

Exercise 1 - Location Based Services

Mobile Business II (SS 2020)

Peter Hamm

Chair of Mobile Business and Multilateral Security
Johann Wolfgang Goethe-Universität Frankfurt a. M.



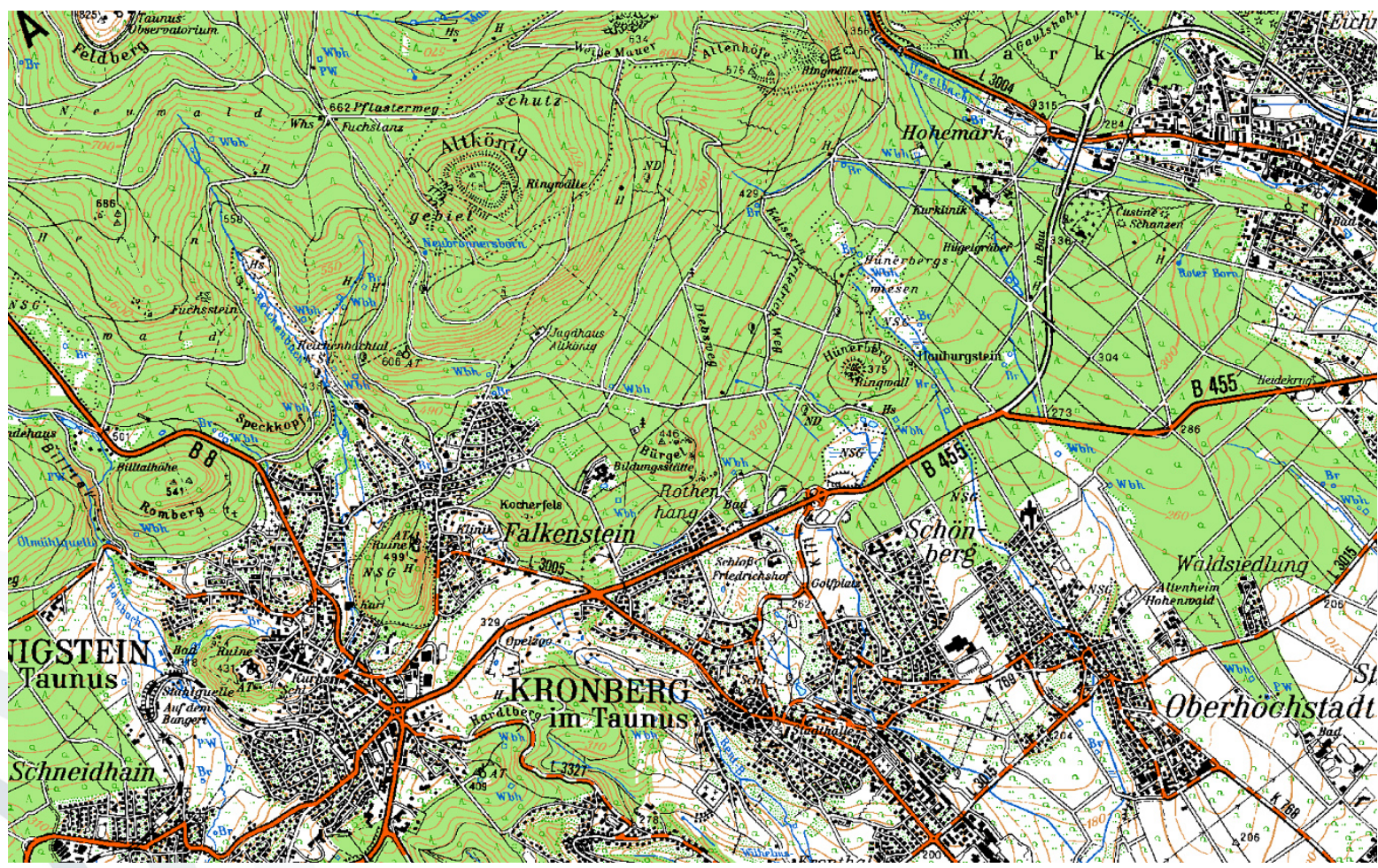
- Maps and their usage
- Mobile Communities and LBS
- Travel services
- Misc

- Your participation 😊

Look at the following maps. Think about the following questions:

- **Purpose:** What is the purpose the map / what can it be used for?
- **Orientation usefulness:** Does this map help you to ride a bicycle from Königstein to Kronberg?
- **Decision support:** Will this map help you to evaluate whether a particular street is a nice place to live in?

