Pilot Project Monitor

PP Corridor:	PP4: Germany – Czech Republic – Slovak Republic – Ukraine – Russia
Involved Project Partners	Association of Chemical Industry of the Czech republic (Coordinator); Association of Chemical and Pharmaceutical Industry of the Slovak Republic; Ústi Region Czech Republic; Ministry of Transport and Regional Development Saxony-Anhalt, DE;
Subcontracted Experts	DEKRA Automobil a.s., Prague, Czech Republic; University of Žilina, Žilina, Slovak Republic;
Further involved Organisations:	**1. Trace:** LC Slovaktrans, s.r.o.; LC Lauterbach Spedition - GmbH; METRANS, a.s.; LEVEL s.r.o.; OLTIS Group a.s.; DEKRA Automobil a.s.; NAM system, a.s.; **2. Trace:** Bohemiakombi spol. s r.o.; Trans-Sped-Consult s.r.o.; ČSPL a.s.; LEVEL s.r.o.; OLTIS Group a.s.; DEKRA Automobil a.s.;

	3. Trace: LC Lauterbach Spedition - GmbH; METRANS, a.s.; LEVEL s.r.o.; OLTIS Group a.s.; DEKRA Automobil a.s.; Bohemiakombi spol. s r.o.; Trans-Sped-Consult s.r.o.;
Contact Details Coordinator: Contact Person: Email: Phone:	 **JUDr. Václav Živec (SCHP ČR)** zivec@lcsokotrans.cz +420 724 007 393

Selection/Preparation of hardware (Onboard Unit)

1. Have you already selected T&T Solution for the Pilot test? If no, when do you plan it? If yes, which T&T Solution did you select?
2. Please provide a short description of the selected hardware for the OBU.
3. Have you subcontracted external expertise for implementation of Pilot?

1. Yes, we have selected the OBU unit GC 071 123 by the company LEVEL s.r.o. (web link: http://www.levelna.com/en/).

2. It is a train communicator designed for installation in transport units which do not have a possibility of power supply. Using GPS coordinates, it detects the position and the routes the transport unit travels and sends the data to the integrator server through the GSM network. The customer can track the train movement in an application which can be accessed only based on a certificate with a login name and password. The unit consists of a personal tracker (with its own battery) and batteries, all placed in a protective box. The battery can last up to 3 months when the information about the transport unit position is sent at 8-minute intervals. The unit has an integrated motion sensor. It is possible to use geofencing – crossing of state or regional borders (e.g. the Ústí Region). The unit will be affixed to the container by means of magnets.

3. Yes, a work group has been created for each route - all the parties involved receive updates about any matters. A meeting of the work group was held on 29 January 2014, and it was attended by:

    1. Jeroným Drvota (DEKRA Automobil a.s.)
    2. Ladislav Špaček (SCHP ČR)
    3. Jan Sixta (Ústí Region)
    4. Jana Stoklásková (DEKRA Automobil a.s.)
    5. Václav Živec (SCHP ČR)
    6. Drahoslav Tesař (Ústí Region)
    7. František Zídka (TRANS-SPED-CONSULT s.r.o.)
    8. Pavel Hamalčík (ČSPL, a.s.)
    9. Jan Mervart (LEVEL s.r.o.)
    10. Jiří Prokop (LEVEL s.r.o.)
    11. Alexander Pfeiffer (LC Sokotrans Reality a.s.)
    12. Petr Kepka (METRANS, a.s.)
    13. Jaroslav Čermák (ZCHFP SR)
    14. Juraj Jagelčák (University of Žilina)
    15. Jaroslav Fürst (METRANS, a.s.)
    16. Jan Gaube (Ústí Region)
    17. Jan Dlouhý (Spolek pro chemickou a hutní výrobu a.s.)
    18. Tomáš Tesařík (Lovochemie a.s.)
    19. Václav Podstavka (Nebezpečný náklad)
    20. Vladimír Fišer (BOHEMIAKOMBI s.r.o.)
    21. Tomáš Ligurský (OMEGA SERVIS a.s.)

The meeting was held in Ústí nad Labem and as per the above nominal list, it was attended by representatives of SCHP ČR, Ústí Region, ZCHFP SR and other parties involved in the project.

