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Exercise 2 – Location Based Services

Mobile Business II (SS 2016)

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

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Agenda

- Your participation ☺

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

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Exercise I

Look at the following maps. Think about the 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?

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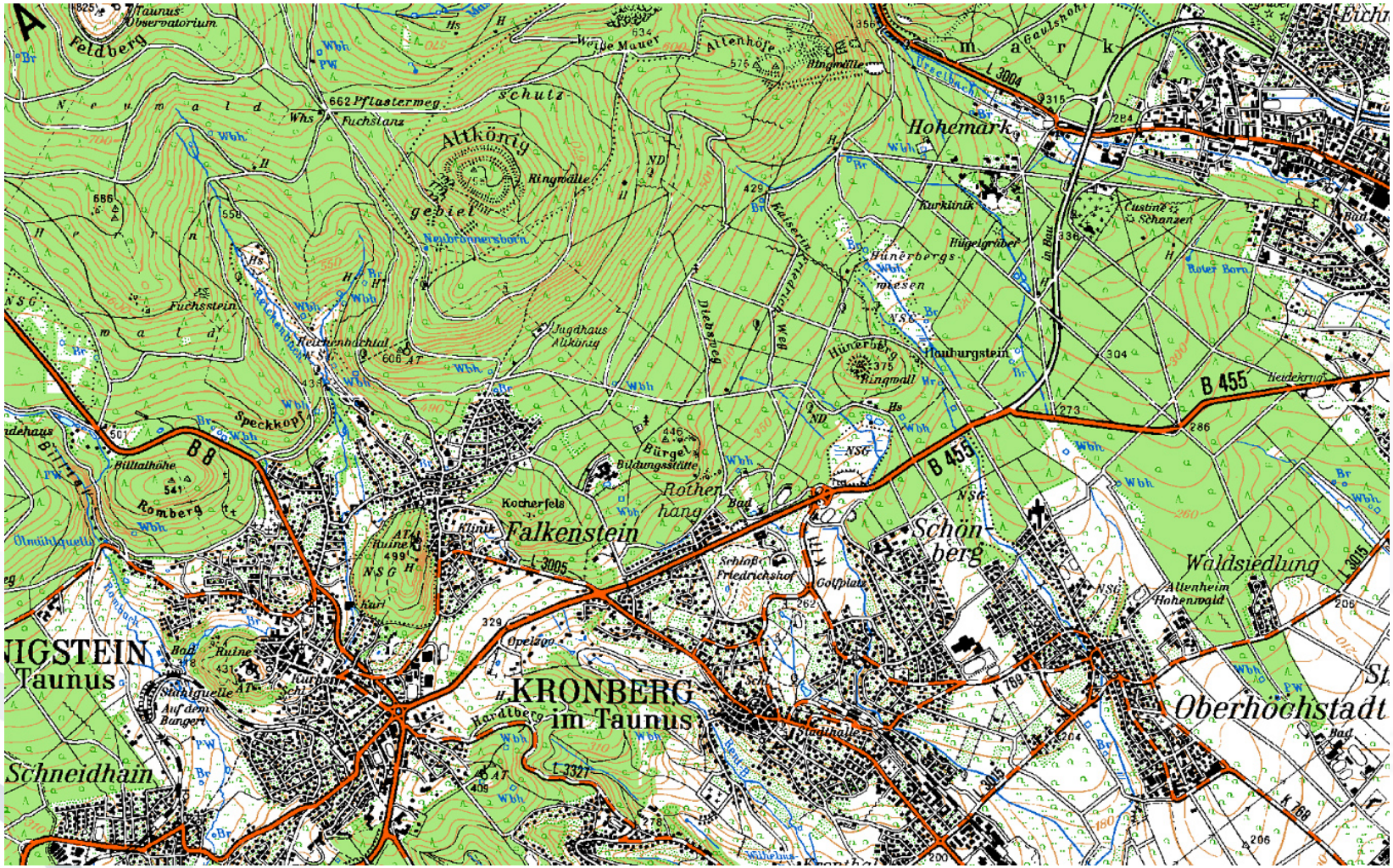
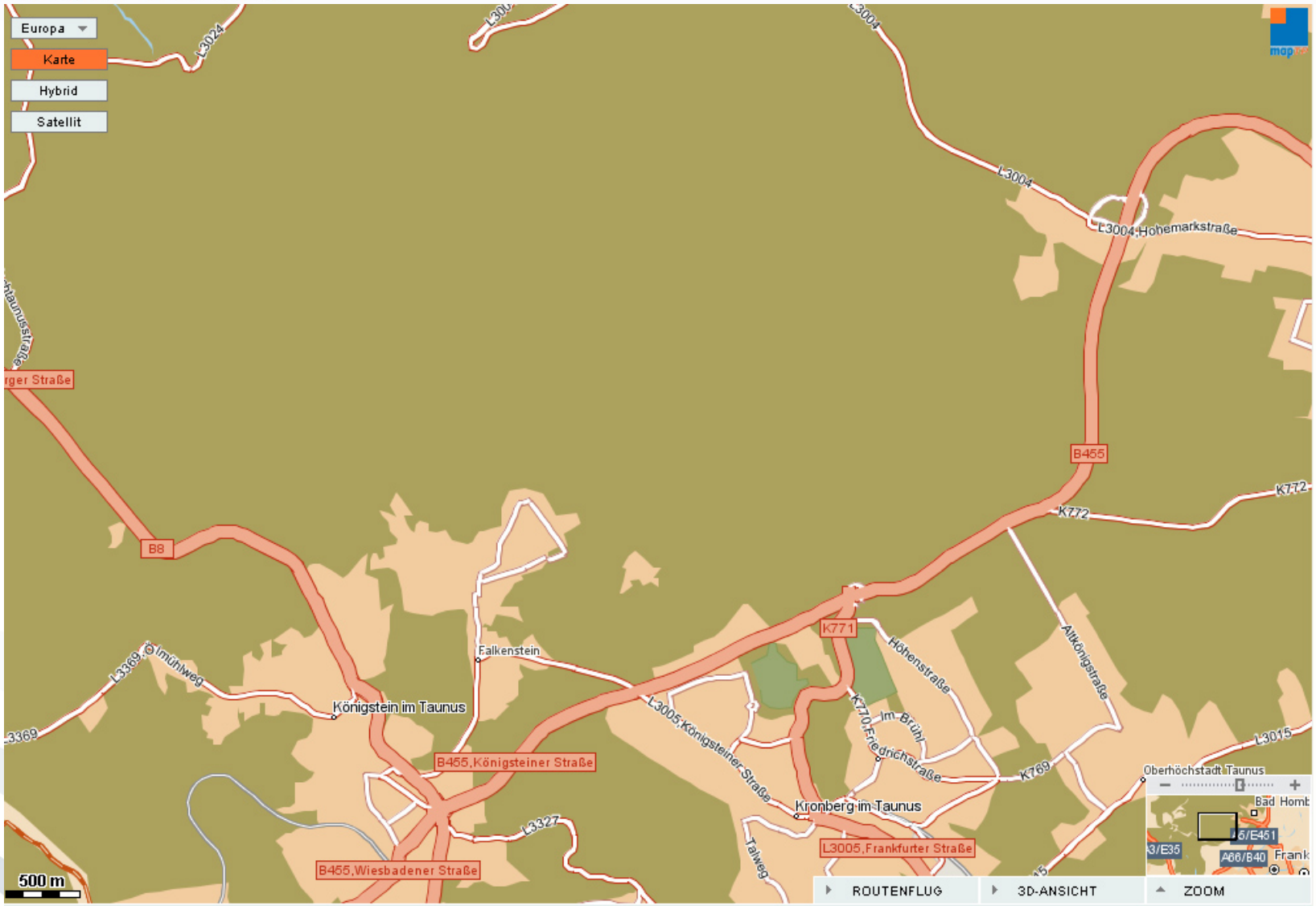
Map 1:Topological map