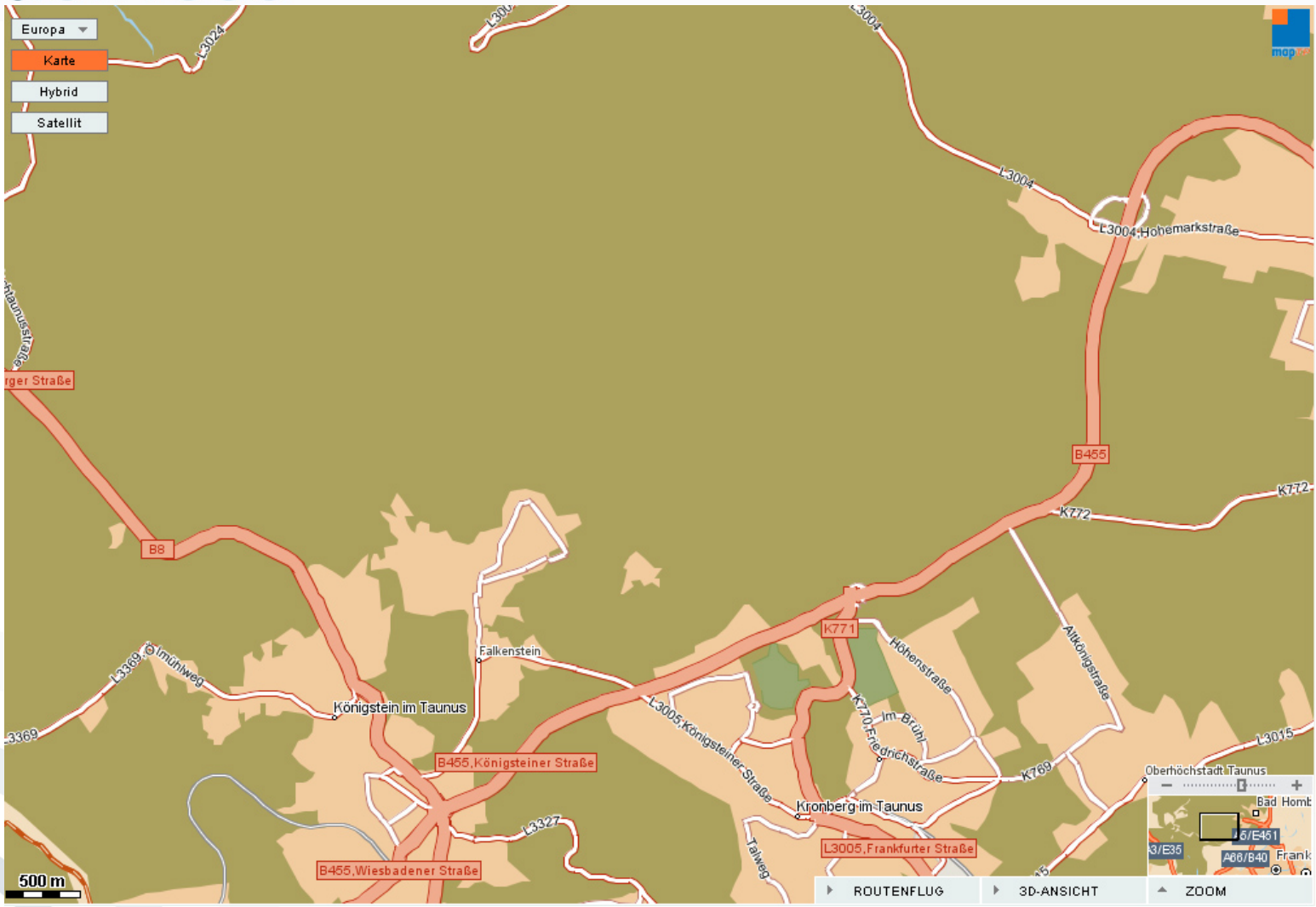
Map 1: Topological map



Map 1: Topological map (2)

- **What is the purpose this map can be used for?**
 - Get an overview of the terrain
 - Height differences
 - Geographical details
 - The area where a certain town is located
- **Does this map help you to ride a bicycle from Königstein to Kronberg?**
 - Yes, since all the roads are shown.
- **Will this map help you to evaluate whether a particular street is a nice place to live in?**
 - One can only partly see what in the surrounding area is, but no precise details.