The agenda of the meeting was as follows:

Mr Sixta started the meeting by summarizing the current findings from the pilot projects. First of all, the OBU unit parameters were briefly summarized. Attention was drawn to the capacity of the OBU unit batteries – currently 49 % after three months of operation without recharging. Experts from the company LEVEL pointed out the factors which impact on the battery capacity (temperature – operation in winter x summer, insufficient satellite visibility, or other features, such as temperature and pressure sensors, ...). Currently the capacity state is visible both in the Positrex application, as well as in the DEKRA application. Dependence of the battery capacity on the impulse frequency (sending GPS coordinates) and also on the summer and winter operation will be evaluated based on these data. It would be useful if the Positrex application could show reports on the time remaining till the battery replacement. This knowledge is crucial for the use of the OBU units in practice. It is not possible to attach an OBU unit to a container without it having a sufficient capacity for the entire transport.

There have not been any reservations about the OBU unit resistance. The water-resistant casing is sufficient for now, no problems have been found. Representatives of the company LEVEL emphasized that this is only a test version of the unit and that the casing of the units for commercial use is resistant.

The discussion was mainly devoted to the non-explosive design of the OBU unit. Representatives of the chemical companies drew attention to the fact that when loading and unloading, it is necessary to respect the rules of operation and thus exclude any sources of sparkling (mainly when loading and unloading flammable gases and flammable liquids). Therefore it is also forbidden to use mobile phones when filling and bottling. The OBU unit acts in fact as a mobile phone which emits high voltage for a short time. Most often, restrictions regarding the installation of potentially dangerous sources of sparkling only apply to 2 m from the filling hole – i.e. nothing should happen if the OBU unit is placed on the edge of the container. However, some companies have blanket safety measures. This could then pose a problem and therefore it is necessary to deal with this issue further. For the container transport itself, non-explosive environment is not required.

As regards the OBU unit maintenance – it is almost a hundred percent probable that the OBU units will be placed on individual journeys of containers carrying dangerous goods. The OBU unit identification on the respective container should also be

reflected in the respective transport documentation.

Under the safety measures against vandalism and theft, it would be advisable that the OBU unit is as little visible as possible. With tank containers and complete trains, the OBU unit can be hidden in the underframe or behind the container frame. With ISO containers, the situation is somewhat more complicated. The company METRANS pointed out a more elegant solution to this problem. There are OBU units which are placed and closed in the container door and the aerial is led out. The solution is shown in the below photographs. The company LEVEL, which provides the tested OBU unit, is able to produce, upon customer request, such design of the OBU unit which suits the customer. I.e. also a design similar to the one in the below photograph. Due to the fact that OBU units will be placed (removed, or checked) on containers by various – yet unidentified entities, standardization of the unit positioning on various types of containers is recommended.

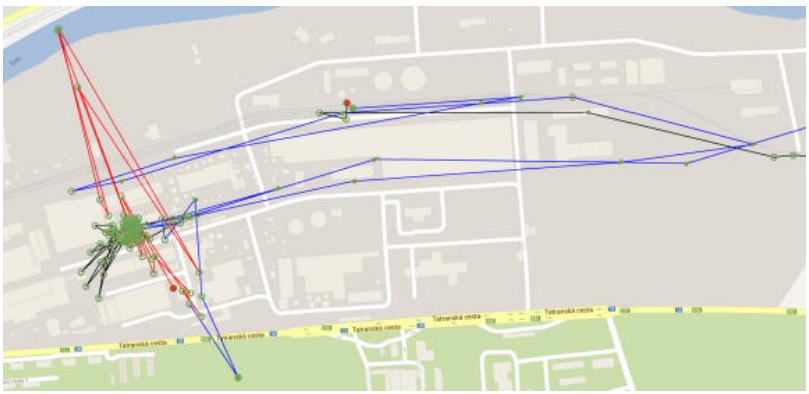
Photo documentation of the OBU unit for ISO containers:

Source:
http://globaltrackingtechnology.com/conlock-gps-container-tracking-device.html

The data which the OBU unit transmits must always be kept to the minimum. Since the very beginning of the project, it has been anticipated that the OBU unit will be reading: position, container number and accident status. Any further information would impact not only on the battery life, but mainly on the accuracy of the position measurement. With regard to measuring the accident status, Mr Medvard showed a simple sensor which reacts to shocks. This simple and disposable sensor, however, is not suitable for the needs of tracking containers, because it only records the "accident" status and without human intervention it cannot be automatically remotely deactivated. Moreover, it reacts only to rapid acceleration (impact). LEVEL is developing a sensor integrated directly in the OBU, but the completion of the development into a phase in which testing in practice would be possible, is not expected until mid 2014.

