

# Mobile Convergence



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# Summary

- Services today and in the future
- The strengths of mobile and broadcast networks
- The combination of broadcast and mobile networks
- Services and benefit for the end user
- Business models – Who can earn money and how?
- Mobile Media Distribution project
- Receivers

# Mobile Convergence

## Services today and in the future

Services often used today:

### ■ Portable area



### ■ Mobile area



Additional in future:

- UMTS
- DAB (Digital Radio)
- Purchase, payment and management services
- DVB-T (Digital TV)
- Information service

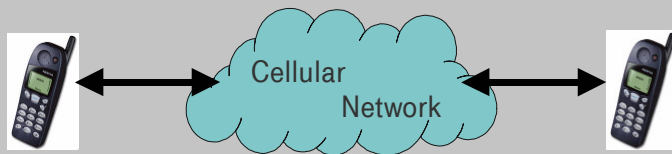
↪ The questions are: How does this fit together and what are the advantages for the end user?

# Mobile Convergence

## The strength of mobile- and broadcast networks

### Mobile communication (GSM, GPRS, UMTS)

- Telephony everywhere
- High level of security
- Interaction well established
- Mobility with low and medium data rates
- Point-to-Point (Pull)
- Identification
- Billing
- Localisation



### Broadcast (DVB-T, DAB)

- TV/radio everywhere
- DVB-T, global standard (except USA, Japan)
- Point-to-multipoint (push)
- Cheap
- High capacity for broadcasting and IP data
- Content free2net or encrypted



↪ The combination of both enables new attractive services.

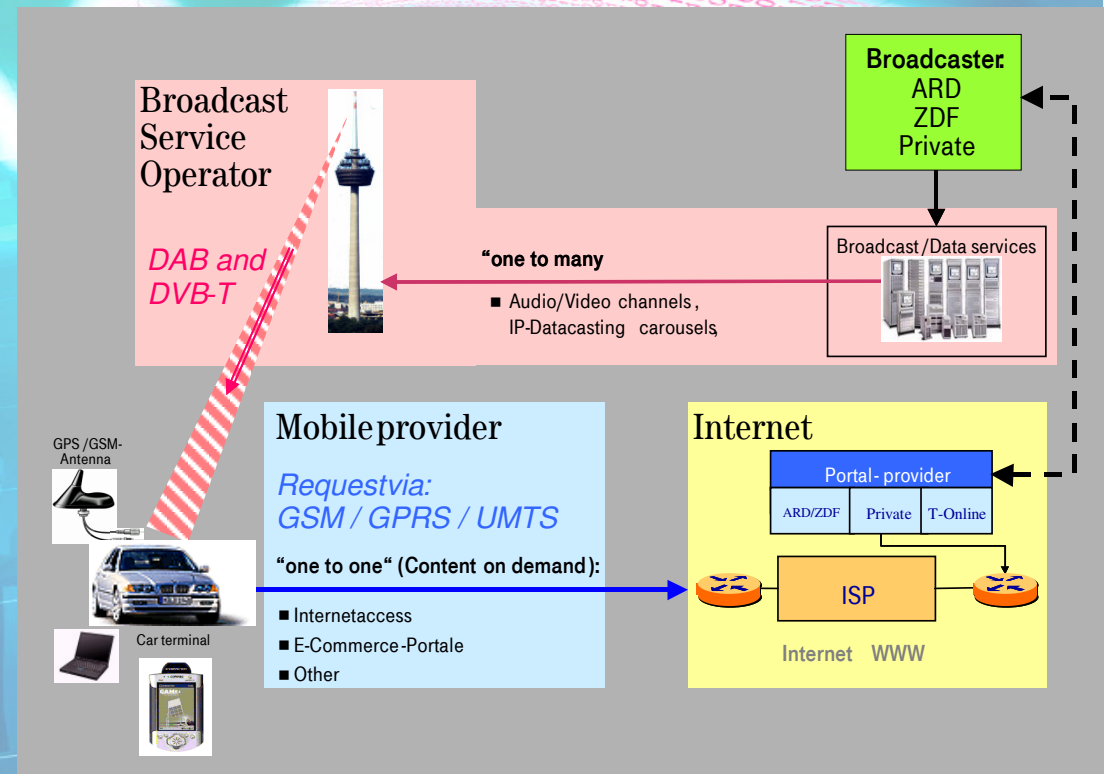
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## The combination of broadcast- and mobile networks

- The broadcast channel always works in one-to-many mode, cheap and with high bandwidth.
- The cellular systems offer point-to-point-services with interaction and payment functions.

### The result:

- Access to broadcast channels and data download for a high number of recipients with interactivity, administration and billing possibilities
- It enables new opportunities for classical- and new content providers.