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.

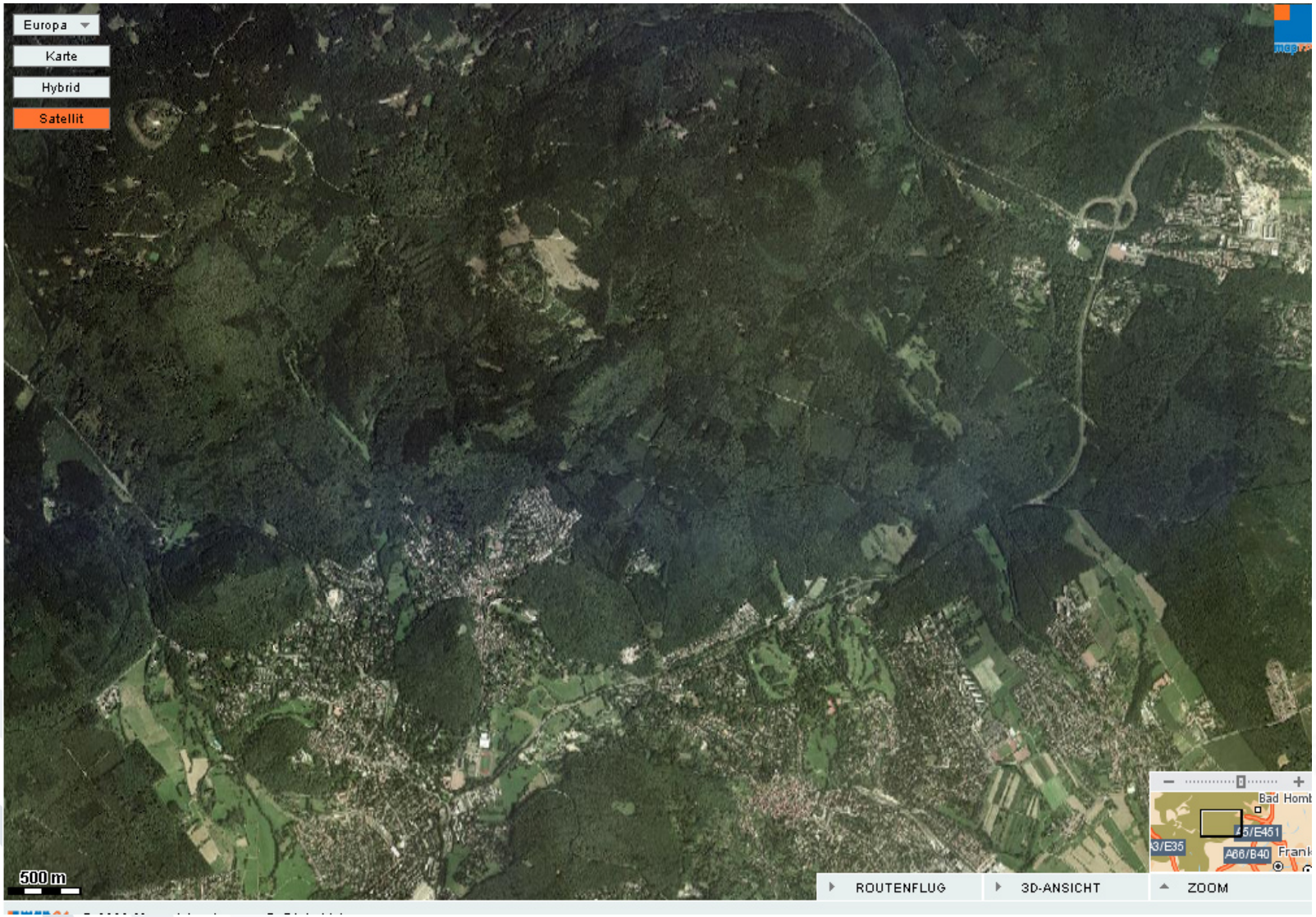
Map 2: Street-map view



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.

Other routing examples

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

