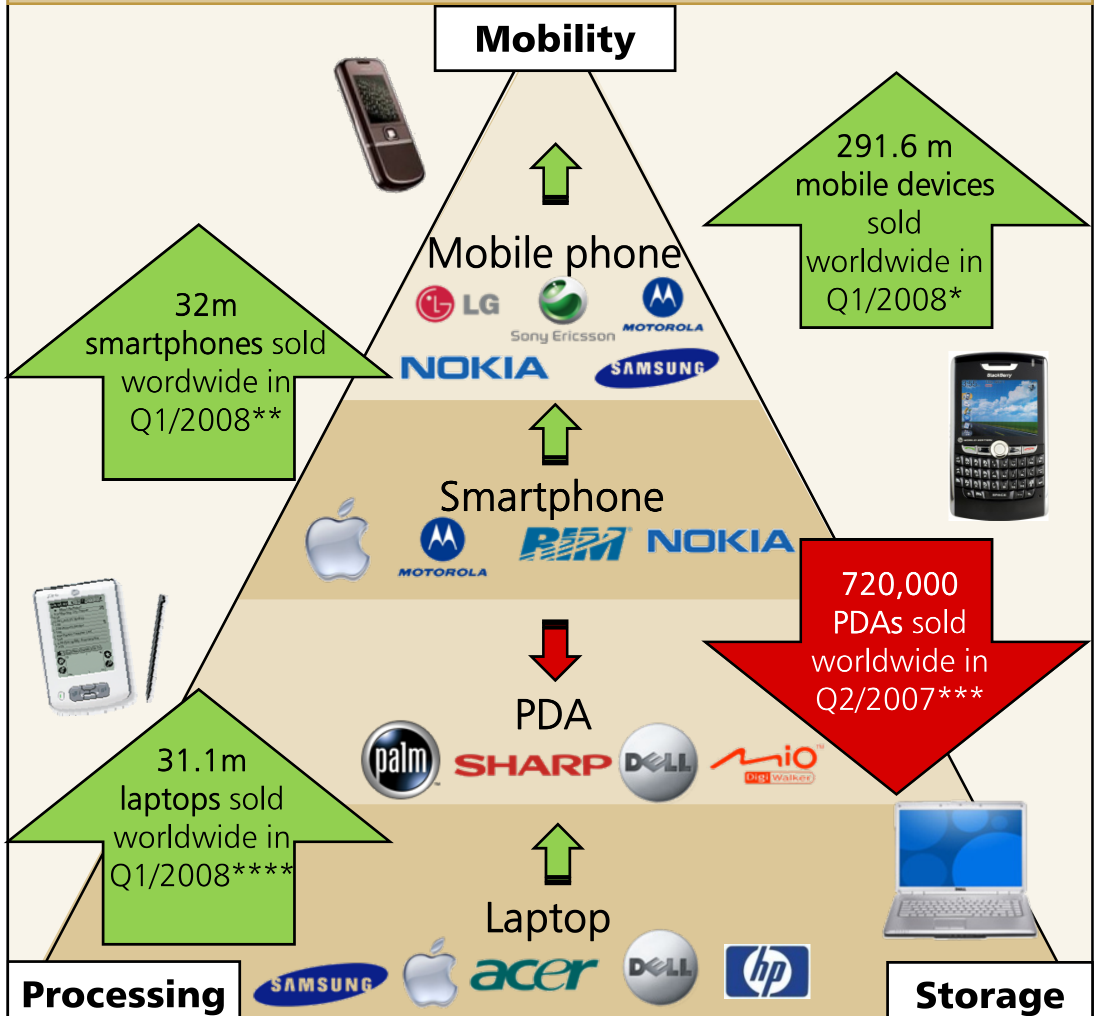
Conclusion

- Decrease in total mobile revenues while subscriber figures still grow.
- ARPU (Average Revenue Per User) declines constantly, CAGR -6.6%
- ARPU: Loss of 8.50 € (one third!) within six years from 2002-2008 due to the market entry of mobile discounters such as Simyo, Blau, Fonic, callmobile, Congstar, etc.) since 2005.

3.3 Market development end user devices

Mobile and smartphones are more popular than PDAs!

Development of mobile devices



* Source: IDC (2008), ** Source: Gartner (2008),
*** Source: IDC (2007) , **** Source: Display Search (2008)

Results

- Mobile phones, smartphones and laptop sales increasing, PDA losing more and more market share.
- Worldwide, 11% of mobile handsets sold in 2007 were smartphones.
- Diversification of functions and forms has blurred the boundaries between mobile devices.
- Trends: multimedia mobile phones with focus on mobile TV, radio, music, gaming, etc. (e.g. iPhone), organizers with web browser and office applications (e.g. BlackBerry), mobile navigation devices (e.g. Nüvifone)

Conclusions

- **Trend is towards specialised mobile devices! Mobile market characterised by short life cycles of mobile devices & enormous demand for innovation!**

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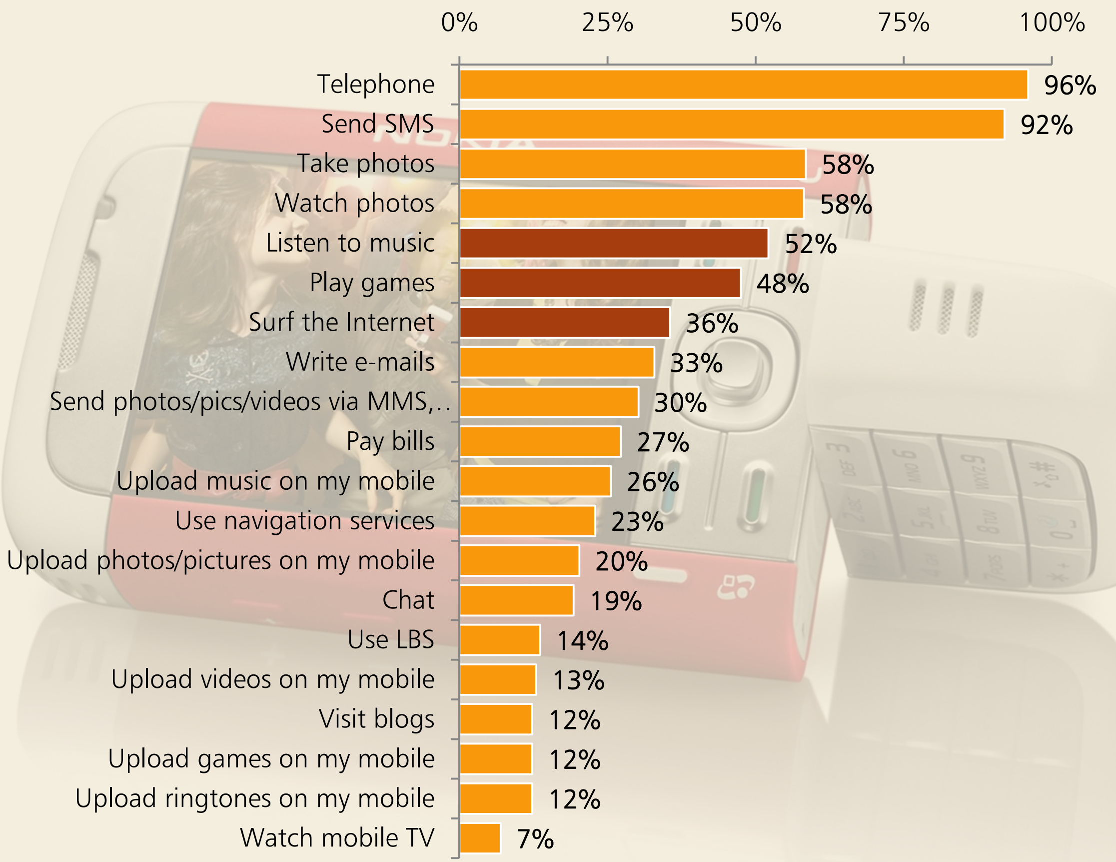
4. Useage habits in Germany

Mobile music, games and internet most popular functions!

Usage of m-entertainment services in DE 2008

"Which applications/functions do you use on your mobile phone at least once a month or even more frequently?"

Basis: Men and women in DE between 18-35 years (n=296)



Source: Goldmedia Online Survey 2008, n=296 (18-35 years, DE)

Conclusions

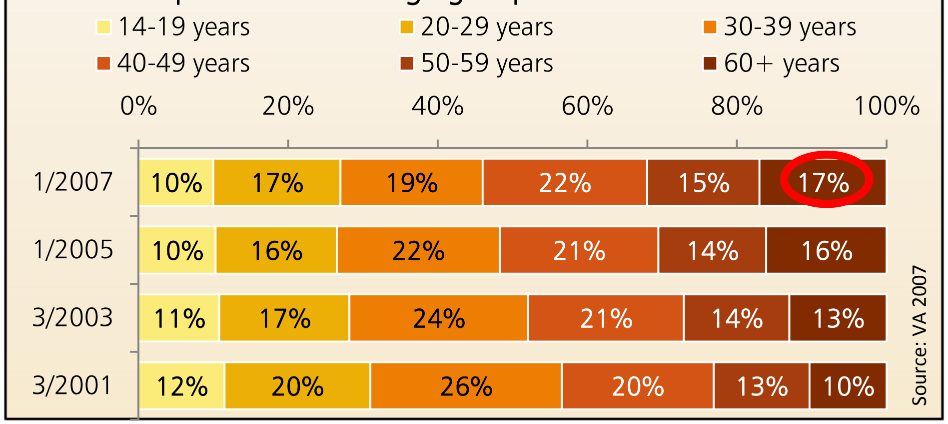
- The Goldmedia Online Survey proves that voice telephony is still the most-frequently used function on mobile handsets (96%).
- SMS is the № 1 non-voice-application (92%).
- More than half of all respondents take and view photos or listen to music at least once a month.
- Less than 50% play mobile games regularly, about 1/3 uses internet & write e-mails at least once a month.
- Navigation services and LBS are not very popular yet.
- Mobile TV brings up the rear of all mobile entertainment services investigated (7%).

4. Usage habits in Germany

Young consumers love mobiles, SMS favourite data service!

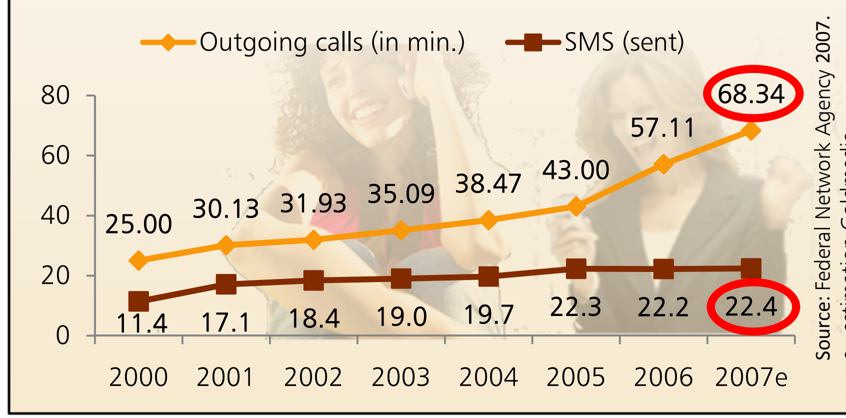
Mobile phone usage in DE

Spread between age groups in DE 2001-2007



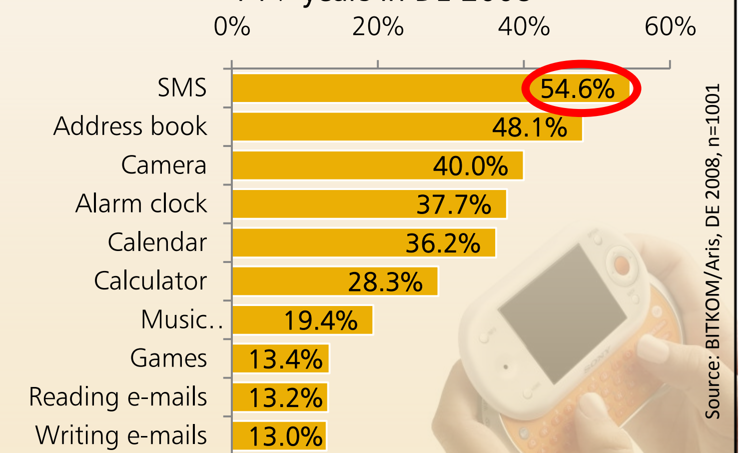
Development of talk time & SMS

...2000-2007 in DE in bn minutes / bn units



Top 10 mobile phone features

Most frequently-used add-ons,
14+ years in DE 2008



Conclusions

- Young consumers (14-29 years) are an attractive target group with ~13m users.
- Due to demographic change, more and more elderly people (40+) use mobile phones → Challenge: services and mobile devices should be adjusted for different target and age groups!
- Most-used features (after voice telephony): SMS, address book and camera.
- Development of SMS sent (2000-2007): 11.4-22.4bn