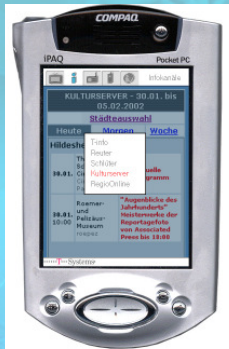
# Mobile Convergence

## Services and profit for the end user



- Telephone
- Internet
- TV / Radio
- Information services

- Location services
- Electronic newspaper
- News
- Guided tours
- Entertainment



↪ The combination of services makes them attractive

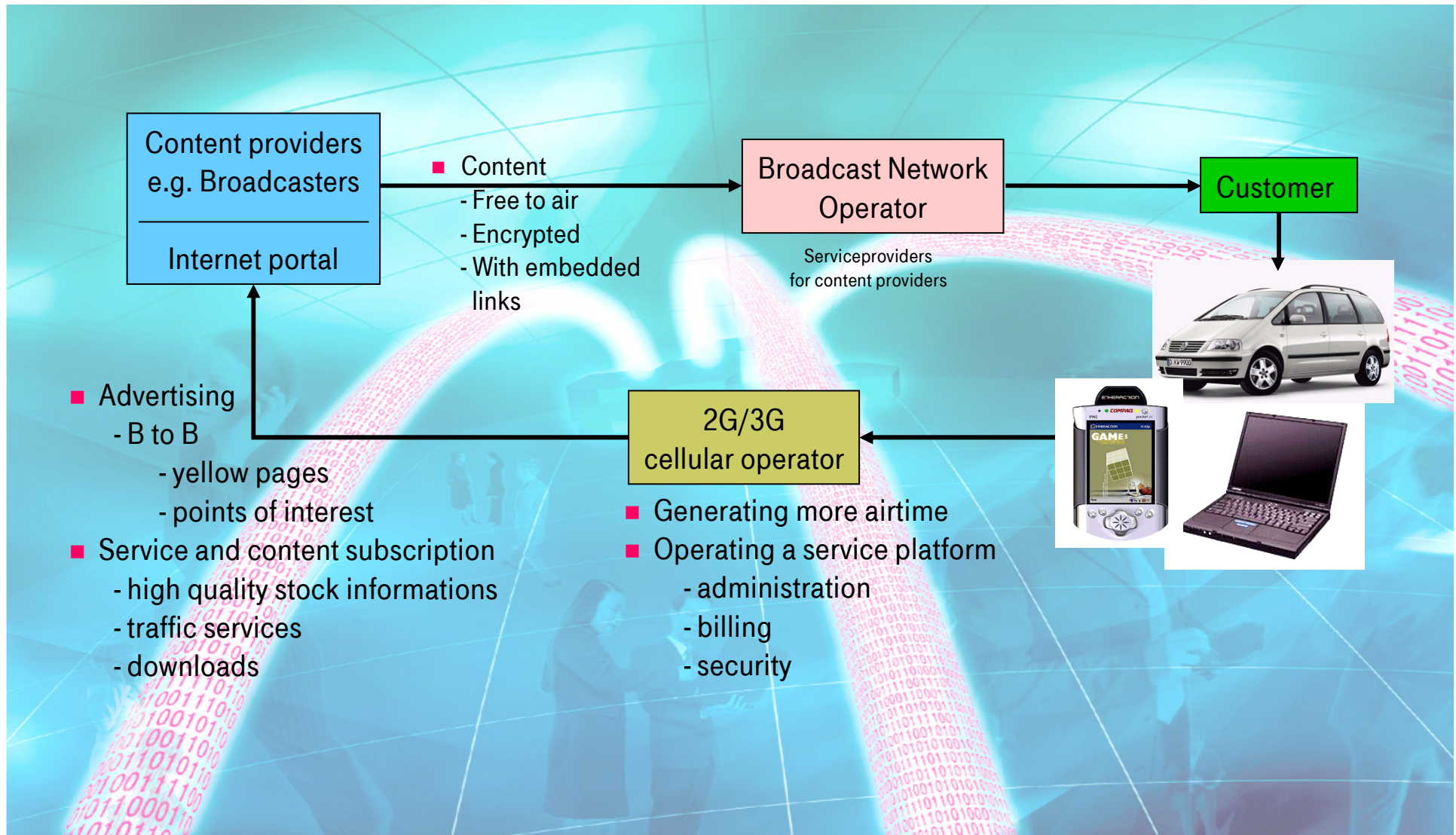
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Content delivery at a new level