Map 2: Street-map view



Map 2: Street-map view (2)

- **What is the purpose this map can be used for?**
 - Car navigation
 - The most important streets and distances are shown.
- **Does this map help you to ride a bicycle from Königstein to Kronberg?**
 - Only partly. The bigger roads are shown, but smaller connecting ways, which are available on a bike are not.
- **Will this map help you to evaluate whether a particular street is a nice place to live in?**
 - No, details missing, except for travelling (connecting) roads to the towns

Map 3: Satellite view



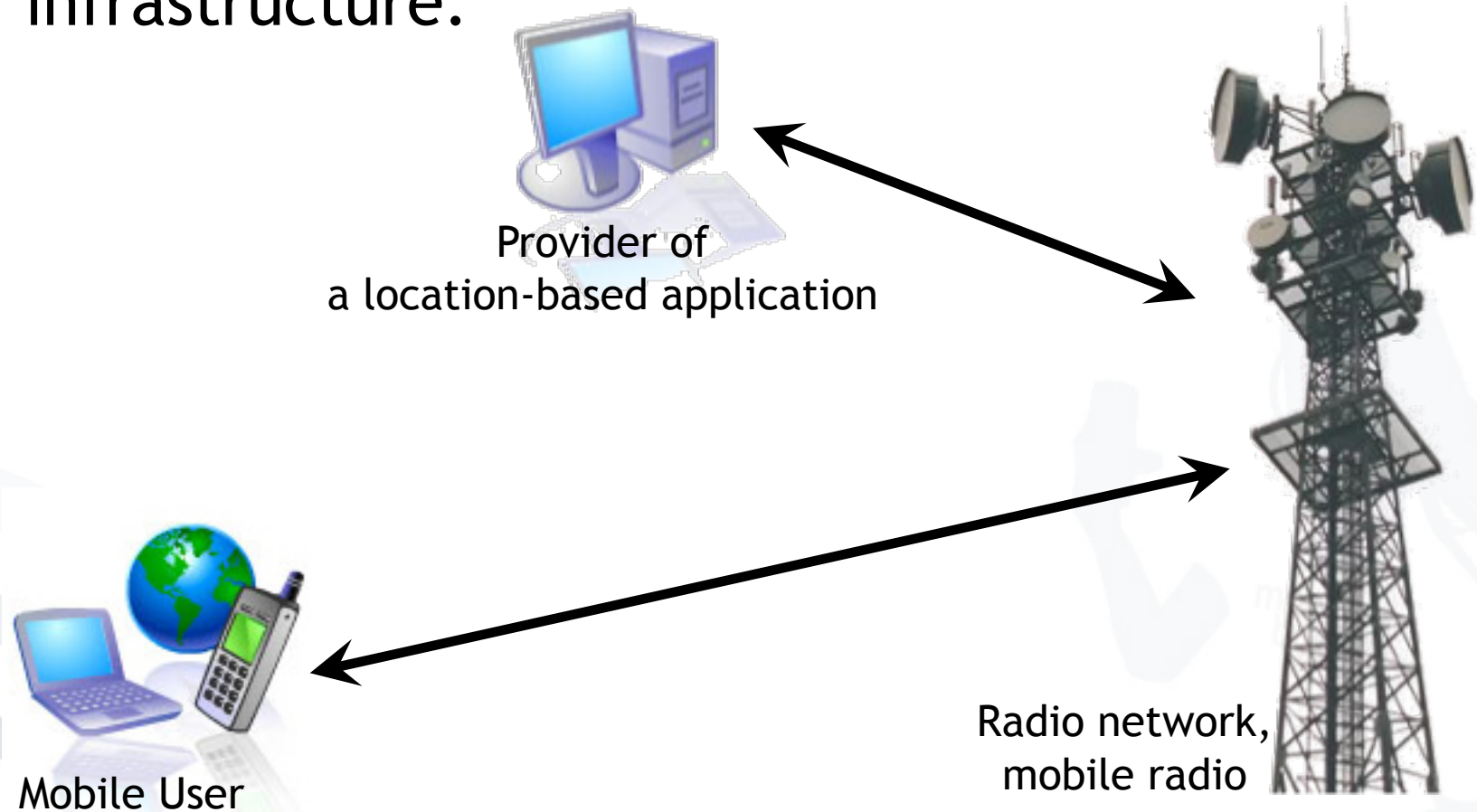
Map 3: Satellite view (2)

- **What is the purpose this map can be used for?**
 - Satellite picture, more precise details about the area can be found.
- **Does this map help you to ride a bicycle from Königstein to Kronberg?**
 - No, the roads are not shown. The streets can only partly be seen, but in the mountains they are hidden from the trees.
- **Will this map help you to evaluate whether a particular street is a nice place to live in?**
 - Yes, depending on the possibility to zoom in and out, precise details can be recognized.