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INFRASTRUCTURE FOR LBS

Infrastructure for LBS

Usually, we speak of variants of the following infrastructure:

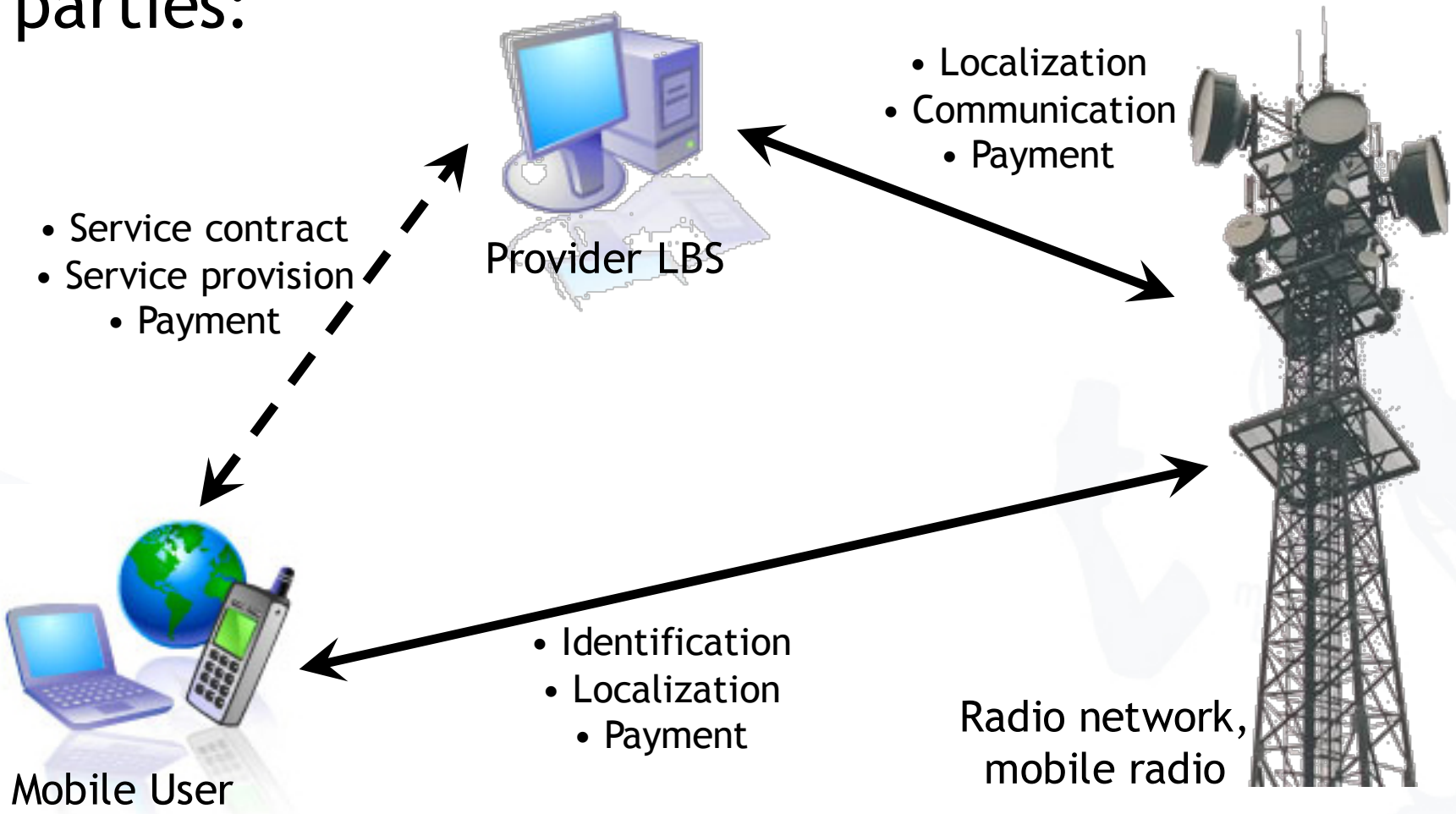
Provider of
a location-based application