# Mobile Convergence

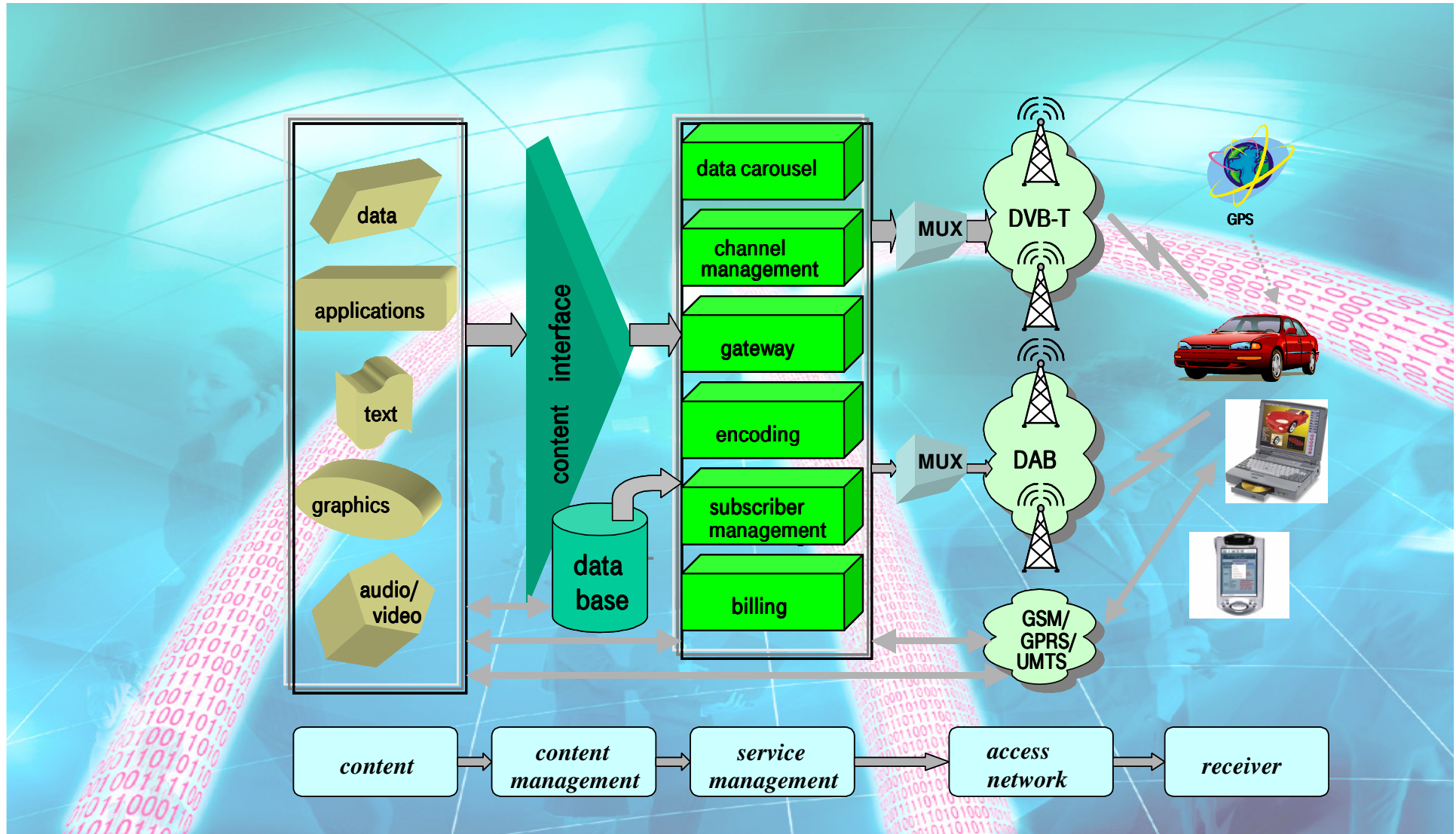
## Who can earn money and how?





# Mobile Convergence

## Project Mobile Media Distribution in Berlin



# Mobile Convergence

## Requirements for end-user devices

- Small shape of the antenna
- DAB and/or DVB-T reception; back channel
- Simultaneous receiving of broadcast and cellular phone network
- Display resolution 240x320
- Display size 2 to 8 inch
- Processing of DAB and DVB-T service information



- Low power consumption (battery at least 2 h)
- Handover within the broadcast network
- Audio and video play back
- Caching and profiling functionality
- Internet functionality
- Data memory (0.5 - 1 GB)

# Mobile Convergence End-user-devices



DAB/GSM

Laptop with two additional PCMCIA-cards and operational gateway to use the hybrid functionality



DVB-T / GSM-GPRS

↪ Some prototypes are already available



Thank you !