Representatives of the company LEVEL explained in detail the inaccuracies of the OBU unit measurements encountered in the pilot testing:

1. Movement of the container in the terminal:



Reason: Too many position points within one place are probably caused by the fact that the view of the sky is blocked. The poor view increases the inaccuracy of the position measurement. This shortcoming can be eliminated by software; we have received raw data for our testing.

2. Remotely situated point:

Within the pilot project, the OBU unit was detected in a different position to where it really was. The remotely situated point is highlighted by a circle in the map.

Reason: Experts from the company LEVEL explain that it is a measurement error, which can never be excluded. According to LEVEL, the error rate in practice can be up to 3 % - big problem of potential raising of false alarms after incorporation of accident sensors.

Currently, great attention is paid to the software solution, specifically to the interconnection of the DEKRA application with the information systems of the individual chemical companies (SAP, ORACLE) and with the information systems of the integrated rescue system. It is necessary to define which data will be displayed by the DEKRA application to these systems. E.g. data necessary for firemen: UN number, unit goods transport x tanker transport x bulk transport, product quantity and place and time of the accident. Each entity will only have access to relevant information due to data sensitivity and its misuse.

In the end of the meeting, two more pilot routes were suggested:

Pilot route 3: Antwerp – Duisburg (river) – Košice (railway shuttle) – Hungary (road) and back

Pilot route 4: Lovosice - Slovakia - Scandinavia - France - Lovosice

Evaluation of the state of the pilot project up to now

The pilot projects go according to plan and in accordance with the specification of the ChemLog T&T project. The first round of testing took part on the route Germany (Duisburg) – Czech Republic – Slovakia – Ukraine (Kalush). Within the first pilot testing, the OBU unit was placed in a metal ISO container with a wooden floor.

Nonetheless, the unit was able to record data about the container movement.

The second round of testing is under way on the route Germany (Hamburg) – Slovakia and on the stretch Děčín – Hamburg and back. It includes waterway transport on the Elbe. It was agreed in the meeting of 29.1. that two more routes of pilot testing will be implemented. Furthermore, behaviour of the OBU unit in a closed container with a wooden floor will be put to a test again on the Prague – Česká Třebová – Prague route.

Currently, two applications are used to track the container – an application by the company LEVEL (Positrex) and an application by the company DEKRA. In the Positrex application, it is possible to track the container position. The DEKRA application records the container position as well (data is obtained by forwarding the coordinates of the container position from the Positrex application), but it is also able to generate the transport documentation for the dangerous substance.

The first round of pilot testing was conducted in cooperation with the partners from Slovakia. ZCHFP SR connected the OBU unit by the company NAM (http://www.nam.cz/) to the same container so as to evaluate and compare two tracking systems on the same route with the same base (container). Information from this OBU unit is forwarded to the ONI system application (www.onisystem.net).

Evaluation of the setting of geozones (geofencing)

In the Positrex and DEKRA applications, zones (geozones) have been set in which it will be possible to evaluate the entry, passage or departure of the tracked unit. The following geozones have been prepared in the Positrex application: Czech Republic, Ústí Region, Saxony - Anhalt and Hamburg. In the DEKRA application, only the Ústí Region and Czech Republic geozone has been set so far.

At the same time, the unit borrowed from the company LEVEL has not been fully programmed to track passage through the geozones, but the company has been working on the adjustment of the software and it has been put into operation during the pilot testing of the project on route 2.

Since the last monitoring report, telephone and e-mail contacts have been set in the Positrex application for defining entries to and departures from the respective geozone. While using this feature, a defect was detected – the telephone numbers provided did not receive the warning message about the geozone border having been crossed. The malfunctioning notifications of the geozones and points of interest were thoroughly checked and the problem was found in the storing of a “composite geozone”. One just like that was set in our application (its name was CR). The

geozone has been modified and the feature for sending warning messages is now working without any problems.