Mobile User

Radio network,
mobile radio

Business Relations

LBS require many relationships among involved parties:



If you are planning to provide a LBS,

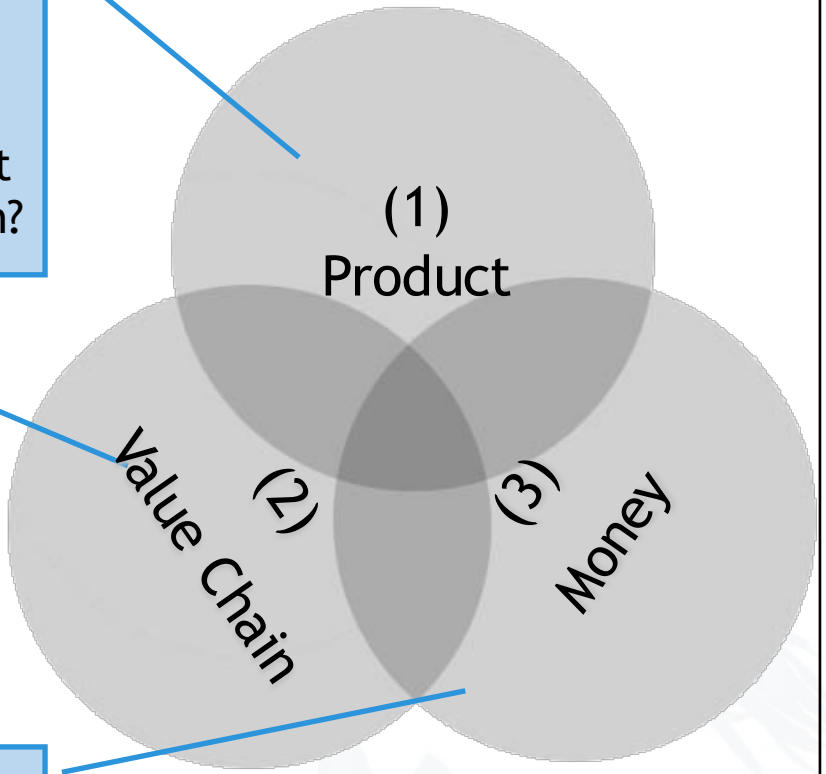
WHICH FACTORS ARE RELEVANT FOR YOU AS A SERVICE PROVIDER IN ORDER TO CHOOSE A POSITIONING METHOD FOR YOUR SERVICE?

Elements of a Business Model

(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
	One-time	regular		
Single transaction depending on quantity or period of use	e.g. connec-tion fee	e.g. subscrip-tion, (broad-cast) fee	e.g. advertisement, commission	Subsidisation