Senior device "easyuse"

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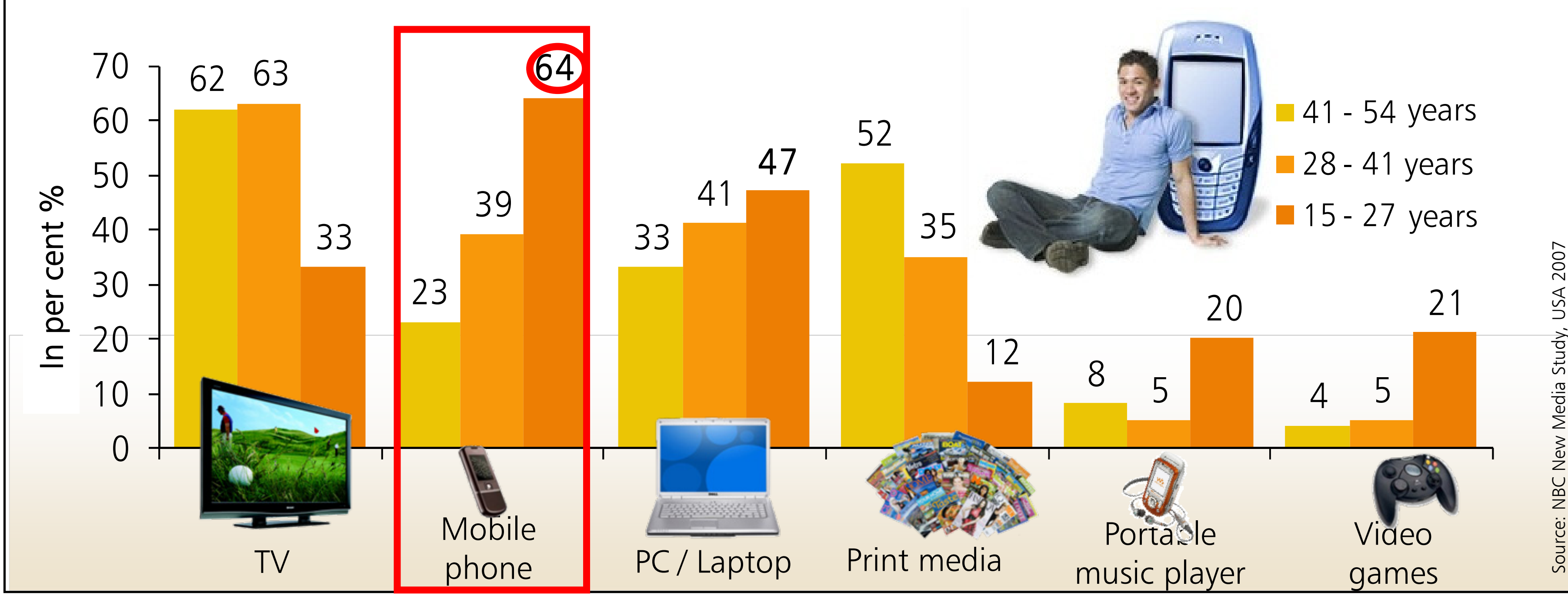
5.1 Mobile entertainment

2/3 of 15-27 year olds cannot live without their mobile!

Comparison of generations: Media preferences in the USA 2007

Research question: “I cannot live without...“
Basis: Men and women between 15-54 years



Conclusions

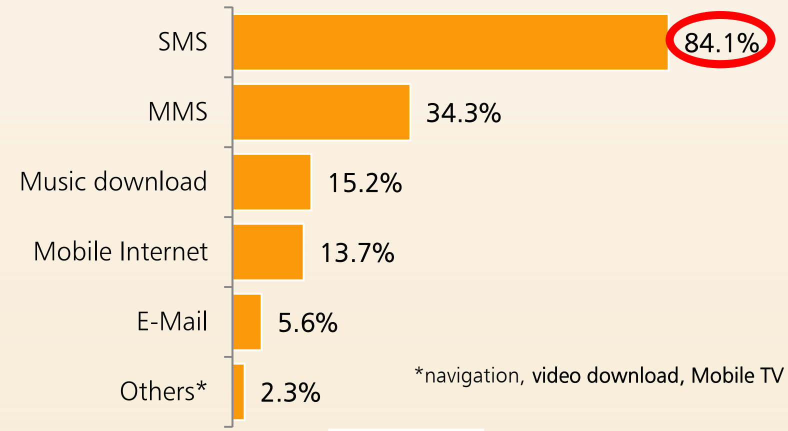
- The youngest age group has the strongest ties to mobile handsets!
- People prefer media with which they grew up: Mobile technology, internet and games among 15-24 year olds.
- 41-54 year olds rather use traditional media such as TV, radio or print products.

5.1 Mobile TV and mobile radio

Radio is popular! Mobile TV (DMB/DVB-H) failed in DE!

Most frequently-used data services

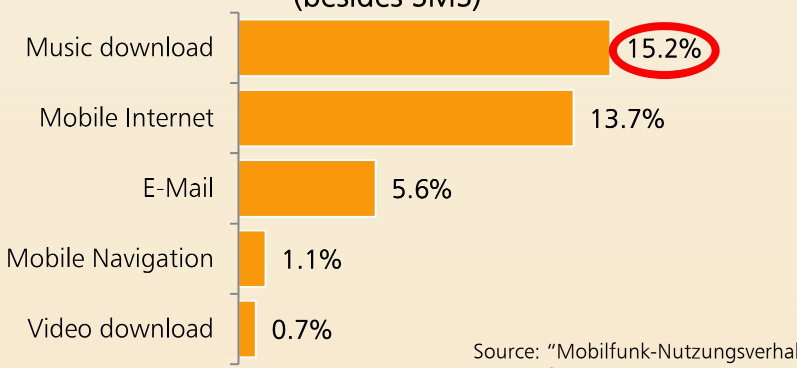
Most frequently-used data service in DE 2008



*navigation, video download, Mobile TV

Without SMS

Most frequently-used data service in DE 2008 (besides SMS)

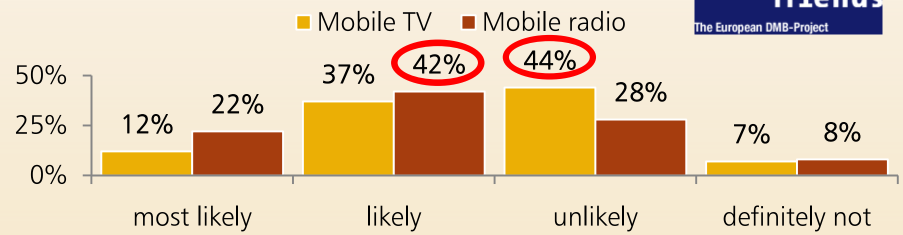


Source: "Mobilfunk-Nutzungsverhalten in Deutschland 2008", TNS Infratest /E-Plus Group, n=1,502

Interest in mobile radio and TV 2006

"Do you intend to use commercial mobile TV and mobile radio services in future?"

mi friends The European DMB-Project



Source: SOFI 2006, n=180 in DE

Conclusions

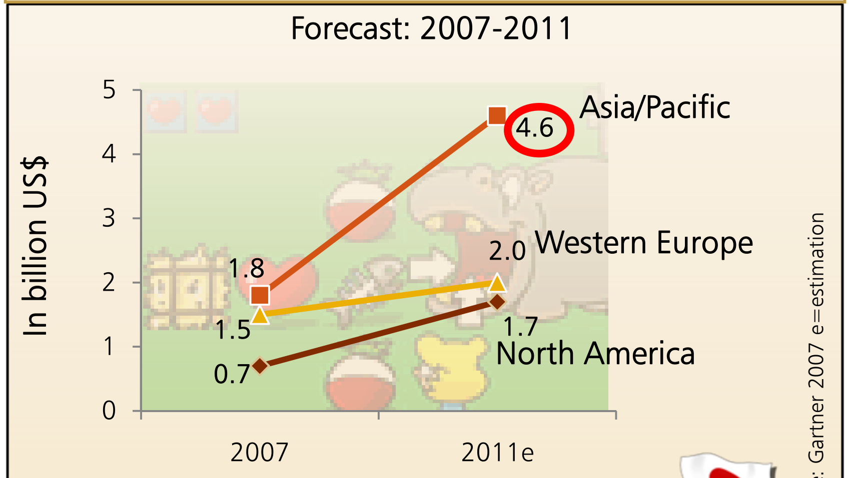
- Radio is part of media-usage habit!
- Video downloads are not very relevant; mobile TV is still in its infancy: 32% of the users are not interested at all, almost ½ would not accept extra costs*
- watcha! (1st commercial mobile TV over DMB, launched in May 2006) shut down its service in May 2008; Mobile 3.0 (German consortium which planned to launch a mobile TV subscription service over DVB-H) ceased before its start in mid 2008
- Mi Friends trial and commercial offers (S-DMB in South Korea) show high uptake of mobile radio services

*Source: "Mobile usage habits in Germany 2008", TNS Infratest /E-Plus Group, n=1,502

5.1 Mobile games

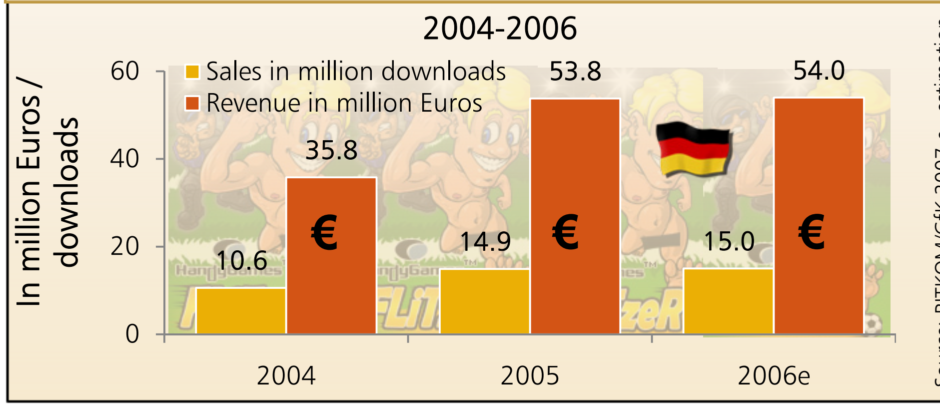
Moderate growth in DE, pre-installed games are preferred!

Mobile games revenue by region



Japan is the largest market with 2.3bn US$ revenue in 2008!

Mobile games revenue in Germany



Mobile games advertising

- Revenue from ad-financed mobile games is estimated to grow from 97m US$ (2007) to 1.3bn US$ (2012) worldwide*.
- This kind of advertising will become popular and accepted by users. It could boost usage of mobile games.

*Source: eMarketer 2008

Status quo

- In Q2/2008, worldwide ~10.9m people used their mobile phone for playing mobile games*.
- Only 5.8% of the total amount of digital gamers in Germany (which make out more than 1/3 of all gamers) use their mobile handset for playing!**
- Special mobile-gaming end-user devices (a mix between games consoles and mobile phones) are less than successful.

Nokia N-Gage

- Challenge: Adjustment of games to make them compatible for every end-user device.