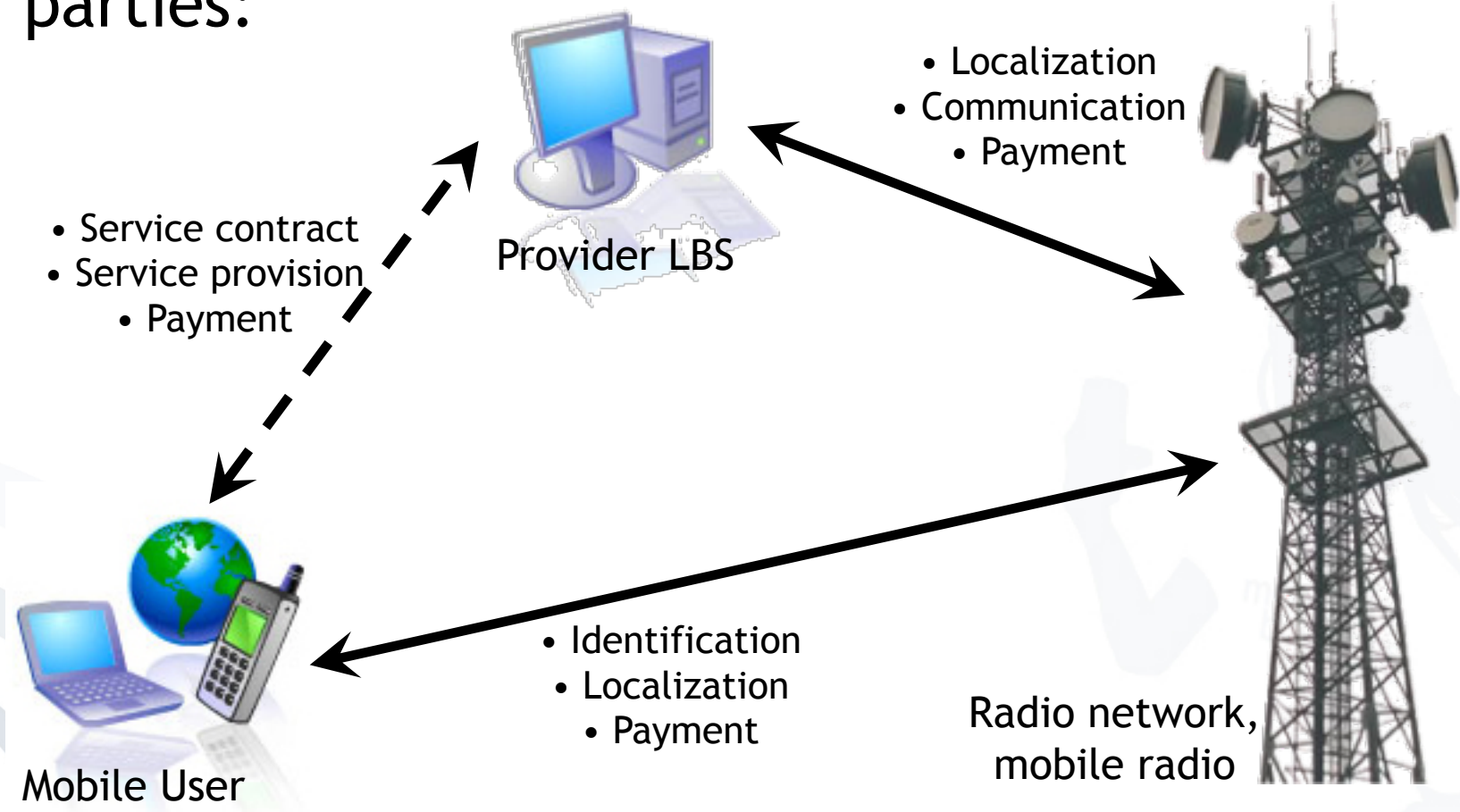
- Biking
 - Bikemap.net for biking
 - Google Maps brings biking directions in certain countries
- Any other examples that you use?