Exercise II: Mobile Community Platforms

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

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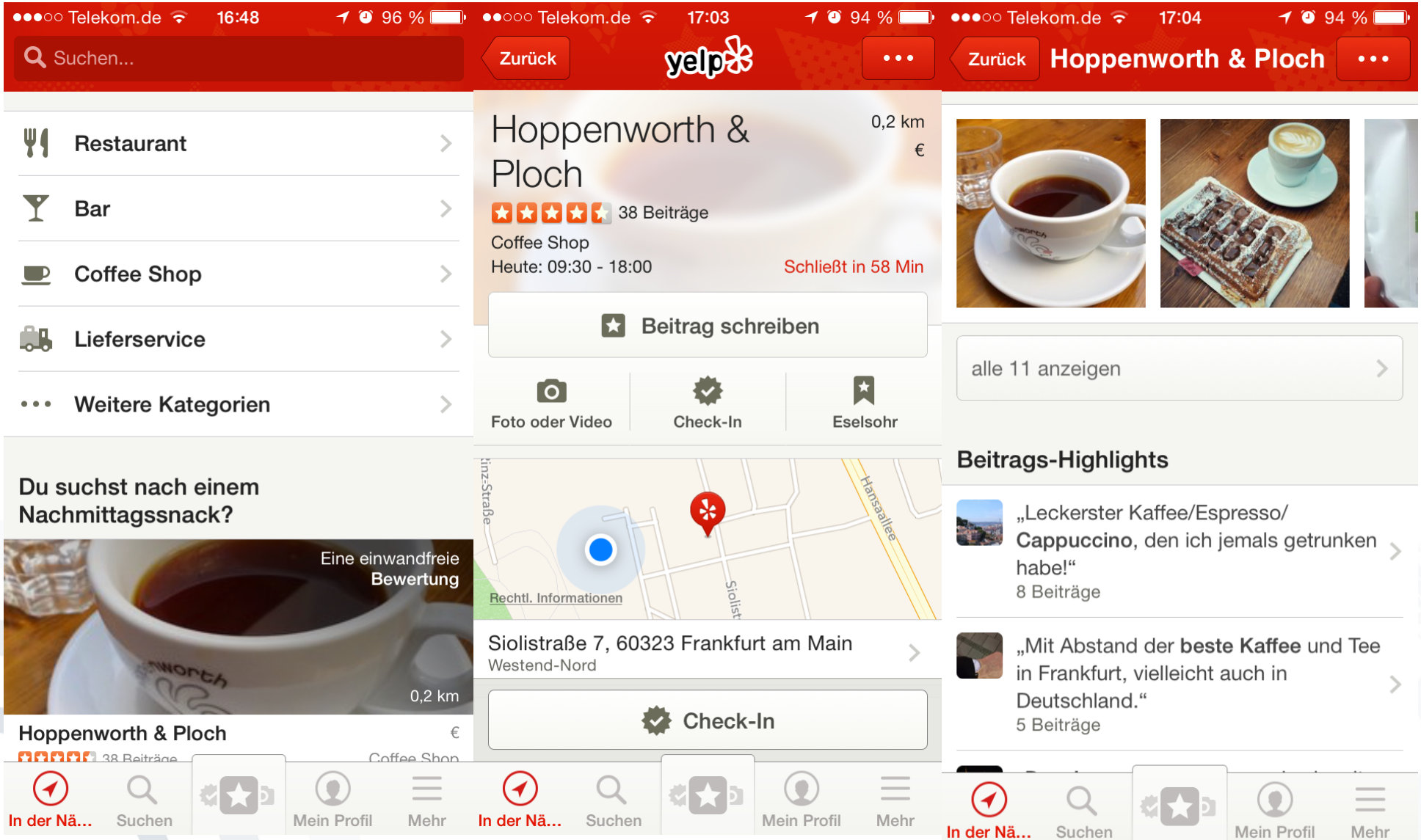
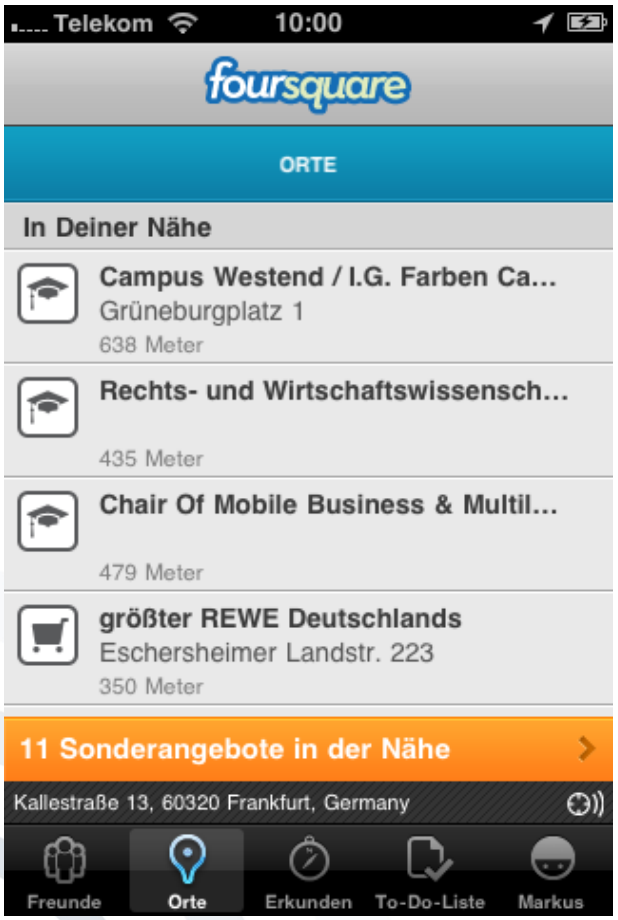
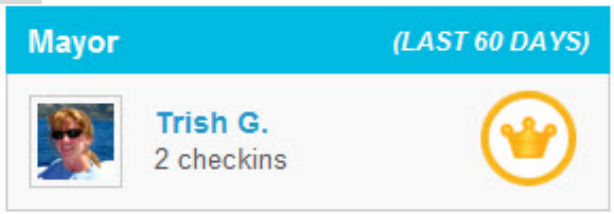
Example 1: yelp