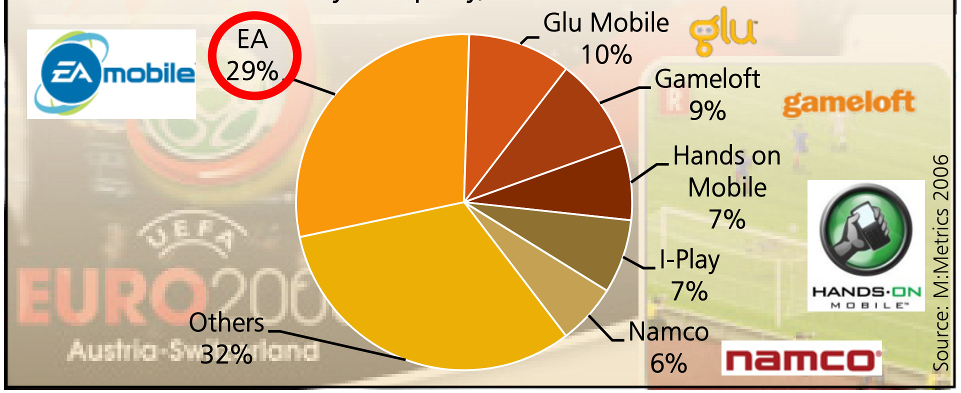
*Source: ComScore 2008, **BITKOM/Ipsos 2008

5.1 Mobile games

Users prefer classic games! EA Mobile is the market leader!

Mobile games market share

…by company, worldwide 2006



Top 5 mobile games

Most downloaded games, worldwide 2006

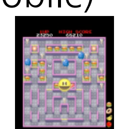
1. Tetris (EA Mobile)

2. Bejeweled (EA Mobile)

3. Platinum Solitaire (Gameloft)

4. World Poker (Hands on Mobile)

5. Pac-Man (Namco)



Source: M:Metrics 2006

Development of mobile games

- Since Nokia's implementation of the first mobile game "Snake" there has been a constant development of new mobile games
- Top mobile games download lists show that users prefer simple and classic games on their mobile phones!

Conclusions

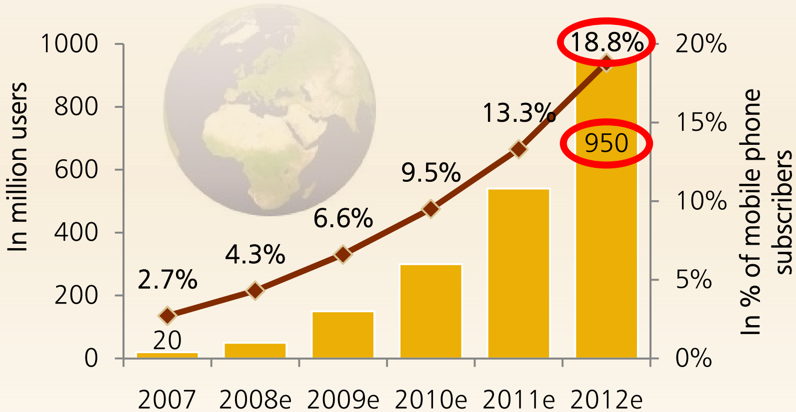
- **Simple and classic games dominate the mobile games market.**
- **Users are not willing to "pay to play", they prefer pre-installed or ad-sponsored (i.e., free of charge) games.**

5.1 Mobile social networks & communities

Social networks: Drivers of the mobile internet?

Users of mobile social networks

…in million users and % of mobile phone subscribers, Forecast: 2007-2012 (worldwide)



Source: Pyramid Research 2008, eMarketer 2008 e=estimation

German-speaking networks

Network	Mobile?	Language
StudiVZ/SchülerVZ/MeinVZ	no	-
Wer-Kennt-Wen	no	-
Lokalisten	yes	German
SchülerCC/SchülerRegister	no	-
Kwick!	partly	German
Jappy	yes	German
XING	yes	German
MySpace/ Facebook	yes	English
Orkut	yes	German
Twitter	yes	English
Friendster	yes	English
Bebo	partly	English
Netlog	yes	German (+20 other languages)

Source: www.mehrblog.net, 28.07.2008

Summary

- Estimated global revenue in 2012: 28.9-52bn US$*
- 12.3m users in 2007 in the USA and Western EU**
- Mobile social communities and networks are among the most popular mobile applications: 40% of the entire mobile internet traffic worldwide goes to social networks***
- Leading mobile social networks (worldwide): MySpace Mobile, Facebook, airG, Mocospace, myGamma, itsmy.com
- High market potential in Germany! Boom of new mobile social networks such as Aka-Aki (launched in March 2008), Qeep, Gofresh (itymy.com), Rock-it-mobile, etc.

* Worldwide forecast by Informa/ PERREY „Mobile Social Networking" 2008, **Source: M:Metrics June 2007, ***Source: Opera „State of the Mobile Web" 2008

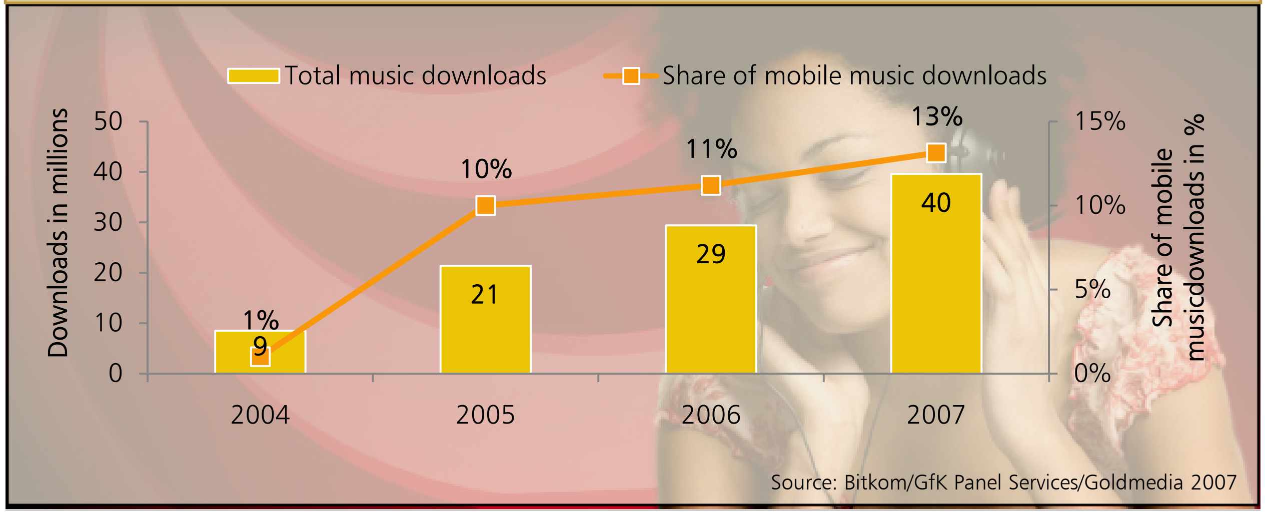
Conclusion

- **Mobile social networks could be an opportunity to drive mobile internet usage to a level comparable with online internet usage!**

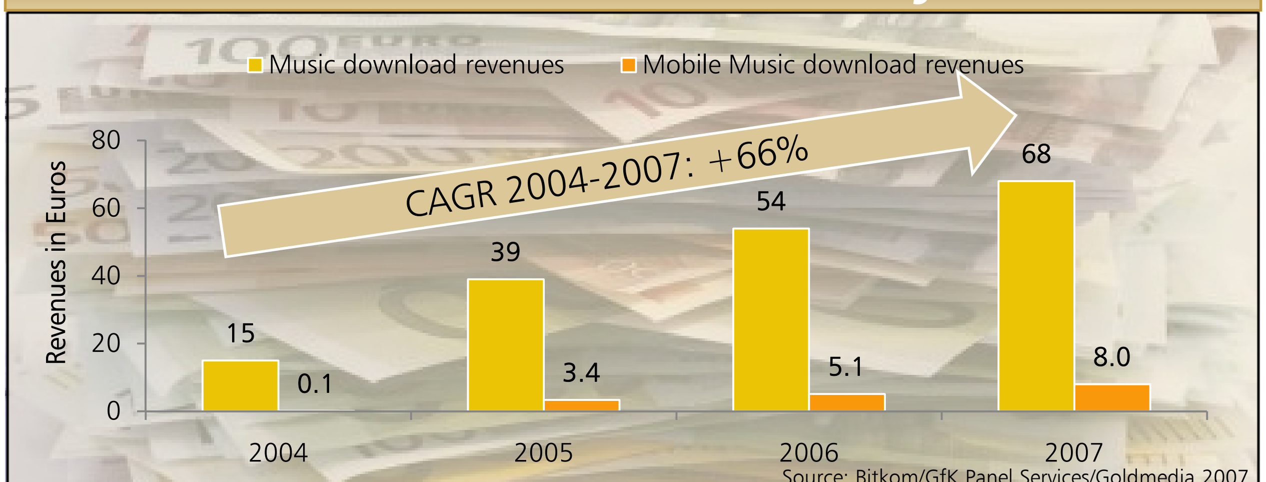
5.1 Mobile music

Further growth due to flat rate business models?

Paid music downloads in Germany 2004-2007



Mobile music revenues in Germany 2004-2007



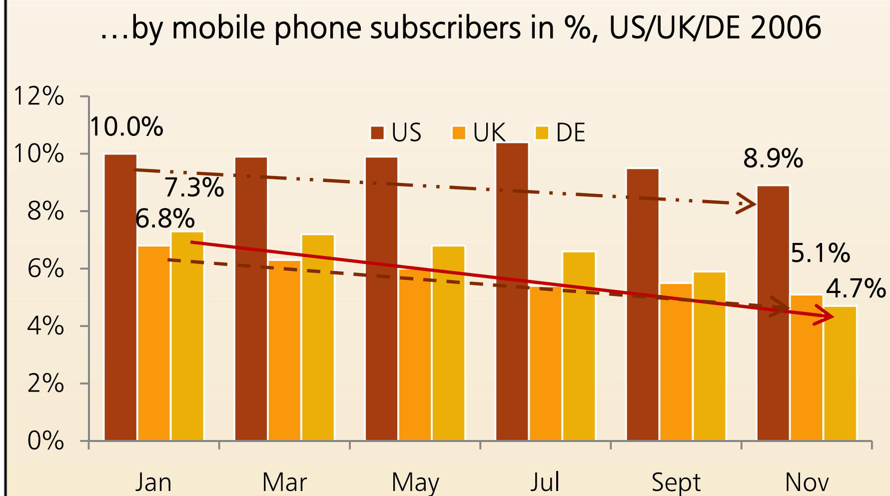
Conclusion

- The German music download market is limited due to illegal download services.
- Nevertheless, there is a constant (but limited) growth in download and revenue figures.
- Share of mobile downloads is about 10% of the total downloads.
- Share of mobile music revenue in relation to total music download revenue is about 10 % as well.
- Further growth in mobile music revenue is possible - induced by flat fees.

5.1 Mobile music

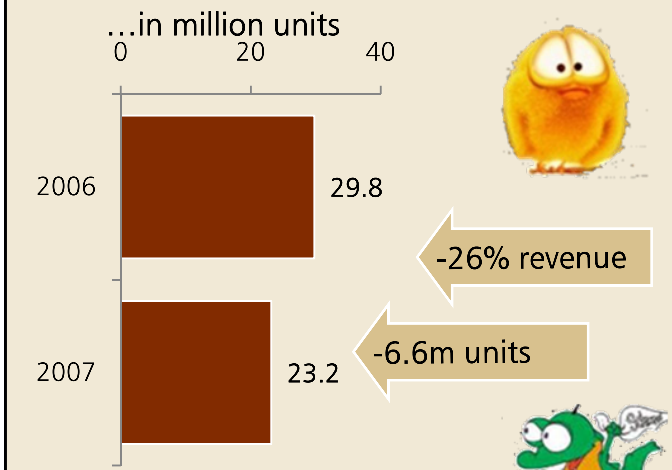
Ringtones – Decline after the hype?