An example of a warning message is shown below:

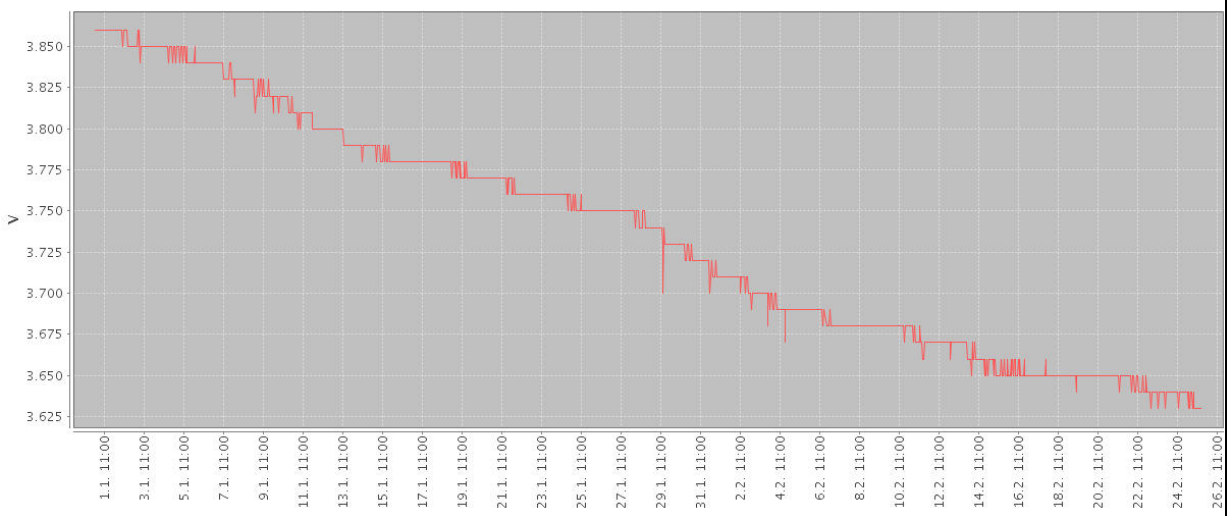
Positrex / Alarm

Time: 14.02.2014 17:49:35
Object: Tracker - CHEM
Location: N50.900062 E14.215884
Alarm: CŘ
Type of alarm: Geozóna
Type of event: Leave the geozone
Geozone: Czech

In the ONI system application, similar characteristics are provided by the Geoplot service, which has not been tested so far.

Evaluation of the current state of the battery capacity:

Currently, the battery capacity is 22 %. The Positrex system can record the state of battery discharging and record it also in the form of a graph. The graph below shows voltage versus time. Almost a linear progression of the OBU unit discharging can be seen.



Cooperation with Logistics Service Provider for selection of container and definition of transnational transport route

1. Have you established cooperation with LSP and how are they involved in the pilot?
2. Have you identified container for the pilot (with dangerous goods)?
3. Have you defined transnational transport route? Please show map.

1. Yes, from the very beginning we have been liaising with the following logistics companies:

   Bohemiakombi spol. s r.o.;

   ČD Cargo a.s.;

   Trans-Sped-Consult s.r.o.;

   AWT a.s.;

   L.C. SOKOTRANS a.s.;

   LC Slovaktrans, s.r.o.;

   LC Lauterbach Spedition - GmbH;

   OMEGA SERVIS HOLDING a.s.;

   METRANS, a.s.;

   ČSPL, a.s.

2. Yes, we have selected tank containers. In the second route of pilot testing CZE (Ústí Region) – DE (Hamburg) using the Elbe waterway, container transport is only simulated. The unit was located in the pilot house of a push tug.