Example 2 - Foursquare – Check-In





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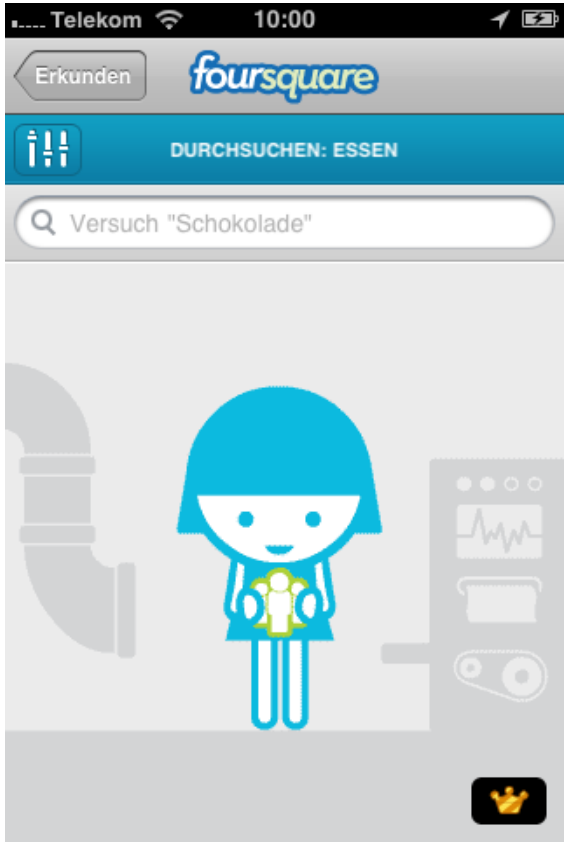
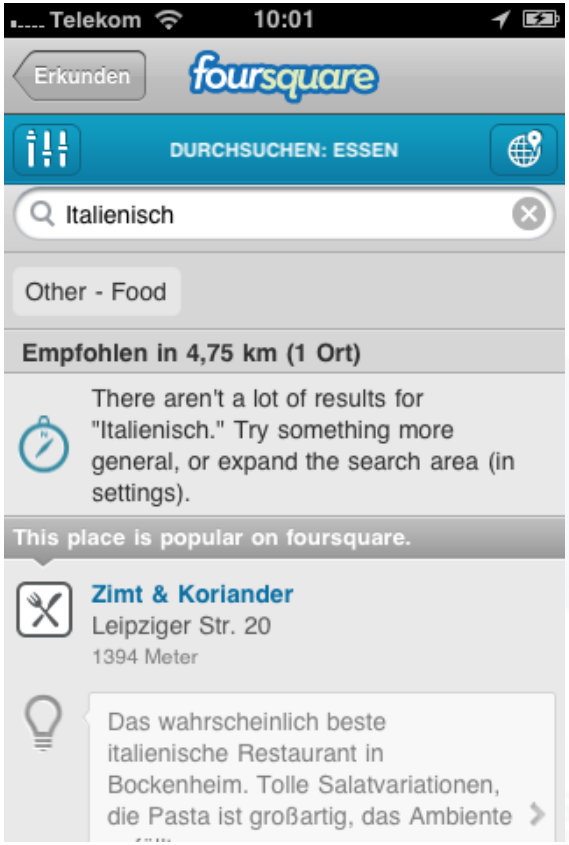
Example 2 - Foursquare
Find places arround you





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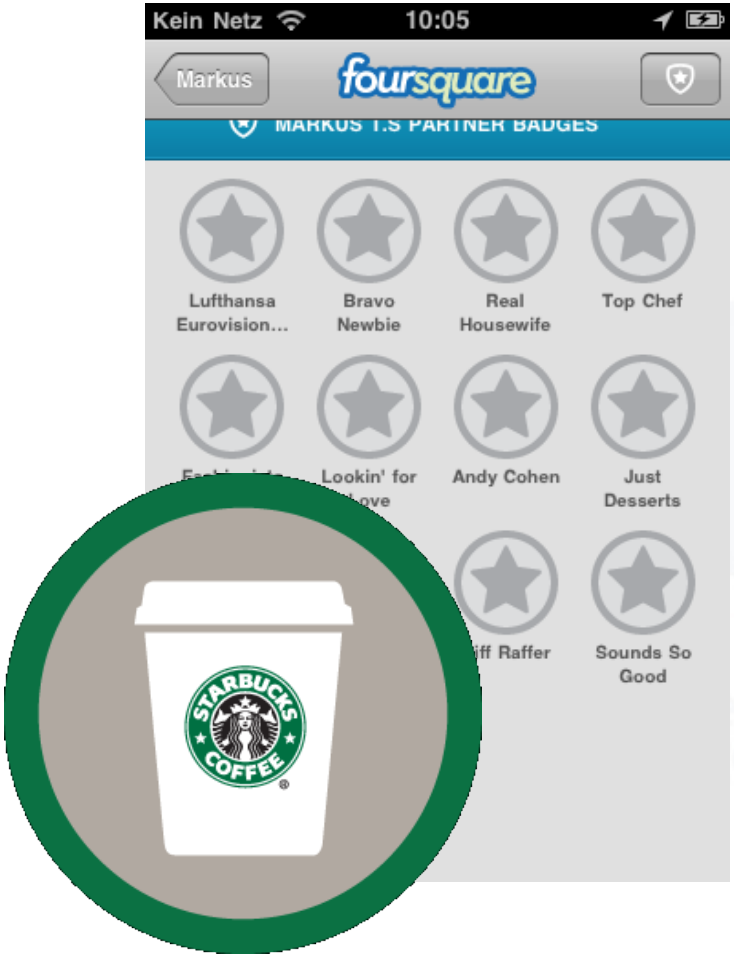
Example 2 - Foursquare Gaming and Honor