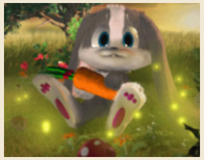
Ringtone usage in UK/DE/US 2006



Source: M:Metrics 2007. Survey of mobile subscribers. Data based on three-month moving average for period ending 30 November, 2006, n=14,612 (DE),14,907 (UK) and 33,736 (US)

Ringtone downloads in DE 2006-07





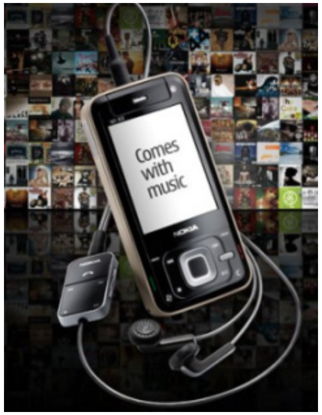
Source: BITKOM 2008

Reasons and consequences

- Realisation: Ringtones are high priced goods!
- Opportunity of user-created ringtones rises (usage of music files for ring tones)!
- **Results:** Interest in purchasing ringtones wanes! Shrinkage of 6.6m units within only one year! Declining profitability of ringtone aggregators such as Jamba/Jamster, Musiwave & Co.
- Uptrend of personalised entertainment service which allows subscribers to replace a standard ringback tone with a melody or voice message.
- **Consequence:** Many players expand their core businesses into music, video, information services, games or magic tricks!

5.1 Mobile music

Sideloading could menace new business models!



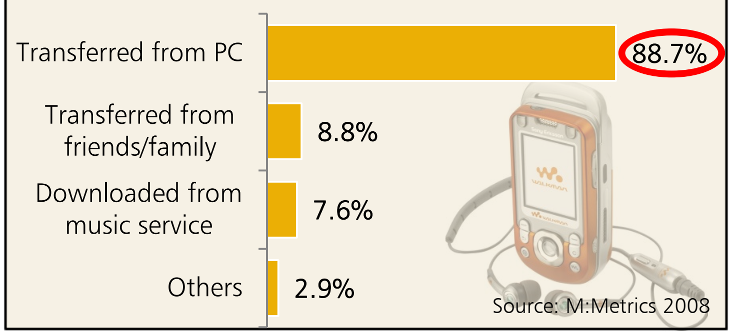
Rise of new business models: music flatrates for mobiles

- Nokia's "Comes with music" service launched in cooperation with Universal Music, Sony BMG and Warner Music in UK in Oct. 2008. Rest of Europe and Asia will follow in 2009.
- Business model: purchase of a mobile device together with a 1-year music flatrate; for another 1-year flatrate the customer needs to purchase a new mobile handset.
- Estimated willingness to pay lies between 125 and 376 Euros per year.

Sideloads vs. downloads

- Definition: Sideloading allows users to transfer music via data cable, WiFi or Bluetooth bypassing the carrier-sanctioned mobile download.

Source of mobile music consumption as percentage of active listeners, DE Nov. 2007



Conclusions

- Sideloading music is by far the most popular way to consume music over mobile phones so far.
- Sideloading music via PC instead of downloading it directly on mobile phones is responsible for about 90 per cent of the mobile music consumption.
- Subscription models highly attractive for music industry.
- No paid services are existing today: If major operators and device manufacturers introduce mobile paid music services esp. by flat fees, high customer demand can be expected.
- Mobile music market development and potentials can be estimated when first lessons are learned with new mobile music business models.

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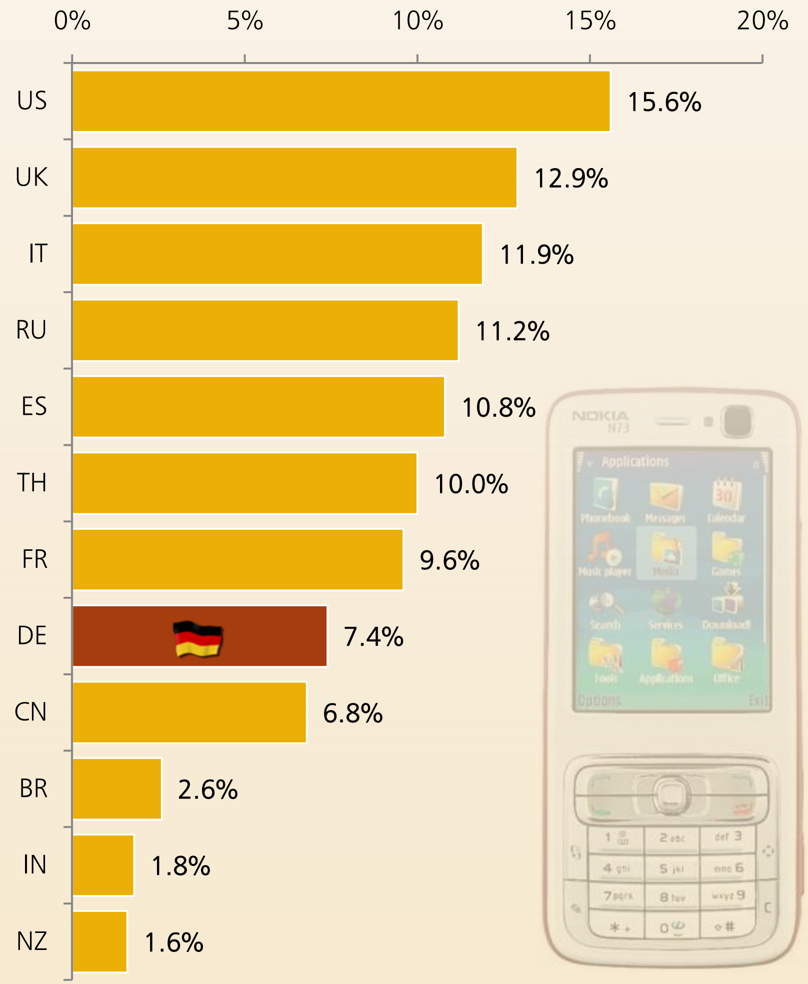
5.2 Mobile internet

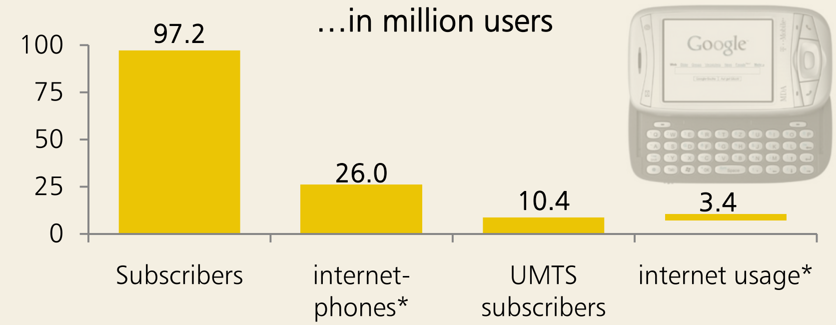
Number of 3G phones grows, but Germany sluggish!

Mobile internet usage



Source: "Critical Mass - The Worldwide State of the MobileWeb", Nielsen Mobile 2008, n=1m

Mobile subscribers in Germany 2007



Source: Goldmedia, BITKOM 2008, *Mobile Web Watch 2008 - internet usage figures are equivalent to a 13% usage penetration of 26m users equipped with internet capable mobiles

Summary

- Leading countries for mobile internet penetration: USA, UK and Italy. Delay in Germany: Only 7.4% of all mobile phone owners use mobile internet.
- 26m Germans own an internet-ready mobile phone! But only 13% of them use it!*
- Diffusion of 3G handsets began late.
- Reasons for reluctance to adopt mobile internet in Germany: price models of M(V)NOs, inadequate equipment, slow site load time, lack of user friendliness, poor site navigation

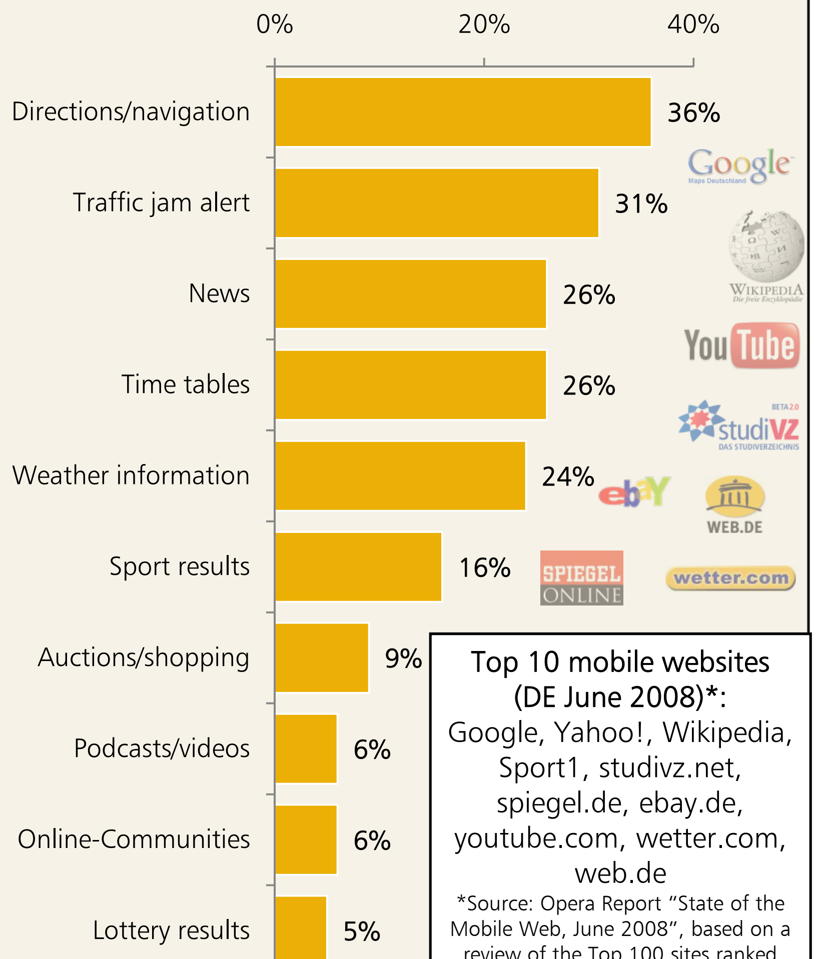
*Source: Mobile Web Watch 2008

5.2 Mobile internet

E-mails, news and mobile search (navigation) are popular!

Survey: Favourite online contents

…for mobile usage, Germans 14+ years 2007



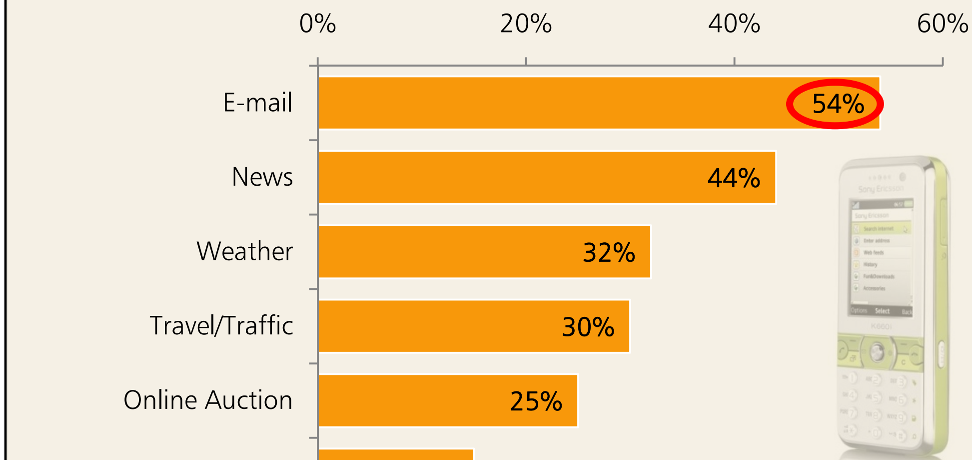
*Source: BITKOM/Forsa/ZAW 2007

Top 10 mobile websites (DE June 2008)*:
Google, Yahoo!, Wikipedia, Sport1, studivz.net, spiegel.de, ebay.de, youtube.com, wetter.com, web.de

*Source: Opera Report "State of the Mobile Web, June 2008", based on a review of the Top 100 sites ranked accord. to page views

Preferred contents

"Which traditional internet contents do you use on your mobile?" (DE 2008)



Source: "Going Mobile" 2008 (Microsoft Avertising/M:Metrics),

Conclusions

- Different reports – different results: Are e-mails or navigation services the most wanted mobile internet contents?
- Opera's Top 10 list shows: Mobile search, e-mails and social communities are the favourite mobile contents!
- Mobile social networks and mobile search should prove to be the drivers of mobile internet

5.2 Mobile Internet: Mobile search

Mobile search will grow with 3G penetration.