3. The routes selected for pilot testing:

   Route 1:
   Germany (Duisburg) – Czech Republic – Slovakia – Ukraine (Kalush,) including a combination of road and railway transport – pilot project has been completed

   Route 2:
   Germany – Czech Republic – Slovakia – Ukraine, including inland waterway transport on the Elbe- pilot project has been kicked off

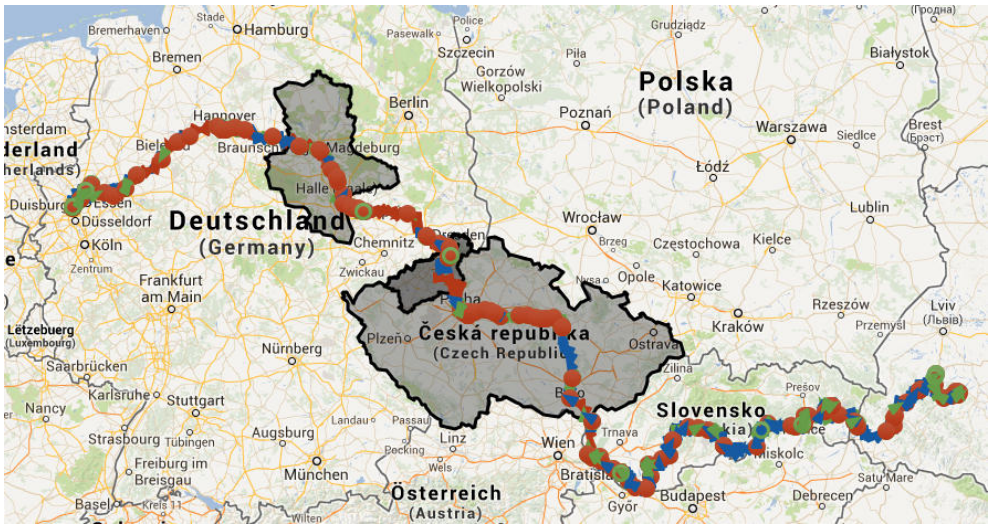
   Route 3:
   Antwerp (Belgian) – Duisburg (Germany) – Czech Republic - Slovakia – Hungary and back including a combination of road and railway transport - pilot project has been kicked off

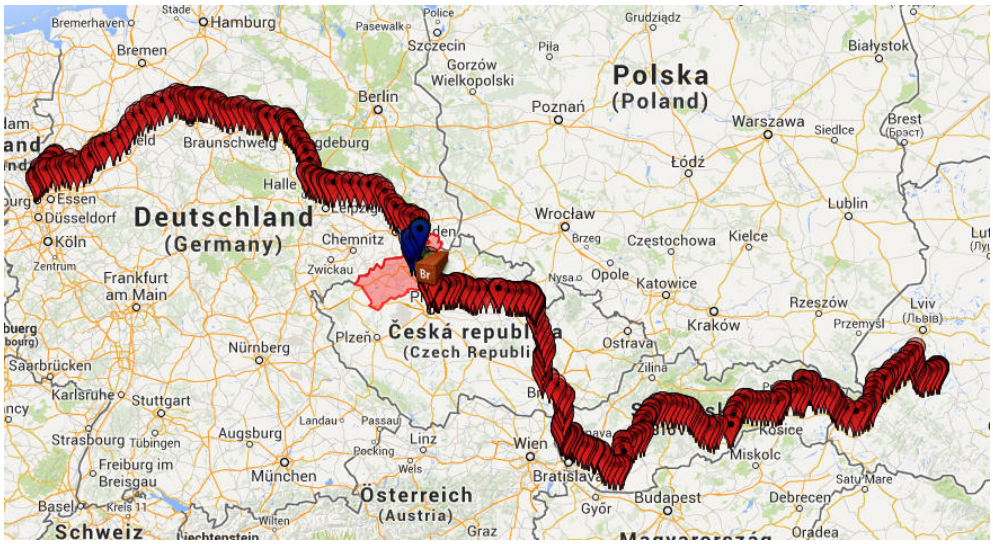
Graphical representation of all three routes on the map of Europe:

Practical testing of T&T Solution: Trace 1

Please describe the timing of the implementation of the pilot project and highlight respective activities