General Badges

Partner Badges



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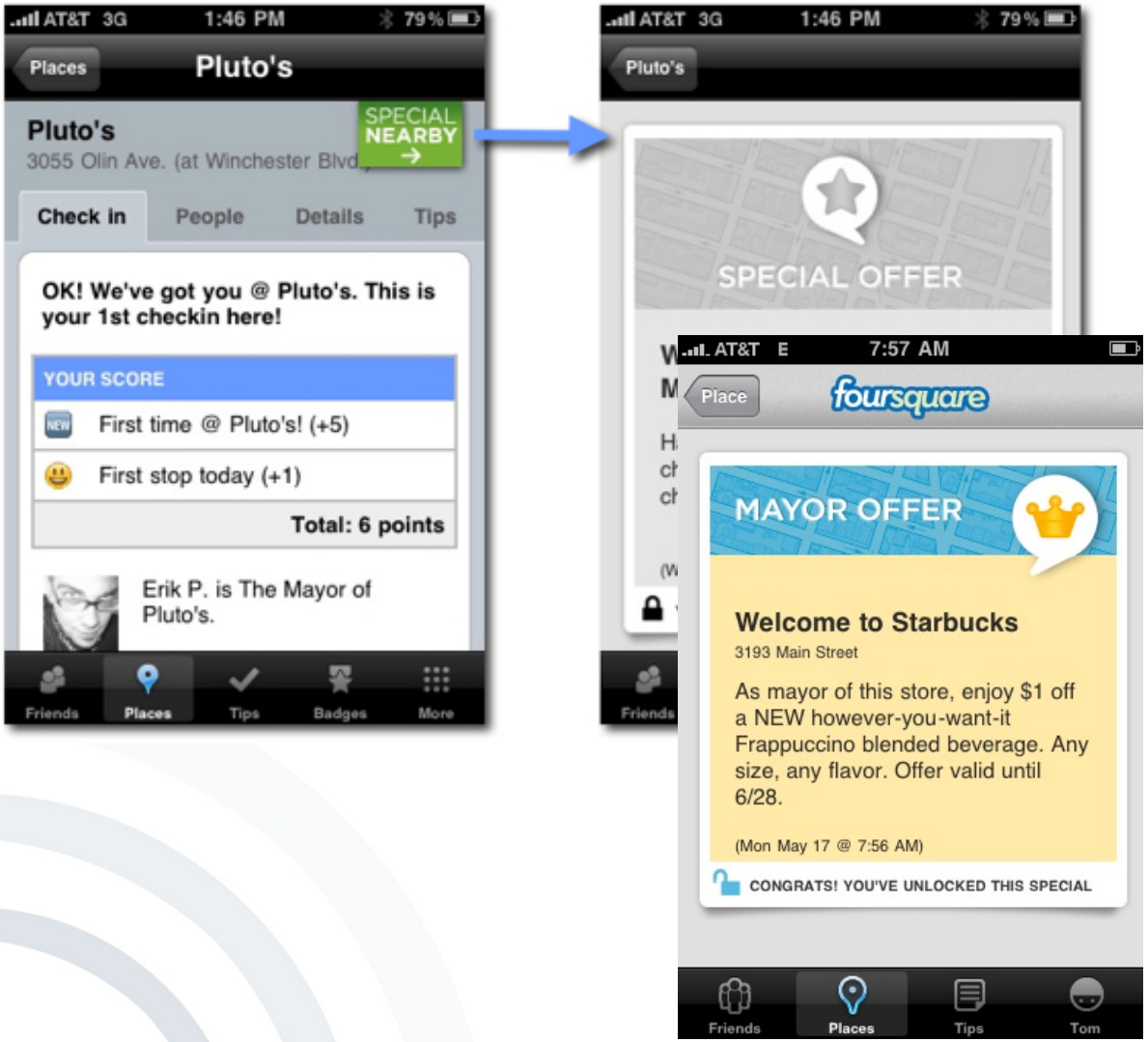
Example 2 - Foursquare Special Offers



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!