Variety of mobile search services

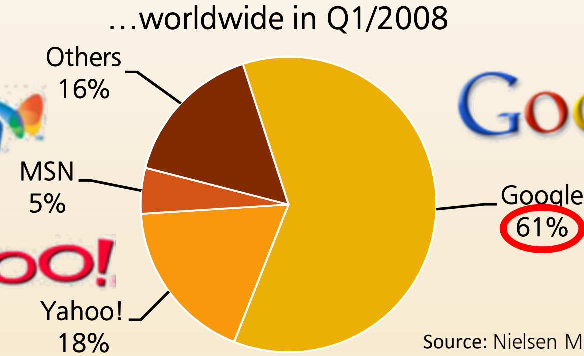
Search engines such as Google, Yahoo!, taptu, Nokia mobile search, etc.

Directory enquiry services

Q&A services (e.g. Question Mania, AskMeNow, which is based on semantic web technology, etc.)

Mobile navigation services

Market shares of mobile search providers



Source: Nielsen Mobile 2008, n=1m

Conclusions

- As of Sep. 2008, the largest part of mobile search revenue is generated by provider fees for data transmission! Target: Increase in advertising revenue!
- Google Search dominates almost 2/3 of the worldwide mobile search market.
- Mobile search will become a growth market: 1.3bn users and 8bn US$ estimated by 2013 (worldwide).*

*Source: Juniper Research 2Mobile Search & Discovery 2008-2013"

- **With increasing penetration of internet-ready 3G phones, mobile search will be used more and more!**

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Content

5.3 Mobile advertising & marketing

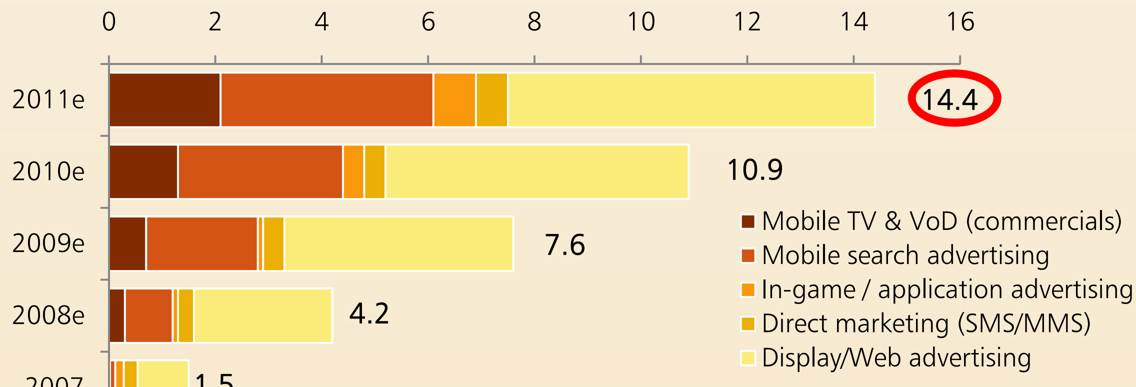
Global ad market should grow to 14bn US$ by 2011.

Types of mobile marketing

Mobile advertising	Pull	Mobile internet advertising	Types: banner ads on online portals, target-word marketing, mobile TV & radio, games, etc.
Mobile permission marketing (MPM)	Push	Mailing of advertising messages provided that the user declared their approval	Types: mobile couponing, SMS/MMS, voice cards, etc.
Mobile direct response marketing (MDRM)	Pull	Initiated by the mobile phone user whose attention is caught by a classic advertising medium such as a poster, magazine, TV-spot, etc.	Types: SMS/MMS, voice cards, newsletter, mobile couponing, etc.

Source: Goldmedia/Mobile Research Guide 2008

Forecast: Worldwide volume of the mobile ad market in bn US$ per ad type



Source: Strategy Analytics "Global Mobile Advertising Updates" 2007 e=estimation

Growing global market

- Estimated volume for mobile advertising in 2011: over 14bn US$!
- Display and mobile search advertising are estimated to make up the largest part of advertising revenues within the next years!

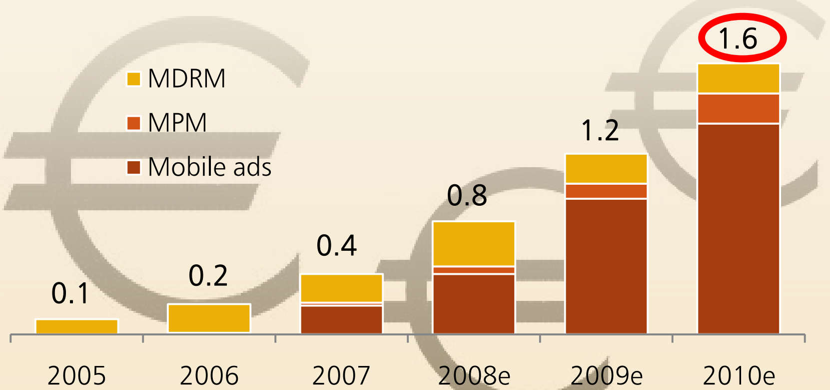
Source (pictures): Homepage Arvato Mobile, www.impactlab.com

5.3 Mobile advertising & marketing

Mobile advertising as a financial basis of Mobile Life.

Mobile marketing spending in DE

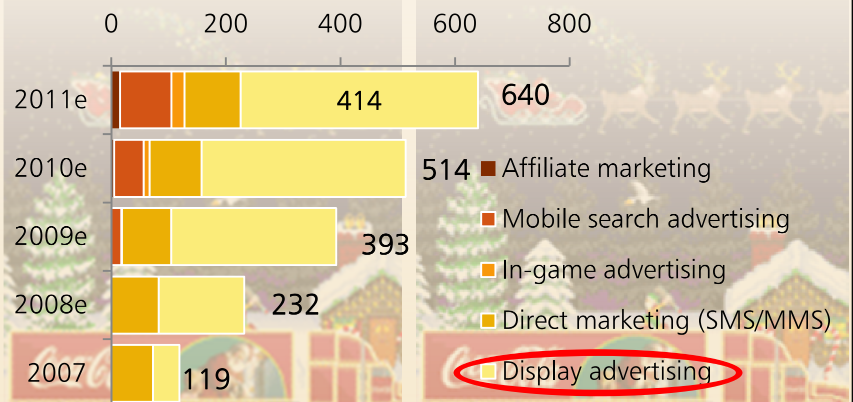
…in billion Euros per category, Forecast: 2005-2010



Source: Mobile Research Guide 2008, e=estimation

Mobile ad market volume in DE

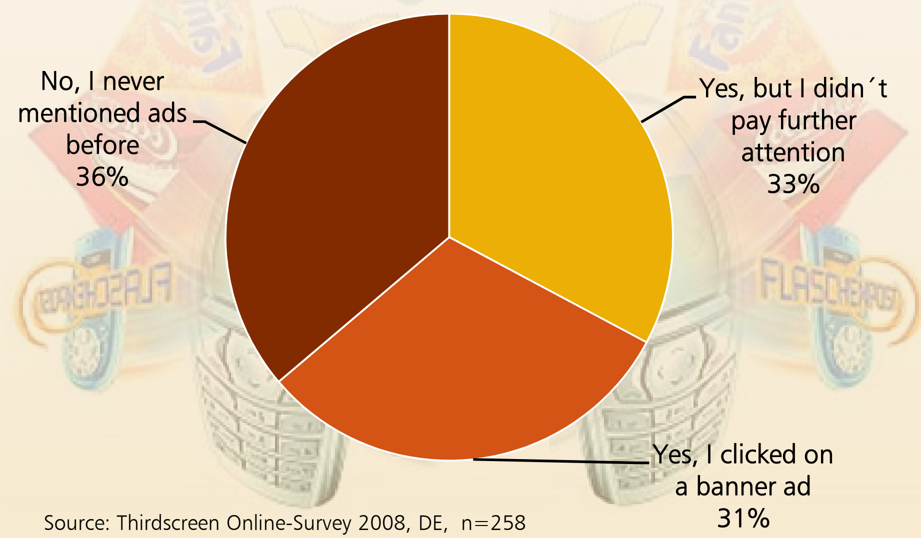
…per category in million Euros (gross), Forecast: 2007-2011



Source: TOMORROW FOCUS "Analyse zur Zukunft von Mobile Media"2007, e=estimation

Recognition

"Have you ever noticed mobile advertising?"



Source: Thirdscreen Online-Survey 2008, DE, n=258

Conclusions

- Due to the close ties between users and their mobile phones there is a high potential for mobile advertising as part of the marketing mix!
- Mobile ads could be used for effective CRM!
- **Mobile advertising is the financial basis of a lot of other mobile life services based on the mobile internet.**

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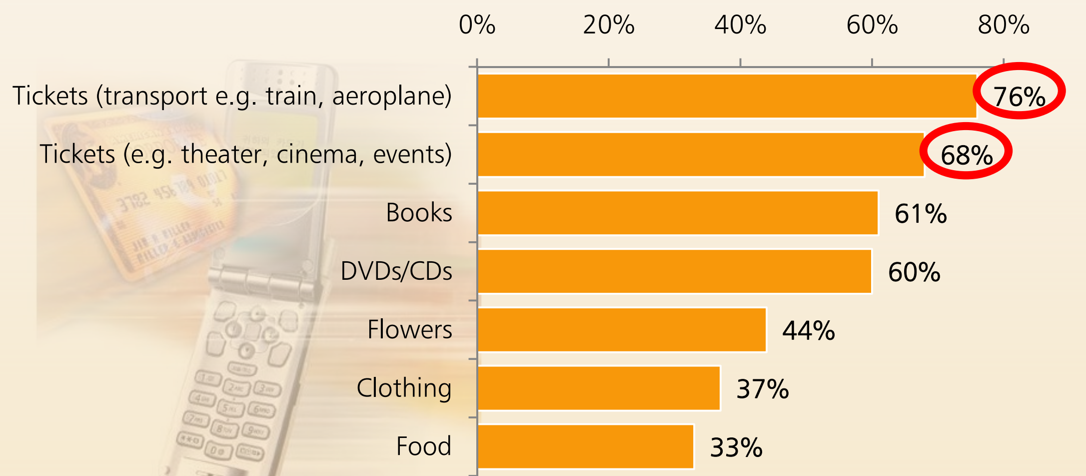
5.4 Mobile commerce, payment & ticketing

Mobile ticketing as top 1 mobile commerce service.

Preferred product categories in DE 2008

"Which products or services would you buy with your mobile phone?"



Source: Lightspeed Research "Wählen Sie S für Shopping" 2008

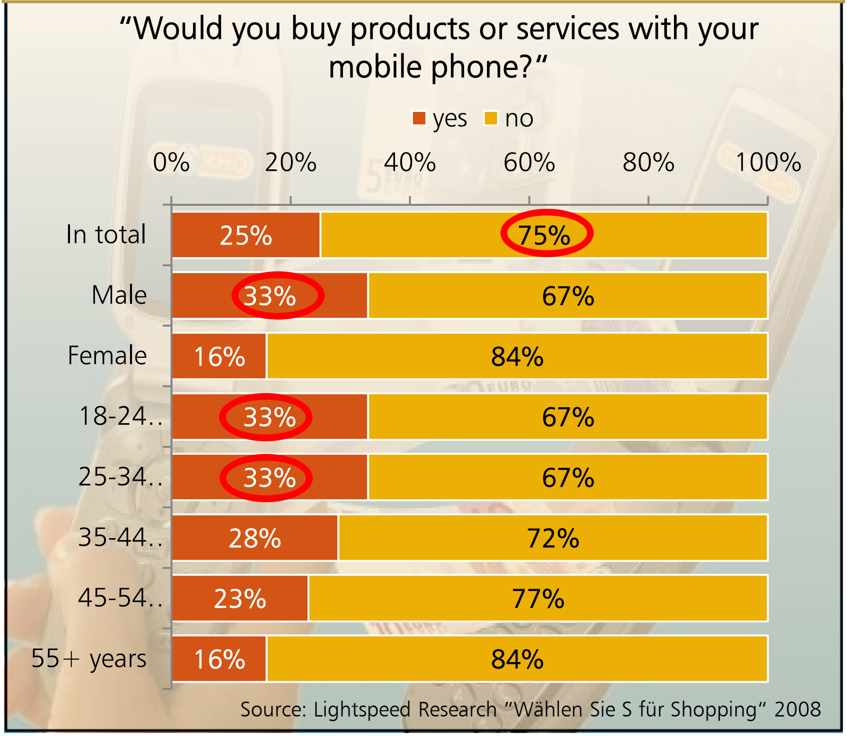
Conclusions

- The most popular mobile commerce service is mobile ticketing!
- 3 of 4 people are willing to order their tickets for public transport, flights or cultural events via mobile phone.
- Juniper Research estimation: over 2.6bn mobile tickets will be delivered to over 208m mobile phone users by 2011.