INFRASTRUCTURE FOR LBS

Usually, we speak of variants of the following infrastructure:



LBS require many relationships among involved parties:



If you are planning to provide a LBS,

**WHICH FACTORS ARE RELEVANT FOR YOU AS
A SERVICE PROVIDER IN ORDER TO CHOOSE A
POSITIONING METHOD FOR YOUR SERVICE?**

(1) Value Proposition

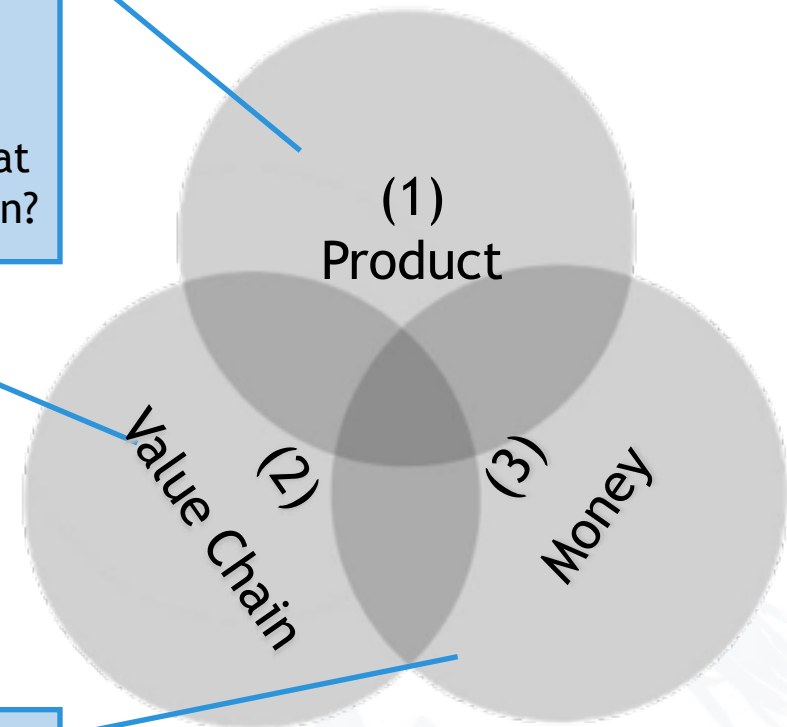
- How does the organisation benefit customers and partners?
- What are the advantages of players that are in relationship with the organisation?

(2) Architecture of added value

- How is the manufacturing of the output presented?
- In which configuration is the output produced?

(3) Revenue Model

- Which revenues will be generated from which sources?
- What are possible types and forms of revenue?



Revenue and Revenue Models

Revenue models

Subscription	Single transaction	Advertisements	Miscellaneous
--------------	--------------------	----------------	---------------

Revenue types

Direct		Indirect	
Utilisation dependent	Utilisation independent	Via enterprise	Via state
Single transaction depending on quantity or period of use	One-time	e.g. advertisement, commission	Subsidisation
	e.g. connection fee		
	regular		
	e.g. subscription, (broadcast) fee		

- Examples
- Type of services
- Advantages
- Technology requirements for the users

The image displays three sequential screenshots of the Yelp mobile application interface, illustrating the user experience for finding a coffee shop.

Top Screenshot (16:48): Shows the search bar with 'Suchen...' and the Yelp logo. The user is in the 'Hoppenworth & Ploch' search results page. The left sidebar lists categories: Restaurant, Bar, Coffee Shop, Lieferservice, and Weitere Kategorien. The main content area shows the restaurant name, distance (0,2 km), rating (4.5 stars), and number of reviews (38 Beiträge). It also displays the address (Siolistraße 7, 60323 Frankfurt am Main) and hours (09:30 - 18:00). A 'Beitrag schreiben' button is visible.