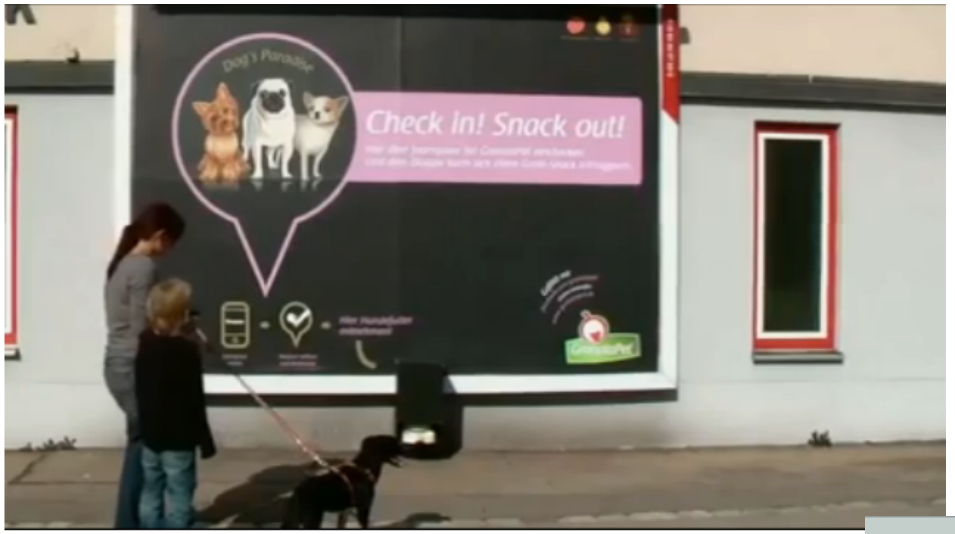
Unlocked every 3 check-ins

Special Offer

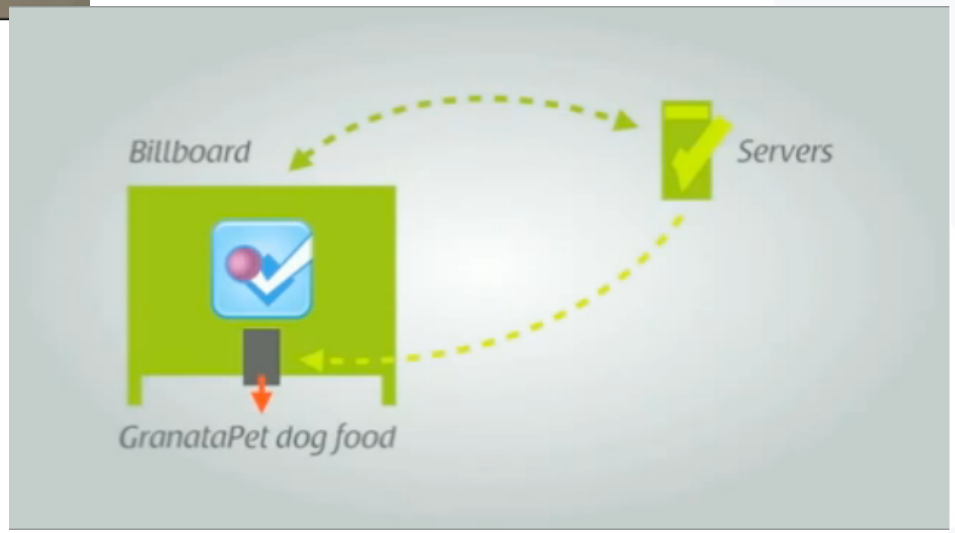
Buy any whole sandwich, wrap or salad and a drink, and receive a FREE slice of pumpkin cranberry cake!

Unlocked for some other condition

Use Case: GranadaPet - Bridging the Offline and Online World

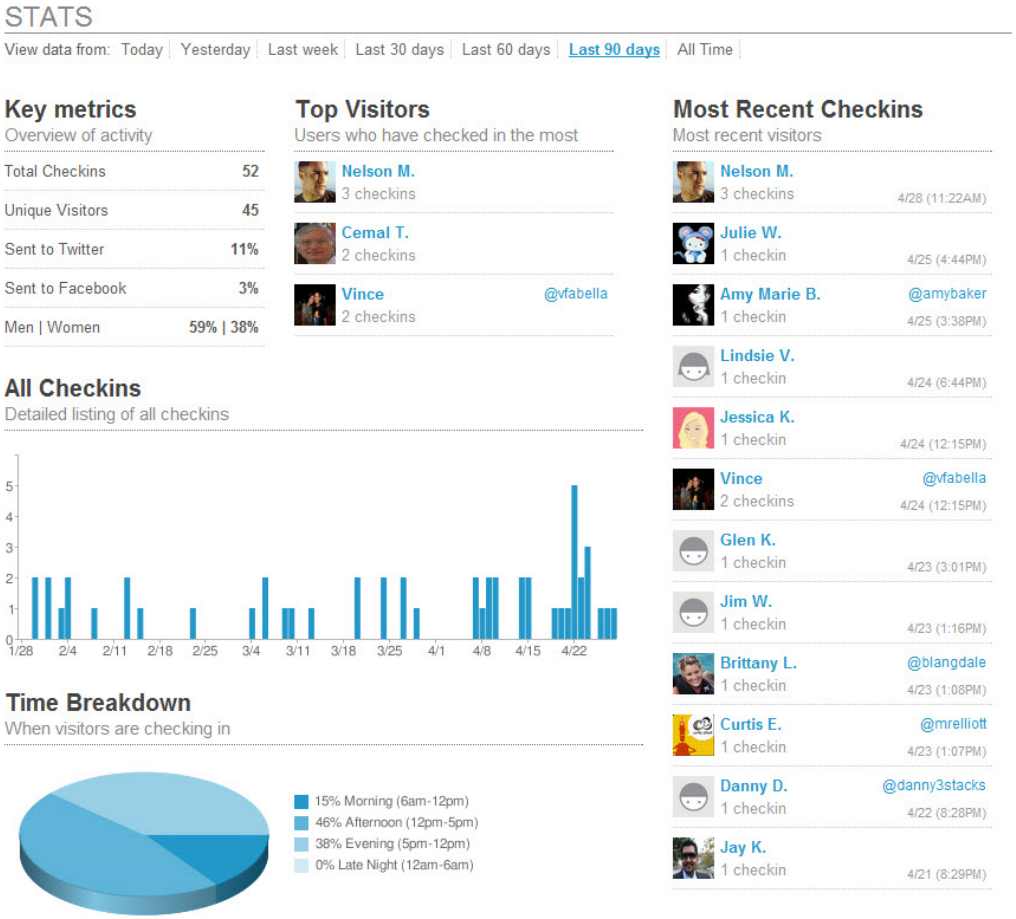


http://www.mediabistro.com/galleycat/granatapet-uses-foursquare-checkins-to-dispense-free-dog-food_b26638



Use Case: GranadaPet
Benefit for the Advertiser

- Cheap advertising
- Dog commands the owner
- Showing dog‘s high appreciation for this dog food
- Getting statistics about the costumers/users
- Viral Marketing through facebook



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!?

Misc

- 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?

Let’s check an online tool out!

http://www.positioningtechniques.eu/lbs_technique_checker.asp

Thank you!

- Questions, comments: mb2@m-chair.de