Truck Parking Information, Guidance and Reservation Portal

Presentation at Truck Parking Conference
Brussels, 29th April, 2009

Presented version
Rudolf Anner, CEO
Move & Park SAS
19, boulevard Malesherbes
75008 Paris
Tel: +33 - 1 - 55 27 39 18
Fax +33 - 1 - 55 27 37 00
info@moveandpark.com
www.moveandpark.com
Content

- Challenges
  - Lack of transparency
  - Still too many accidents
  - Space management
  - Quality assurance

- Solutions
  - Service 1: database
  - Service 2: guidance
  - Service 3: reservation
  - Service 4: certification

- Cost / benefit analysis

- Next steps

- Acknowledgements
Objective 3 of SETPOS: pan-European Truck Parking Portal

- For all types of Parkings
- Interliked services 1,2,3
- User friendly
- Multilingual
- Seemless across Europe
- Open interfaces
- Multimedia…
Service 1: truck parking information

One unified, comprehensive, up to-date and reliable inventory of all European rest areas

all available truck parking information, from printed and other sources

...on one single portal
S1: 3 main ways to search

- Country
- City
- Route
- Highway
  - Radius nn km
  - Corridor motorway
  - Up to 160 different attributes!

- Results on Google map
- And/or in table
S1: Search Example: DK E45

Highway search
Country*: Denmark
Highway name*: E45
Direction:
Corridor width*: 7 km

You are here: HOME ➔ ADVANCED PARKING SEARCH ➔ SEARCH RESULT
S1: Example: Show result in a list

<table>
<thead>
<tr>
<th>Location</th>
<th>Name / Operator</th>
<th>Places</th>
<th>Distance</th>
<th>Price</th>
<th>Status</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A2</td>
<td>Luzern-Nouenik info@luzernor...</td>
<td>50</td>
<td>36.68 km</td>
<td>?</td>
<td>38 free</td>
<td>MORE INFO</td>
</tr>
<tr>
<td>2 A31 38 Geisingen</td>
<td>B31 Richtung Fr... sp_DE01@truc...</td>
<td>30</td>
<td>35.56 km</td>
<td>?</td>
<td>NOW FULL</td>
<td>MORE INFO</td>
</tr>
<tr>
<td>3 E41</td>
<td>Kempfsh-Sud sp_DIVO4@truc...</td>
<td>34</td>
<td>15.18 km</td>
<td>?</td>
<td>12 free</td>
<td>MORE INFO</td>
</tr>
<tr>
<td>4 Albruck, B34</td>
<td>sp_DE03@truc...</td>
<td>?</td>
<td>38.75 km</td>
<td>?</td>
<td></td>
<td>MORE INFO</td>
</tr>
<tr>
<td>5 E50</td>
<td>Rastattne Forre... info@auto...</td>
<td>32</td>
<td>22.85 km</td>
<td>?</td>
<td>10 free</td>
<td>MORE INFO</td>
</tr>
<tr>
<td>6 A1 58 Dietikon Industrie dietikon-silbern...</td>
<td>4</td>
<td>11.86 km</td>
<td>?</td>
<td></td>
<td></td>
<td>MORE INFO</td>
</tr>
</tbody>
</table>
Service 1: Details

Parking Area Operators can now maintain their own data, e.g.:
- upload photos
- show the daily menus
- give news
- update as and when needed their portrait (e.g. as prices change)
- react to driver feedback

Users can comment

Truckinform admin can check maintenance of the site etc
Service 1: Achievements in Quantity and Quality of the data

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUANTITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of TPAs</td>
<td>2.000 – 2.200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 20,000 TPAs found in 30 sources by SETPOS. Selected:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>QUALITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on attributes</td>
<td>25 %</td>
<td>50 %</td>
<td>75 %</td>
</tr>
</tbody>
</table>

→ The data is improving – every day!
Challenges 1: Information

1. Drivers and dispatchers have to know where there is space

2. New areas need to be shown as and when they opened up

3. Lack of parking spaces: 30,000 - 60,000

Our contributions in S1

With SETPOS
www.truckinform.eu an intelligent online overview and search medium has been created

New areas and any changes are seen immediately; Europe-wide

Truckinform Service 1 makes space visible, resulting in better use of infrastructure.