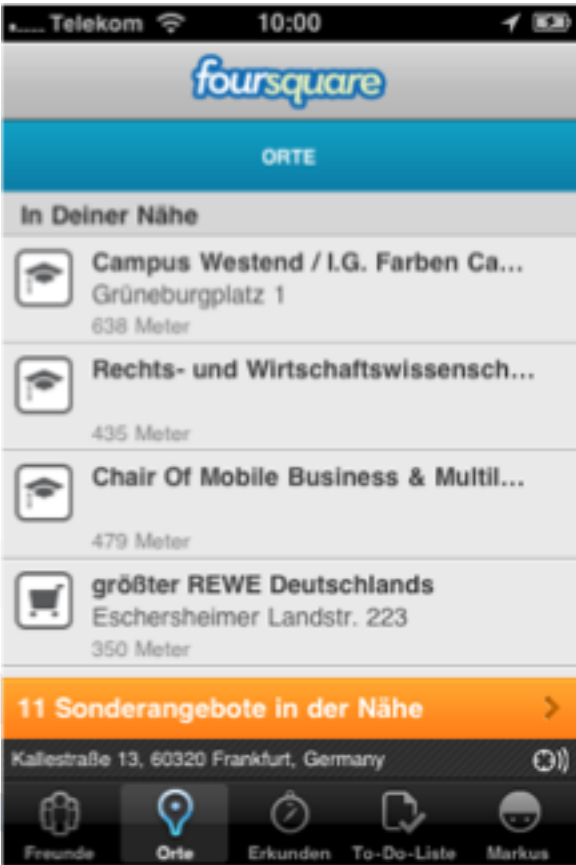
Middle Screenshot (17:03): Focuses on the location details. It features a map showing the restaurant's location on Siolistraße. Below the map, the address 'Siolistraße 7, 60323 Frankfurt am Main' is displayed. A 'Check-In' button is prominent.

Bottom Screenshot (17:04): Shows the 'Beitrags-Highlights' section. It lists two featured reviews: '„Leckerster Kaffee/Esspresso/ Cappuccino, den ich jemals getrunken habe!“' (8 Beiträge) and '„Mit Abstand der beste Kaffee und Tee in Frankfurt, vielleicht auch in Deutschland.“' (5 Beiträge).

The bottom navigation bar is consistent across all screenshots, featuring icons for 'In der Nä...', 'Suchen', 'Mein Profil', and 'Mehr'.



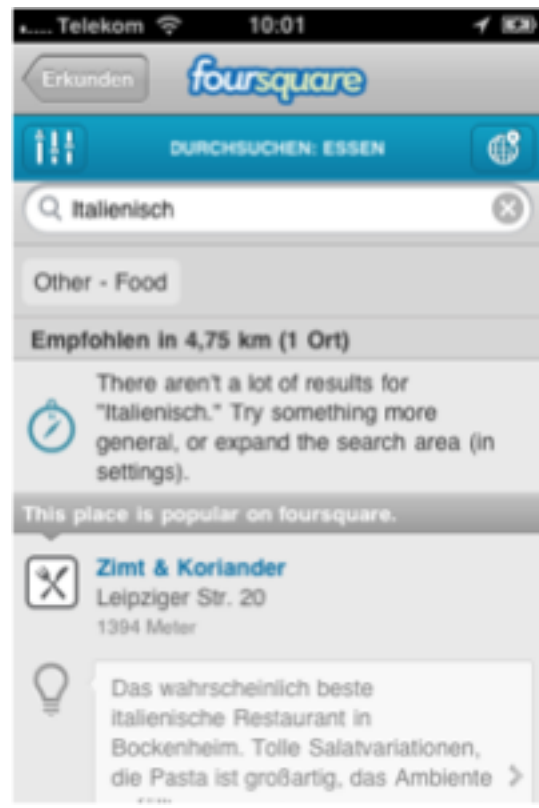
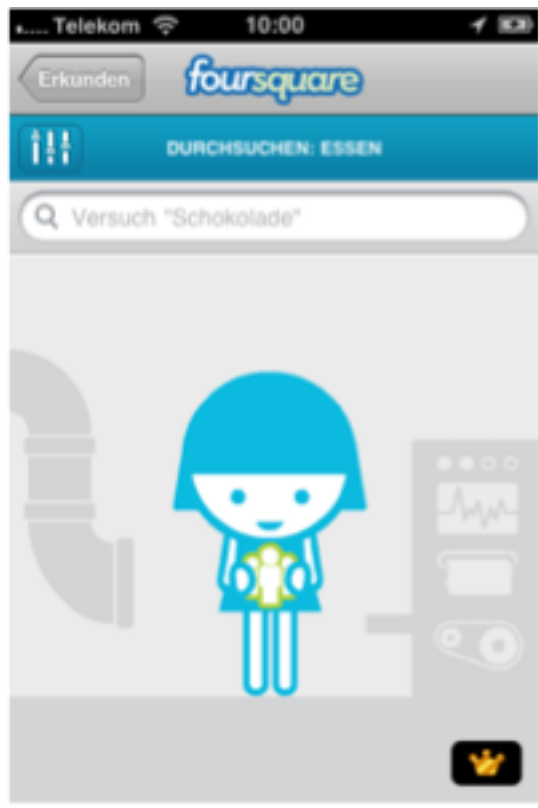
Example 2 - Foursquare - Check-In