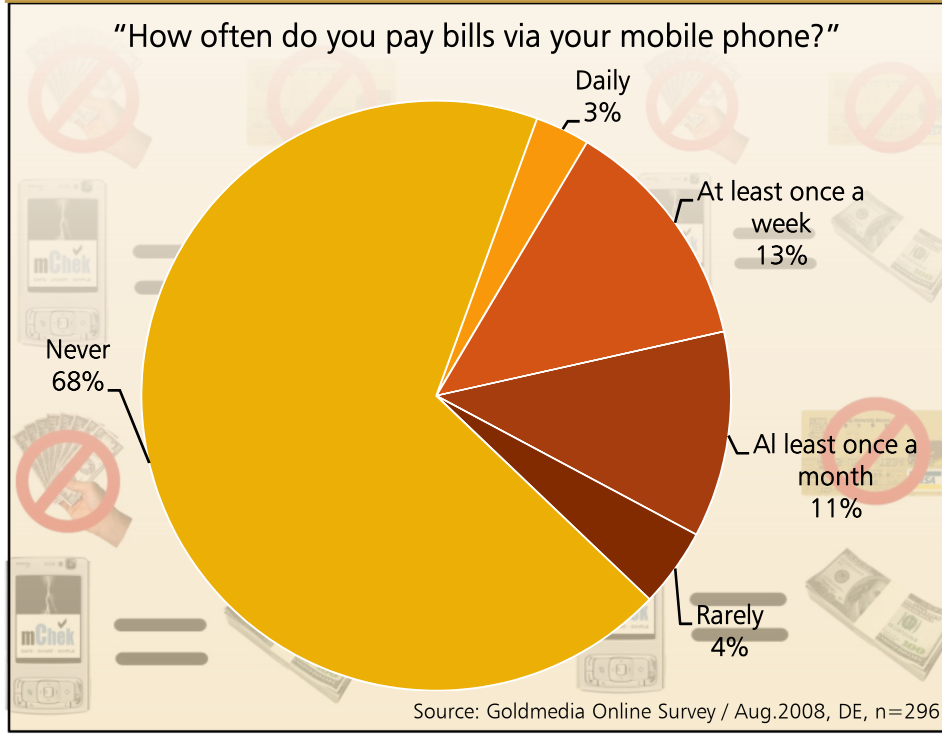
5.4 Mobile commerce, payment & ticketing

75% of Germans are not interested in m-commerce!

Consumer acceptance in DE 2008



Usage of mobile payment in DE 2008



Conclusions

- Most open-minded target groups are men and the age group between 18-34 years! 33% of them would buy products via mobile devices. Only every 6th woman is interested in m-commerce.
- Problem: There is no service available yet. If it is possible to pay by phone, a higher acceptance of mobile payment will probably occur.

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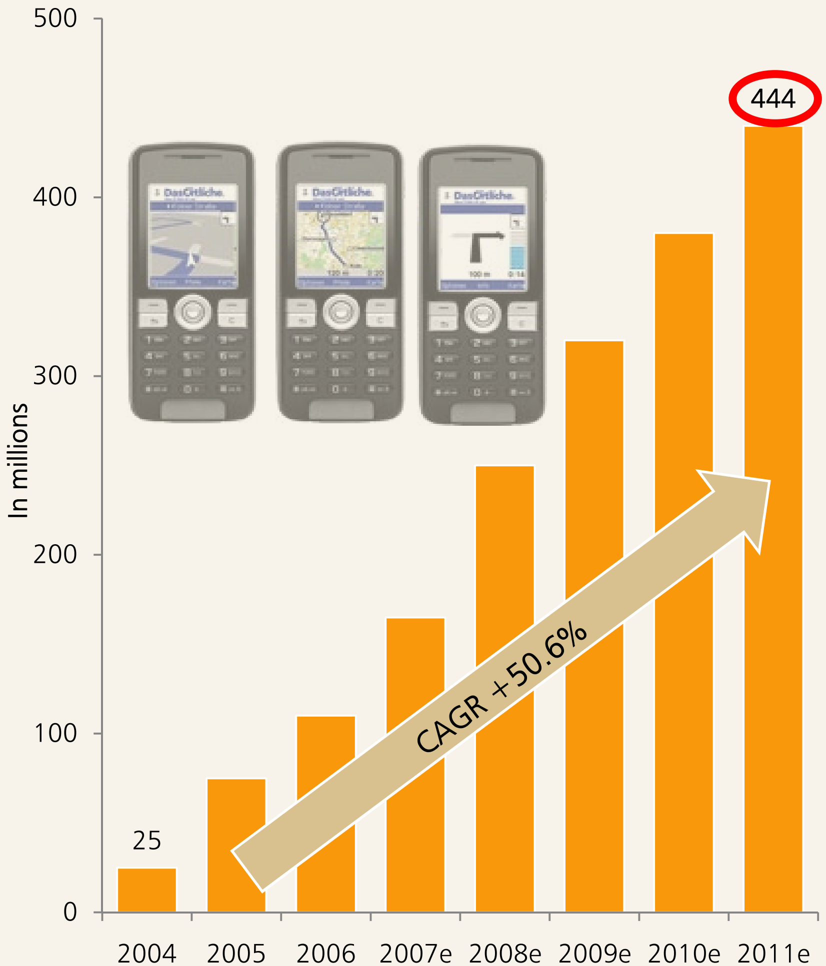
Content

5.5 Mobile navigation & location-based services

Fierce competition between manufacturers!

GPS-equipped mobile handsets

…in millions, 2004-2011 (worldwide forecast)

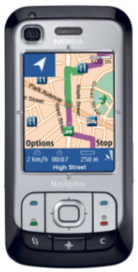


Source: Forecast iSupply Corp. 2007 e=estimation

Market situation

- Fierce competition between classic navigation device manufacturers such as TomTom, Garmin, etc. and mobile phone manufacturers.

vs.



Garmin's nüviphone

Nokia's 6110 Navigator

- Market characterised by mergers and acquisitions.
- № 1 mobile device manufacturer Nokia boosts its navigation services: In October 2007 Nokia bought the US map service Navteq for 5.7bn US$.
- Navteq offers digital maps for navigation devices for 69 countries on six continents.

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6. Benchmark

Keichu ("addiction") and *Otaku* ("life in a virtual world")

Mobile Life in Japan – Extension to all aspects and areas of life

- 41% of Japanese use their mobile devices even in the bathtub!

- The number-one bathtub application: e-mail, followed by music and gaming!

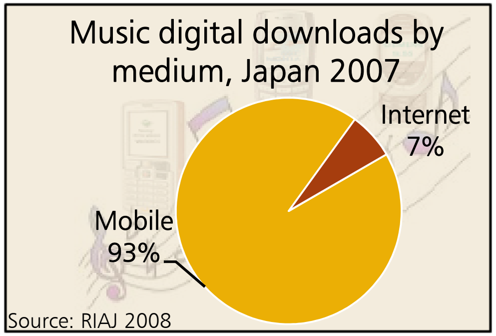
Source: Sega Survey 2008, n=16,250

6. Benchmark

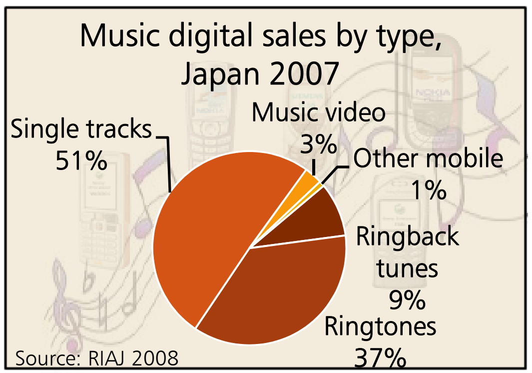
Japan: the world's leading mobile music & games market!

Mobile music market in Japan 2007

- Japanese people prefer downloading music tracks directly to their mobile phones (Comparison: German users prefer to sideload music!)
- Mobile music downloads make up more than 93% of all music downloads (90% of all digital music sales!)



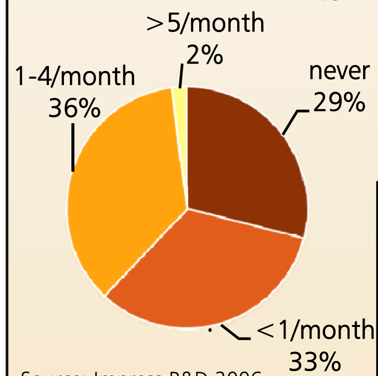
Source: RIAJ 2008



Source: RIAJ 2008

- Fastest growing sub-category: single track downloads (51% (=320m US$) of total mobile music sales)
- Service model of LISMO! (KDDI): Cross-platform (mobile & PC), 2.50 US$/track, downloads can be used as ringtones

Mobile games market in Japan



Source: Impress R&D 2006

Over 70% download mobile games regularly at least once a month! 44% of the active gamers prefer short games*

Source: Famitsu, July 2007

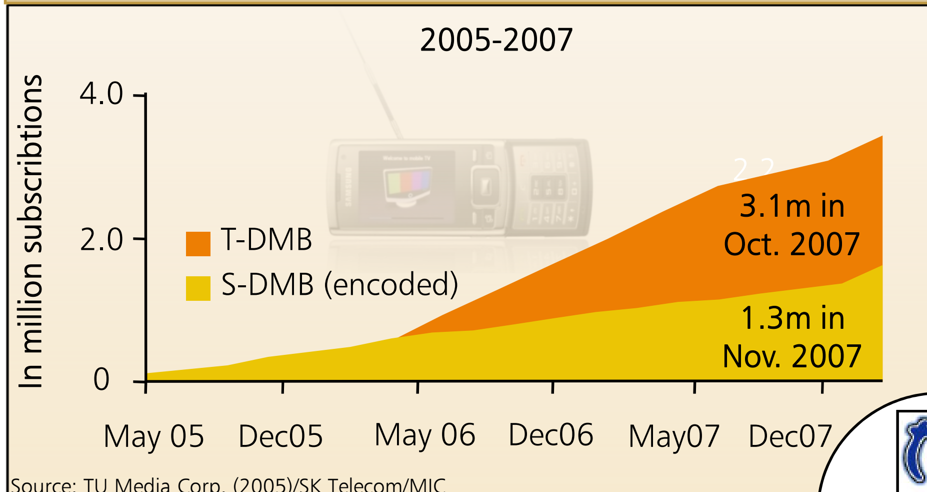
Summary

- Lively "Mobile Life" market in Japan: High popularity and usage of mobile downloaded music and games!
- Evident displacement of leisure activities such as listening to music, playing games, reading, etc. into the "Mobile life"
- 2G phones are not shipped anymore by 2008
- Reasons: rapid diffusion of 3G, availability of adjusted mobile devices & attractive business models – plus very low data prices!