Additional space – e.g. In terminals, ports, forwarders premises – is being added
Service 2: actual availability/parking guidance = more safety

Dynamic and up-to-date information about available parking places

- Truck stop B: full
- Rest area 2: only 5 spaces available
- Truck stop A: full, or no data
- Rest area 1: 10 spaces available
Service 2: Time is soon up... - where to rest?

permissible drive-time limit

- P 142km: FULL
- P 98km
- P 91km: 20 free
- P 10km: FULL
Service 2: real-time input, checks, dissemination

- Automatic detection (8 methods)
- Web form; browser
- Warden SMS
- Driver or other SMS/phone
- Parking mgt system

- Data collection
- Quality control
- Send out

Call centre
On-board devices
Internet, SMS
A) automated availability detection at parking sites (8 methods evaluated)

- video number plate reading
- terminals and barriers
- laser scanner

move & park
Service 2: real-time input, checks, dissemination

- Automatic detection (8 methods)
- Web form; browser
- Warden SMS
- Driver or other SMS/phone
- Parking mgmt system

B

TRUCKinform
- Data collection
- Quality control
- Send out

- Call centre
- On-board devices
- Internet, SMS
Service 2: B) input by web form → instantly visible

- Autohof Lindau
- Parking: floppy@allmobile.com
- Petrol Station: floppy@allmobile.com
- Restaurant: floppy@allmobile.com

Transfer to Operator

By checking the box next to services above, then selecting an operator below you can transfer services to new owners.

Search: [search bar]

ASSIGN CHECKED SERVICES
Service 2: real-time input, checks, dissemination

- automatic detection (8 methods)
- web form; browser
- warden SMS
- driver or other SMS/phone
- parking mgt system

TRUCKinform
- data collection
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Call centre
On-board devices
Internet, SMS
Service 2: C) updating by parking warden

Advantages:
- no on-site installation needed
- job of warden is upgraded

Disadvantages:
- person-dependent

Dear Warden
HOW MANY FREE SPACES, RIGHT NOW?
Thank you
Truckinform
Service 2: D), E) other quick-to-implement measure

- P messenger phone
- drivers report status via onboard computer
- data collection
- quality control
- send out

- call centre
- on-board devices
- Internet, SMS

barriers counts
S2: Examples of dynamic data indication near motorway
### Challenges 2: Guidance

1. Still too many accidents

2. Drivers should be enabled to ‘see’ 20 to 300 km ahead

3. Environment

4. The infrastructure to capture dynamic availability data is expensive (> 98 % not in place yet)

### Our contributions, with S2:

- A pan-European parking guidance system can now be established quickly and cheaply = road safety is enhanced for all
- Time to rest can be planned better: stress is reduced
- Less search traffic
- In SETPOS/Truckinform fast and cheap alternatives have been developed - for immediate use!
Service 3: truck parking reservation

1. booking via SMS, OBU, internet, call centre..., is transmitted to platform
2. reservation transmitted from the platform to truck park terminal
3. enter/exit:
   - identification
   - time stamp
   - payment
Service 3 – reservation → TPAs register & appear

- Reservations until?
- Reservation fee?
- Parking fee?
- Cancellation fee?
- No show-fee?
- Which cards accepted?..
<table>
<thead>
<tr>
<th>Challenges 3</th>
<th>Solutions S3: Pre-booking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Often, expensive parking space needs to be managed better (near bottlenecks, cities, ports...) or earn more</td>
<td><strong>Truckinform can guide trucks to pre-booked space</strong></td>
</tr>
<tr>
<td>2. Some rest areas are over-parked</td>
<td><strong>Truckinform helps to make better use of existing space</strong></td>
</tr>
<tr>
<td>3. Drivers need to avoid stress and expenses searching around</td>
<td><strong>To know: „my space is reserved“ is reassuring</strong></td>
</tr>
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</table>
All 3 Truckinform services can also be used in a truck.
Services 1 and 2: static and dynamic TPA info

Find TPAs
- near by
- close to destination (with activated navigation)

Detailed information include
- Address
- Phone number
- Number of parking spaces
- Number of available parking spaces
- Time of last inquiry of available free parking spaces
- Any current reservations made
- Opening hours
- Available security areas
- Special installations and services
Service 3: a truck driver can book space out of the truck

- Enter Date/Time of reservation
- Enter duration of reservation

Selection of TPA as described in S1 and S2

Summary

Confirmation Message with reference number

move & park
Truckinform in the LABEL project (Service 4)

1. **certification**
   - by Dekra and Atlantis
   - 75 sites in 10 countries

2. **ADAC/Eurotest**
   - by Automobile Associations
   - 50 sites (25 same as 1.)

3. **algorithmic**
   - by Truckinform portal
   - 2’500 sites in 40 countries

4. **user feedback**
   - to Truckinform portal
   - 2’500 sites in 40 countries

Mainly from SETPOS
Integration of SETPOS ICT/ITS and LABEL

TRUCKinform
the European truck parking information portal

R means can reserve  C means certified

You are here: HOME ➔ ADVANCED PARKING SEARCH ➔ SEARCH RESULT

Calling Europe’s Truck Park Area Operators

Background: Truckinform today has information on some 2500 European Truck Parking Areas, both public and private. This data has been collected from over 20 different sources. However, some information is still missing and all needs to be checked.