Preparation	**Germany (Duisburg) – Czech Republic – Slovakia – Ukraine (Kalush,) including a combination of road and railway transport** 1. The selected container was a tank container carrying a safe substance. 2. The container number is PCVU 125633-1. 3. The haulage is ensured by the company Lauterbach Speditions-GmbH, Berg. 4. Loading took place on Monday 28.10.2013. 5. The container left Duisburg on Tuesday 29.10.2013. 6. The OBU unit was affixed to the container on 30.10., 8:15 p.m. in Prague. Magnets were used to affix the unit. 7. Unloading took place on 07.11.2013 in Ukraine. 8. The container carrying the OBU unit took only one route, the OBU unit was then supposed to be removed from the container at a terminal in Prague. After that, tracking of an aerial in a 20´ box-type container (Praha Uhříněves – Česká Třebová and back) was tested – as a simulation of distribution of dangerous goods (e.g. after the goods from a tank container is reloaded into smaller transport containers, it is then distributed by a collection service in a 20´ box-type container into another collection centre to the end customer). Although the OBU unit was enclosed in a metal container, it was able to report all the time and it was possible to track its position in both applications. The OBU unit manufacturer explains this result by the fact that the container flooring is made from wood which made it possible for the unit to receive and transmit signal. 9. The OBU unit was removed at a terminal in Prague on 19.11.2013.

	Photo documentation of the OBU unit attachment to a tank container of the company LC Lauterbach for route 1:  
Testing	**Result of pilot route 1 in the Positrex application:** 

	Result of pilot route 1 in the DEKRA application: 
Evaluation of Results	Based on the above provided pictures it is clear that the container with the OBU unit took the route Germany (Duisburg) – Czech Republic – Slovakia – Ukraine (Kalush). Transport between Duisburg and Košice was carried out by railway, and between Košice and Ukraine by road. The map in the Positrex application shows the direction of the movement and the speed of the OBU unit movement. Coloured arrows represent position points, depicting the travel direction, and containing date, time, position and speed. The colour of the arrow represents the speed under 50, under 90, under 130 and over 130 km/h. Full green point is the commencement of the journey, red point is the end of the journey, and green blank point represents a speed which is lower than 4 km/h. In the map in the DEKRA application it is only possible to track the container position depending on time, which the application receives by forwarding exact data by the company LEVEL. The application makes it also possible to obtain information about the transported freight (UN number, quantity of the transported substance, container type, consigner, carrier, consignee, etc.). The application includes four databases (database of substances, drivers, vehicles and subjects) and it thus provides all data required for filling out transport documentation correctly and fully. The database of substances includes relevant information about the individual dangerous goods classified according to the ADR, RID and ADN agreements. The

picture below shows a section of the DEKRA application, namely the part where data about specific dangerous goods are filled out (UN number, official name of the substance for transport, packaging type and quantity, and weight or volume of the freight).

Seznam látek

(*) UN číslo: ?

(*) Název:

(*) Druh obalu: —VYBER—

(*) Počet kusů:

(*) Hmotnost / objem nákladu:

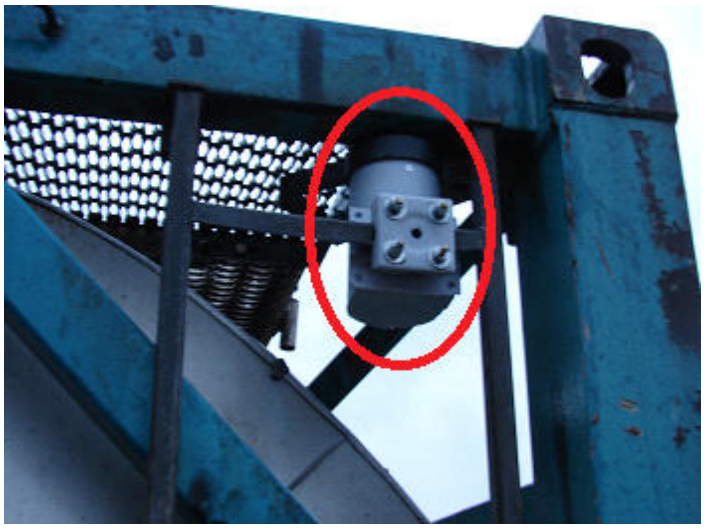
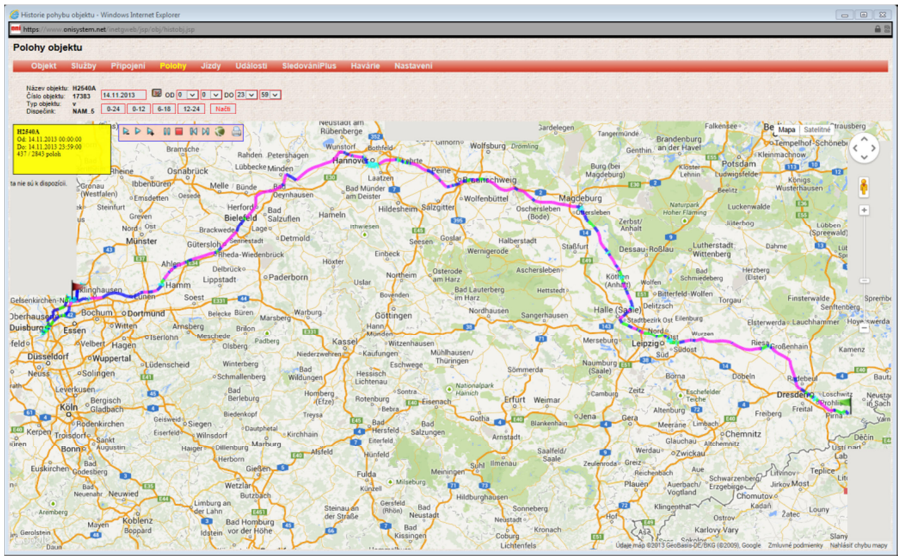
(*) Jednotka: —VYBER—