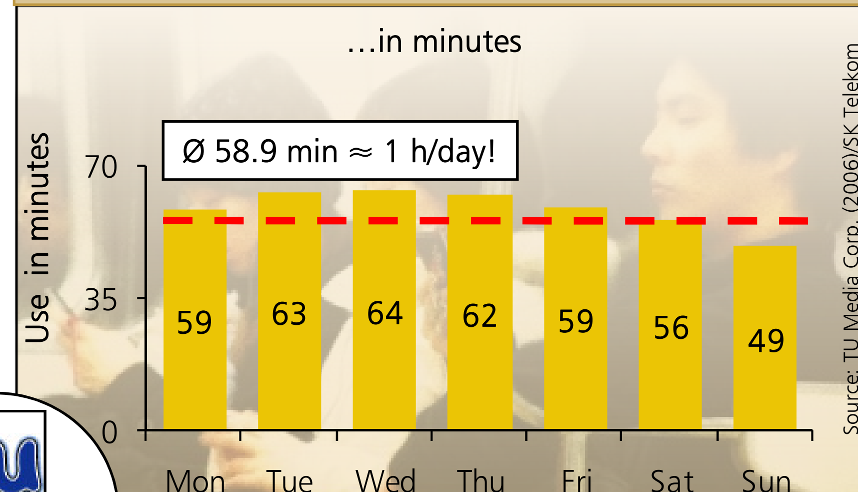
6. Benchmark

South Korea: Success of DMB mobile TV & radio services

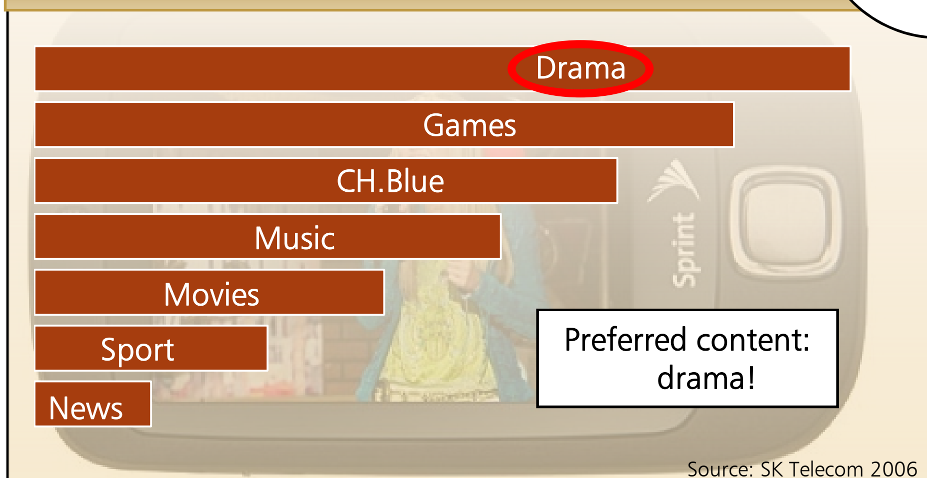
Development of mob. TV users in KR



S-DMB use in Korea in 2006



Preferred contents for mobile TV



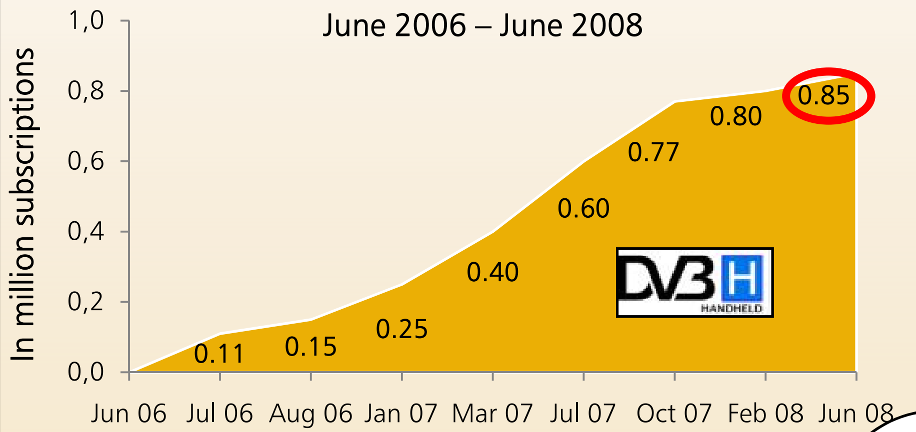
Conclusions

- First mover worldwide, high penetration with end-user devices
- Commercial S-DMB services (Pay TV) started in May 2005, the commercialization of T-DMB (Free TV) followed in Dec. 2005.
- Number of clients using free of charge T-DMB offers are increasing faster, but estimation of 21m mobile TV users by 2012 seems not to be realistic.

6. Benchmark

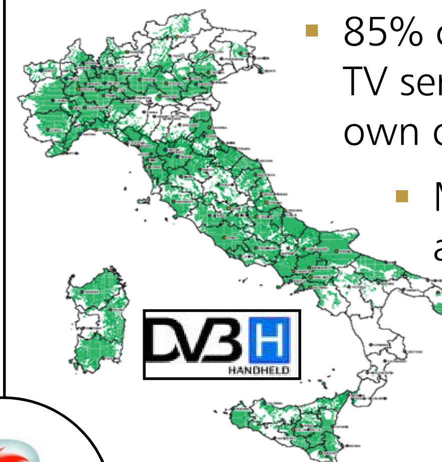
3 Italia's Mobile TV started with Pay-TV+switched to Free TV!

Development of mobile TV users in IT



Source: 3 Italia 2008

DVB-H coverage in IT 2008



- 85% coverage for mobile TV services due to 3 Italia's own outdoor DVB-H net
- MNO possesses content and infrastructure!
- 3 Italia offers end-to-end services = "Market maker"

Service of 3 Italia in Q3/2008

- Programming: 12 channels (public channels, four Mediaset channels, 3 own 3 Italia channels)
- Since June 2008 3 Italia implemented a new cross-media strategy: the company offers selected DVB-H channels (RAI 1, RAI 2, Mediaset, Sky Meteo 24, Current TV and La3) and internet for free!

Conclusions

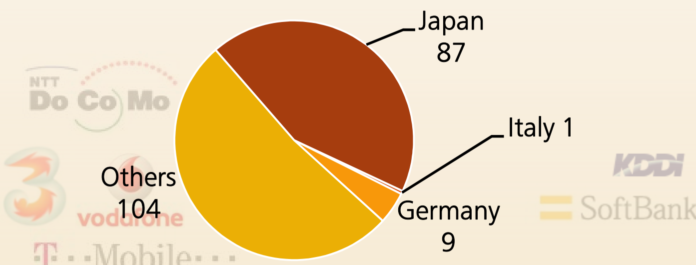
- 3Italia began services in Italy in 2000, in June 2008 they had 8.2m 3G subscribers.
- Launch of mobile TV services: June 2006
- Different business models: Pay TV, Free-to-Air, Pay-per-view (daily, weekly or monthly) packages, with or without other services included, e.g. mobile TV at 4€/day, 9€/week, 19€/month or 29€ for 3 months

6. Benchmark – Summary

Technologic & cultural factors lead to different use habits!

3G users in 2008

…by country in millions
(Basis: >200m 3G users worldwide,2008)

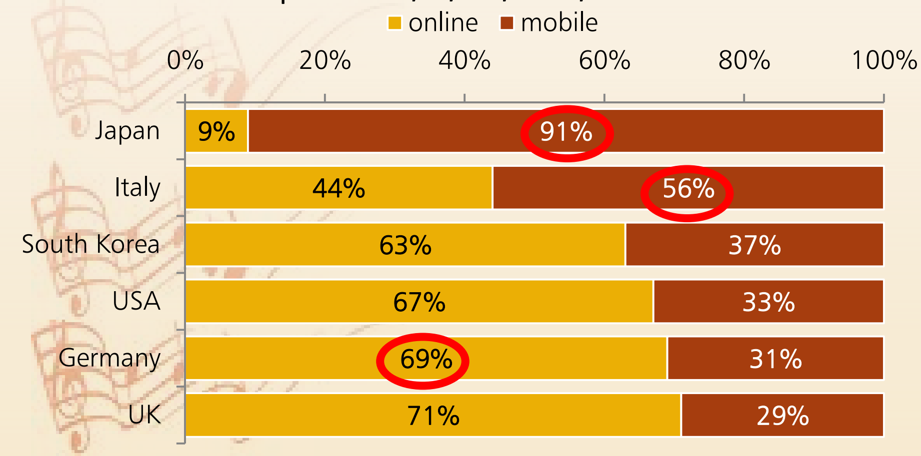


In Japan there is almost no market for mobile devices without UMTS: Last 2G phone shipped in Dec. 2007! 75% of phones shipped in 2008 are mobile TV-ready!

Source: BITKOM , UMTS Forum 2008

Digital music: online vs. mobile revenues

Example: Music revenues in %,
Comparison JP, IT, KR, USA, DE and UK 2007



Source: International Federation of the Phonographic Industry (IFPI), 2008

Results

- The Japanese use their mobile phones as a "persona-lised medium" with internet access. 91% of all music revenues generated by mobile (IT: 56%, DE: 31%).
- NTT DoCoMo was the world's first 3G operator in 2001! Mobile use dominates in JP due to the fast diffu-sion of 3G and adjusted devices! SoftBank holds exclu-sive right on iPhone 3G's marketing: since 2007 Soft-Bank has recorded enormous increase in customers.

Conclusions

- **Spread of 3G differs! Technolo-gical progress and cultural differences determine mobile life!**
- **Further reason for high popularity of data services in JP: it is NOT considered polite to talk by phone in public space (in contrast to Germany or Italy)!**

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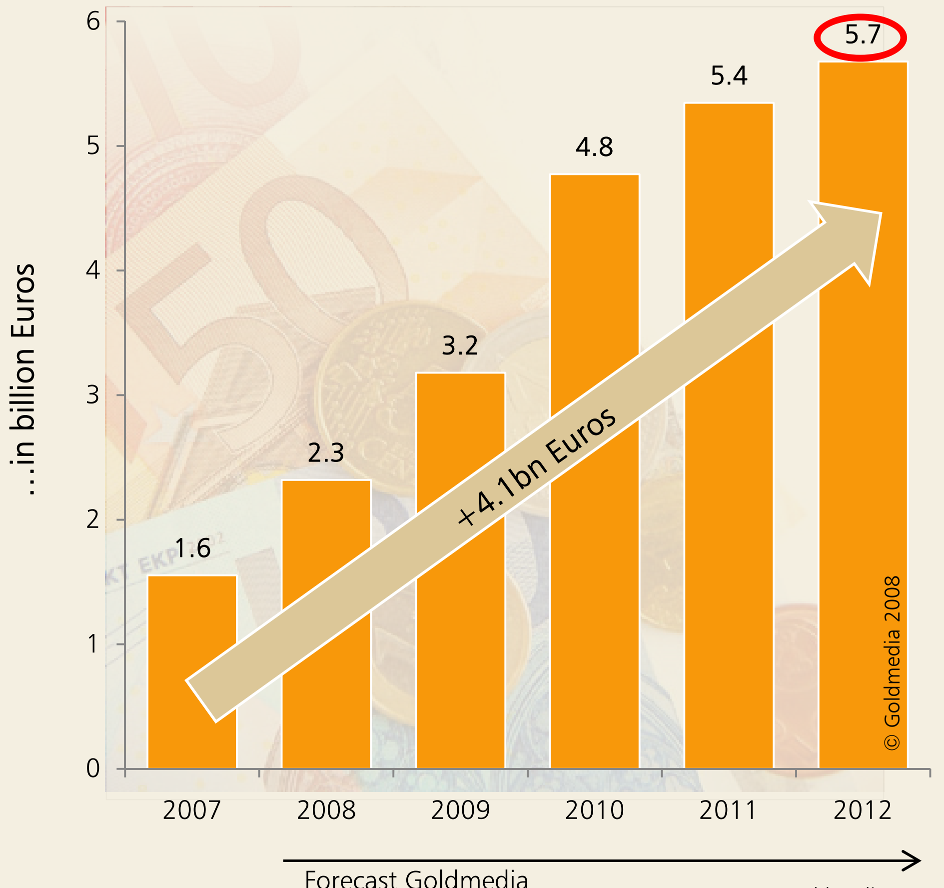
7. Forecasts

3G penetration will exceed 60% in 2012 in Germany!