Mayor (LAST 60 DAYS)

Trish G.
2 checkins

Example 2 - Foursquare Find places around you

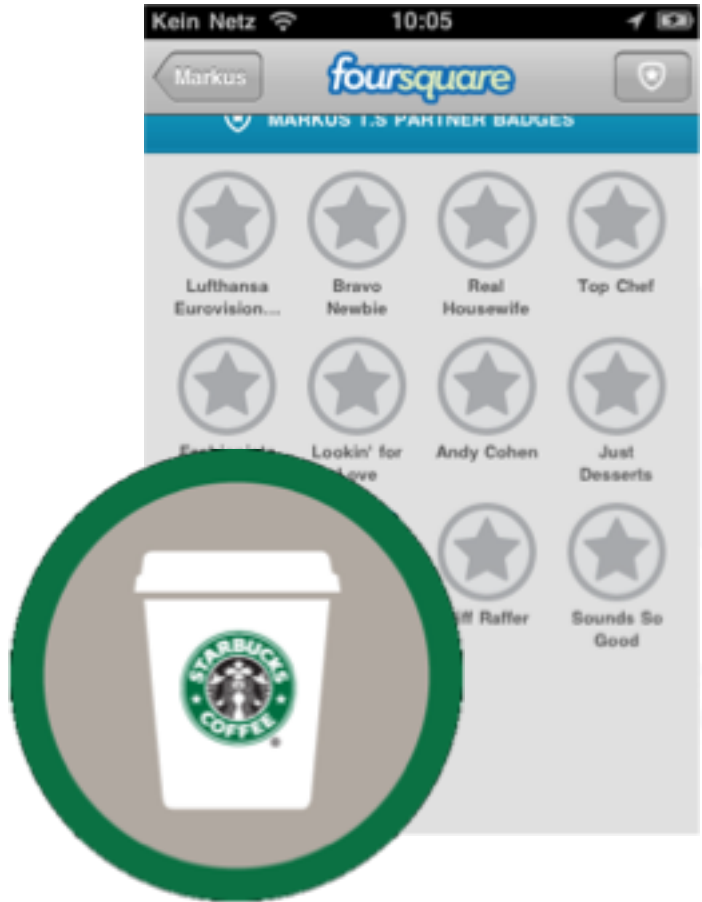


Example 2 - Foursquare Gaming and Honor

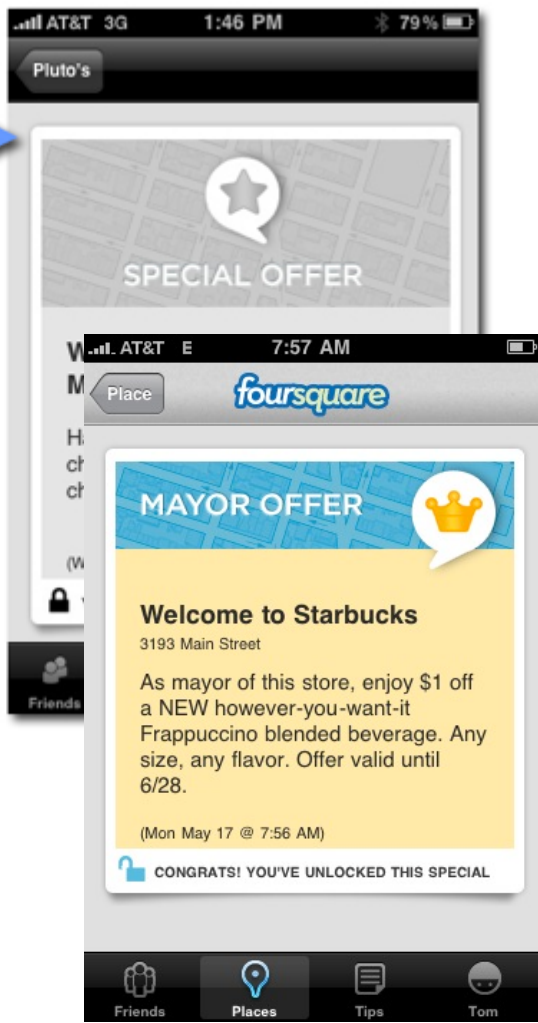
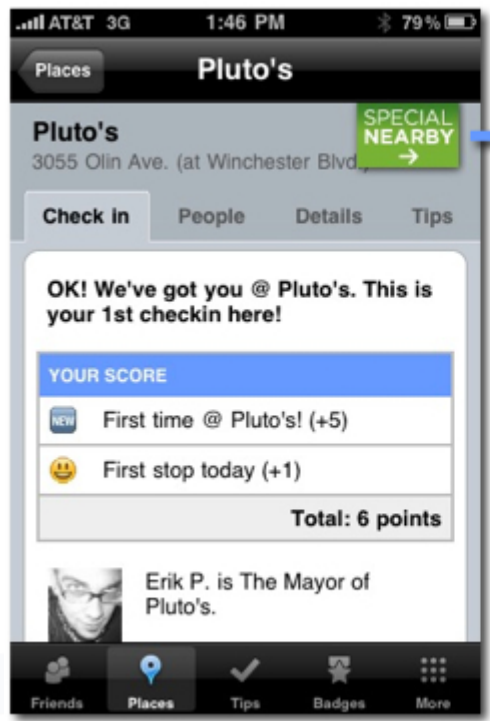
General Badges



Partner Badges



Example 2 - Foursquare Special Offers



Mayor Special

Free drink with platter purchase.
Unlocked for the mayor

Check-in Special

Adam will get you a fresh beverage today during your session if you so choose!
Unlocked every check-in

Newbie Special

Thanks for checking in! Please show your checkin to our booth staff to receive a free gift.
Unlocked on your 1st check-in

Loyalty Special

Free Potato Pancake with every 3rd check in!
Unlocked every 3 check-ins

Special Offer

Buy any whole sandwich, wrap or salad and a drink, and receive a FREE slice of pumpkin cranberry cake!
Unlocked for some other condition

If you are planning to provide a LBS,

**WHICH FACTORS ARE RELEVANT FOR YOU AS
A SERVICE PROVIDER IN ORDER TO CHOOSE A
POSITIONING METHOD FOR YOUR SERVICE?**

Exercise III: Travel applications: Touch&Travel



https://www.youtube.com/watch?v=iF78QdCn_xQ

Exercise III: Travel applications: Touch&Travel (2)



- Additional info:
 - App installation on the phone
 - Support of the telecom operators
- Location can be determined by:
 - Phone
 - Barcode scan at the station
 - Contact-point number input
 - Reading the NFC tag at the station
- Check-in, check-out!
- Pay in the end of the month!

Now:

which factors are relevant for you as a service provider in order to choose a positioning method for your service?