Help: we ask Europe’s Truck Park Area Operators to send us an e-mail telling us who you are: we will then send you a password so that you can log into our portal and check and update your information.

This portal can potentially serve Europe’s 2.5 million long distance truck drivers, and their dispatchers - as well as the transport industry in general, public authorities, and others.

View "contact quality" summary.

Truckinform is co-financed by the European Commission, as part of the SETPOS project

move&park
Synergies: combining Truckinform Services 1, 2 and LABEL

- Name of Truck Parking Area on sign outside facility
- Service 1: information
- Service 2: parking availability
- Text customisable by Truck Park Area
- LABEL rating: in this example
  - 3 points for security
  - 2 for “quality”
Challenges 4

1. Very different types of TPAs across Europe

2. Different national ‘standards’ = ‘unequal’ treatment to drivers

3. Comfort & dignity, safety, security and services should over all grow in quality

4. A feedback system is lacking

Solutions S4

Truckinform allows to classify TPAs and to assess user needs

Truckinform makes markets transparent and motivates

Truckinform shows the progress

Truckinform soon captures user feedback
Content

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<td>• European road transport becomes safer, more secure, more efficient</td>
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COST:  
- Pre-investments (studies; R&D projects) ≈ 5  
- SETPOS and LABEL ≈ 2.7  
- Pan-European implementation (to break even) 2-4

BENEFITS:  
- 0,25 – 0,5 mn dispatchers can plan journeys better nn  
- 2 - 4 mn truck drivers can travel safer; with less stress nnn  
- 100.000 – 200.000 parking slots can be utilised better nn  
- 10.000 – 20.000 parking slots need not be built ≥ 200  
- Truck Parking Operators get 'known', get modern tools, can earn more, are thus better motivated to invest nn  
- Public authorities get overviews, statistics, planning aids nn  
- The ITS industry profits due to dozens of interfaces and added-value products nn  
- European road transport becomes safer, more secure, more efficient

SUM:  
- Euro Millions
  - Cost: ≈ 10
  - Benefit: Approximate values are indicated.
Stakeholders with agreements

- Truckers + Forwarders
- Petrol Companies
- Associations
- Motorways + Toll collect
- Truck Park Areas
- Parking Equipment Suppliers
- Truck Makers
- Public Authorities
- Navi/GIS
- Telcos
- Service Companies

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TRUCKInform architecture: open; standard interfaces
Content

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- Continue with dissemination, deployment, training...
- Continued technical refinements
- Broaden ownership; PPP?
- Integration of LABEL results / Web 2.0
- Large-scale pilots, for instance:
  - Complete dynamic data along several important corridors
  - Parking space management for a port / multimodal terminal
  - Slot allocation for dangerous goods...
- Serve in other Projects esp EasyWay / ITS Action Plan →/.
<table>
<thead>
<tr>
<th>EU ITS Action Plan and Truckinform</th>
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<tbody>
<tr>
<td><strong>ITS Action Plan asks for:</strong></td>
<td><strong>Truckinform.eu offers:</strong></td>
</tr>
<tr>
<td>▪ Reduction of congestion</td>
<td>Yes</td>
</tr>
<tr>
<td>▪ Optimal use of existing capacity</td>
<td>Yes</td>
</tr>
<tr>
<td>▪ Increase traffic safety</td>
<td>Yes</td>
</tr>
<tr>
<td>▪ Less damage to the environment</td>
<td>Yes</td>
</tr>
<tr>
<td>▪ Deployment criteria</td>
<td></td>
</tr>
<tr>
<td>– Projects must be mature</td>
<td>***</td>
</tr>
<tr>
<td>– Roll-out consistent across Europe</td>
<td>***</td>
</tr>
<tr>
<td>– Preferably offer synergies with other applications</td>
<td>***</td>
</tr>
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Move & Park thanks the many contributors, especially:

- Vinci Concessions: specifications; selection supplier
- Alturos / C-oncept: subcontracted ICT suppliers
- ADAC: e.g. design-help, support and data for Service 2
- Allmobile: study and results e-/i-parking EU projects
- Daimler FleetBoard: integration of 1st on-board computer
- UICR: market research and driver feedback
- many others, for example project officers, coordinators, partners, members of the advisory board, technology suppliers, associations, data suppliers, users, clients...
is developed state-of-the-art, and is ready to be implemented, serving the European transport markets – AS OF NOW

Thank you!