Data service revenue* in DE 2002-2012

……in billion Euros in Germany,

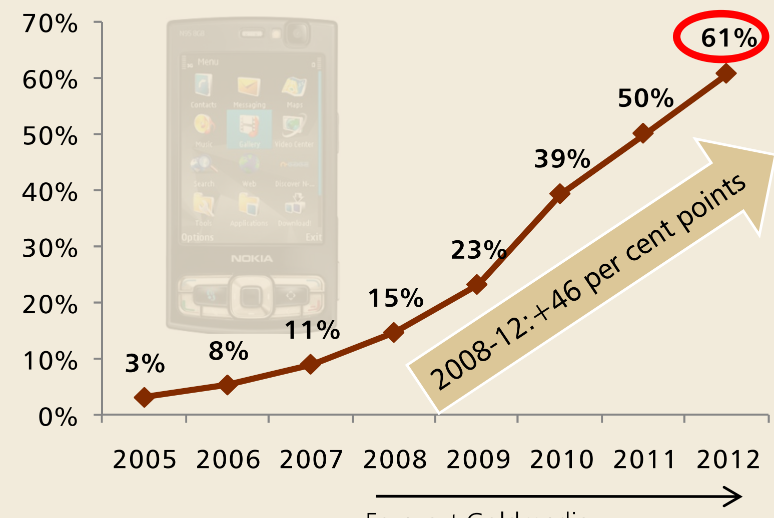
* Retail revenues from data services on wireless communication networks (including data access and content, without SMS, MMS) as billed by the mobile service operator. Interconnection revenues are not included in this segment.



Source: Goldmedia 2008

3G penetration in Germany

…in % of mobile subscribers



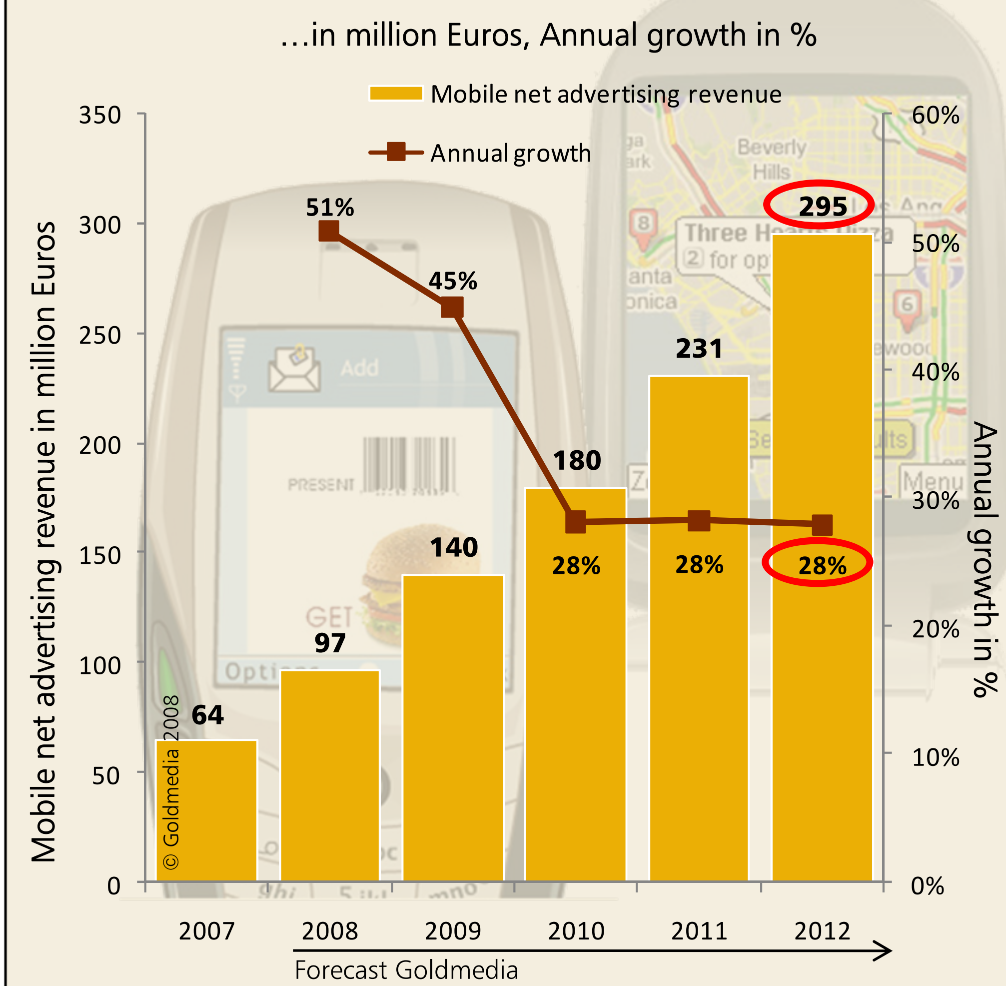
Source: Goldmedia 2008

Conclusions

- 3G penetration will reach more than 60% of the German subscribers by 2012!
- Data service revenue should increase to almost 6bn Euro by 2012!
- **Declining costs will make 3G attractive for the mass-market and push services related to mobile internet.**

7. Forecasts
Mobile advertising still in its infancy in Germany!

Mobile net advertising revenue* in DE



(* including affiliate marketing, mobile search advt., in-game advert., direct marketing, display advert.)
Source: Goldmedia 2008

Conclusions

- New 3G technology enables delivery of richer contents such as mobile TV, video and games.
- But: there is a limit to how many additional charges, subscriptions, fees, etc. users are willing to pay!

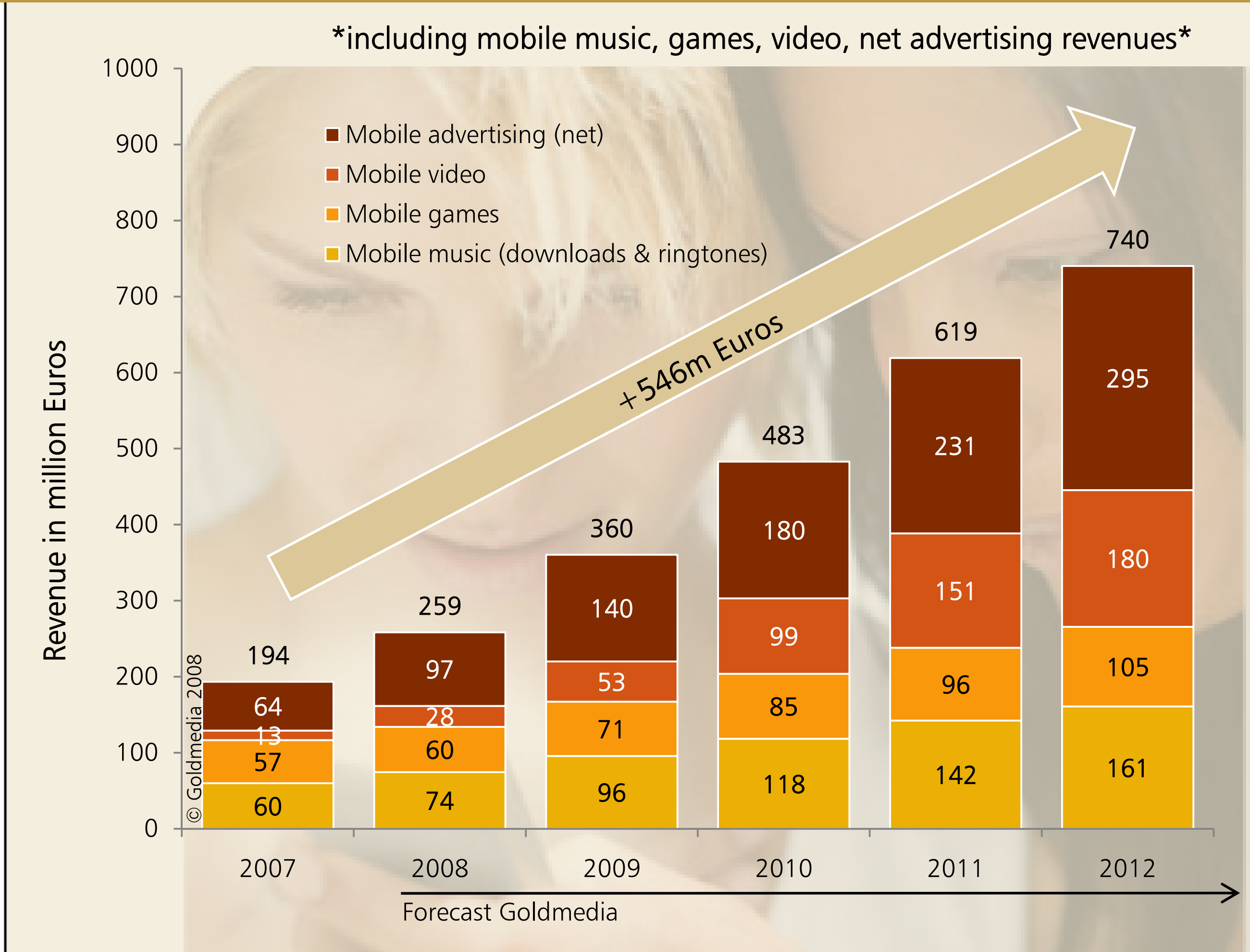
- **Sponsored or advertising-funded contents will become more and more accepted!**
- **In Germany ~300m Euros mobile net advertising revenue expected by 2012!**

- Challenges: business models and revenue share, type, length and frequency of ads, consumer attitudes

7. Forecasts

M-entertainment revenue grow to ~750m Euros by 2012!

M-entertainment revenue in DE in million Euros*



Source: Goldmedia 2008 *Mobile Entertainment includes net mobile advertising (affiliate marketing, mobile search advertising, in-game advertising, direct marketing, display advertising), mobile videos, mobile games and mobile music

Results

- German mobile entertainment market will grow by ~500m Euros by 2012

- Mobile net advertising will make up the largest part of revenues, followed by mobile video, games and music!

Conclusions

- **By 2012: Substantial growth to ~750m Euros in m-entertainment revenue expected.**

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8. Outlook & Theses

Coming soon…

Mobile phone with laser projectors and DLP-chips:

Different players such as 3M, Texas Instruments or Microvision have developed compact mini projectors for high resolution screenings. The projector could be integrated or be connected to the mobile device

Source: www.computerwoche.de/nachrichtenarchiv/1851864

Mobile phones with human qualities

Japanese could talk with their handsets soon! Phone Braver, a Softbank Mobile development, is able to communicate with its owner and react with facial expressions. In addition, arms and legs can be attached. The device possesses enough artificial intelligence to be able to have simple conversations and to learn its owner’s habits

Source: www.focus.de/digital/handy/japan_aid_263164.html

“Perfumed” mobiles:

The companies Isi und Convisual developed a patent-registered “perfumy mobile“ which is able to receive odours via SMS. The handset could – for example – send SMS greetings for mother‘s day with the smell of flowers

Source: www.inside-handy.de/news/11777.html

8. Outlook & Theses

1. A life without mobile handsets is no longer imaginable for under 30s!
2. Spread of users and target groups: People 40+ prefer linear media and use their mobile mostly for traditional services such as voice telephony. People under 20 years who have grown up with digital media, use the entire range of services and applications of mobile devices.
3. The demographic change will lead to a high usage of mobile phones by elder people. Devices should be adjusted for these users who will account for the majority within the next decades! To reach the today´s generation 50+ there must be offered adjusted handsets & services, too.
4. Mobile devices are the № 1 tool for organising and structuring the entire interpersonal private and business communication. Their importance will increase even more.
5. Being "always on" and using mobile devices at any time and place will become more and more normal. Many users do not know that the switch-off button can give access to autonomy and freedom.

8. Outlook & Theses

6 The internet makes entertainment and information available at any time and any place! Mobile internet will make mobile phones more and more indispensable!

7 The way to consume music has changed radically. Nowadays everyone have access to all ever produced music.

8 Due to lifestyle changes (higher mobility, flexibility) mobile phones meet the demand for mobile entertainment. There is no device which is able to adjust to new usage situations and periods better than mobile phones.

9 The mobile phone increasingly replace functions of other devices. It will become people`s most important constant companion. Mobile phones are the showpieces for convergence (one device incl. telephone, camera, MP3-player, calender, internet access, etc).

10 The consumer benefits from more and more attractive data pricing: Mobile Internet becomes a mass market in Germany

Strategies for E-Merging Media..

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