III: Travel applications: Touch&Travel (2)



- What are the advantages for the travellers?
- What are the requirements of the travellers?
- What are the advantages for D-Bahn?
- What is the role of the network operators?

III: Travel applications: Touch&Travel (3)



- What are the advantages for the travellers?
 - Less stressful travel
 - Ticket on the spot
 - Smarter pricing - daily vs. one-way tickets
 - Travel now - pay later
 - Electronic receipt of the travel
- What are the requirements for the travellers?
 - Smartphone with location capability and/or camera (QR code)
 - Registration (bank, address)
 - „Certain“ mobile operator
 - Mobile data (internet connectivity)

III: Travel applications: Touch&Travel (4)



- What are the advantages for DBahn?
 - „Mobile and distributed“ terminals
 - Less expenses for maintaining/installing ticket machines
 - Less expenses - less personnel
 - Potential additional customer data and travel profiles
- For discussion:
 - The role of the network operators
 - Setting up the database of the stations/stops
 - Determining the location of the phone
 - (Any other) parties involved!?

- Other uses:
 - Outdoor activities (jogging)
 - Advertisements
 - Meeting friends (sharing location on Whatsapp, for instance)
- Privacy concerns: who should own the location data?
- Your other ideas, experiences in general.

Now:

which factors are relevant for you as a service provider in order to choose a positioning method for your service?

Questions

mob2@m-chair.de