Intelligent Truck Parking Workshop

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Specific needs of transportation company

- Purpose of this presentation:
  - To show parking topic from driver's view
  - To find scope where ITS can help

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Driver's lifecycle – when & where to find parking?

- When?
- Driving times of most drivers based on Regulation (EC) No 561/2006
- Simplified rules for rests:
  - Short rest (45 minutes) after 4,5 hours of driving
  - Daily rest (9 – 11 hours) after 9 or 10 hours of driving
  - Weekly rest (24 – 45 hours) after 6 days of driving
- Main goal for transport operator: to use maximal driving time with minimal number of stops

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Driver's lifecycle – when & where to find parking?

- Where?

- Everywhere close to main transport coridors (highways) and loading places
- Demand is changing in time and space
- Simplified situation: bilateral transports (CZ -> DE, AT, IT, ….)

- Day 1 – start from company's HQ, loading (export), crossing border, daily rest
- Day 2 – unloading, heading for next load, loading (import), daily rest
- Day 3 – crossing border, unloading (import), return to company's HQ
- … next round / or weekly rest
- The goal is to be back at HQ for weekly rest

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Today's praxis – how drivers search parking

- Most routes are regular routes
- Most drivers have experience
- Drivers have their „favorite“ parking places
- Drivers want to be on safe and known places

- Drivers search parking places in foreign countries
- Drivers search other services as well - fuel, shop, toilets

- Categories of parking places:
- Small parkings at petrol stations (20 – 50 parking lots) – open access
- Truck parks (D1 park, “Autohof” > 50 parking lots) – open / restricted access

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How to offer free parking lot

- Two phases: Detection and Providing information

- Detection of free parking lots
  - Technologies available, but not deployed – cameras, induction loops
  - Questions to be solved: costs, motivation to deploy – not technological issues
  - Review of parking capacities on highway network (regular/real capacity?)

- Providing information to drivers
  - Technologies available as well, but not deployed – drivers have to „stop and go“
  - Questions to be solved: interface between parking infrastructure and vehicle

Can parking place be chosen a booked before the route starts?

- Nowadays / loading lots and ferries are booked in advance – why not to use the same praxis for parking?

- Advantage:
  - Parking place can be booked by dispatchers, no issue for drivers, easy to pay

- Barriers:
  - Not suitable for “open access” parkings with low capacity – how to prevent usage of parking lot by other carrier?
  - How to deal with missed reservations – when to free them up?
  - Will companies accept to pay for parking lot?

- Conclusion: can be used in specific cases, but will not solve the main problem => further we focus on solutions where driver decides

Driver's decision – simple approach

- Goal: provide information to drivers to prevent "stop and go"

- Provide information directly at the parking place or close to it
- One way communication infrastructure > vehicle

- Advantages:
  - No investment cost for transport operators
  - Possible to use existing devices (price labels, highway information boards)

- Disadvantages:
  - Investment costs for operators of parking places
  - No information about when parking place will be free

Driver's decision – information provided to vehicle (in advance)

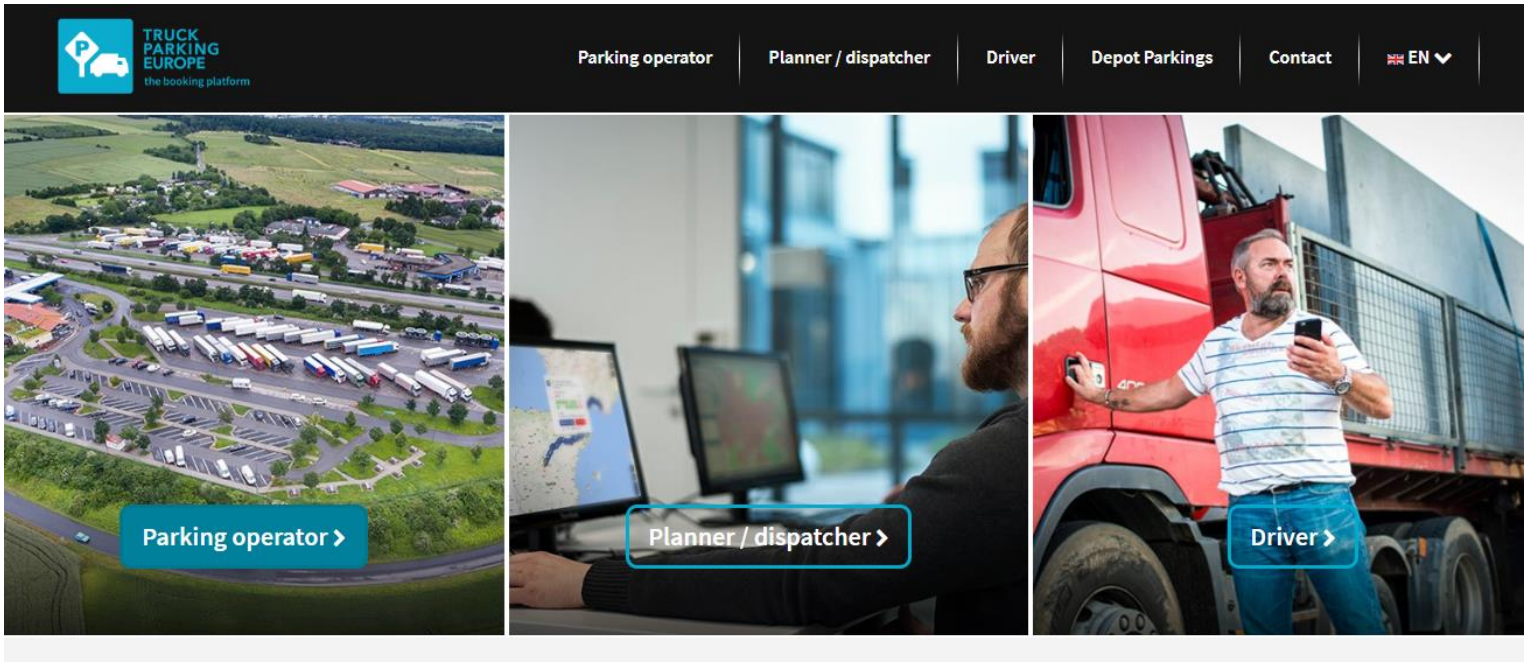
- Goal: Provide information to drivers directly into vehicle in time and place of demand

- How to get the information into the vehicle (possible devices in vehicle):

- 1) digital tachograph
- 2) OBU unit
- 3) vehicle unit
- 4) extra telematics unit
- 5) radio - RDS
- 6) mobile phone

Possible scope for ITS solution – parking application for drivers

- Goal: provide information about free parking places to vehicle
- There is already existing app for this purpose (www.truckparkingeurope.com)



The end

- Thanks for your attention