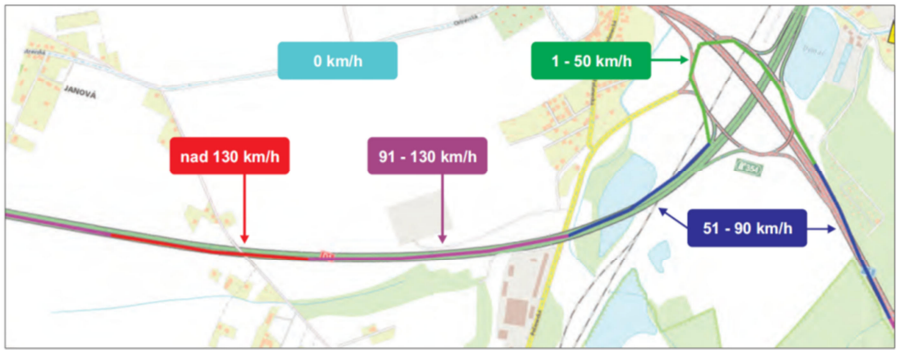
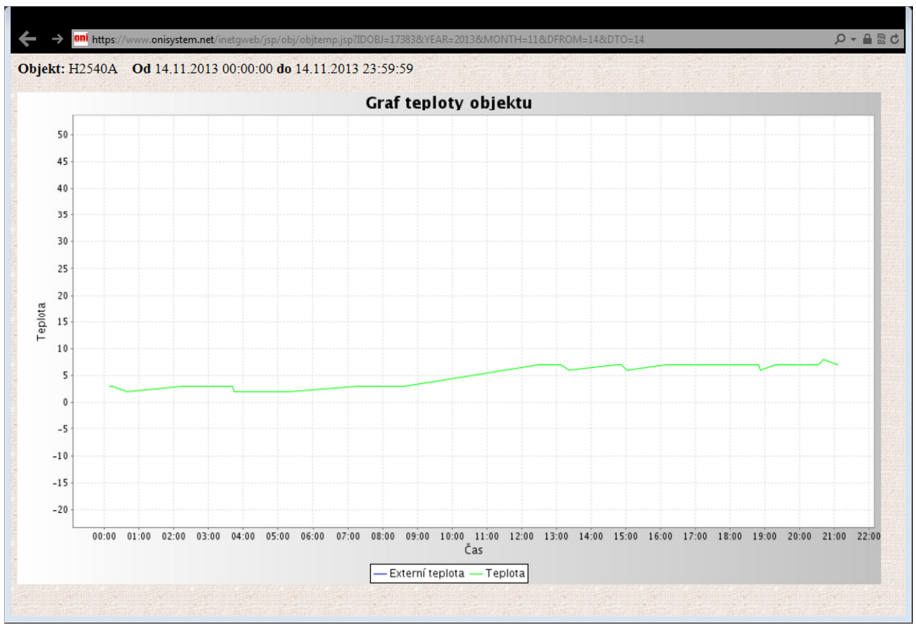
Uložit

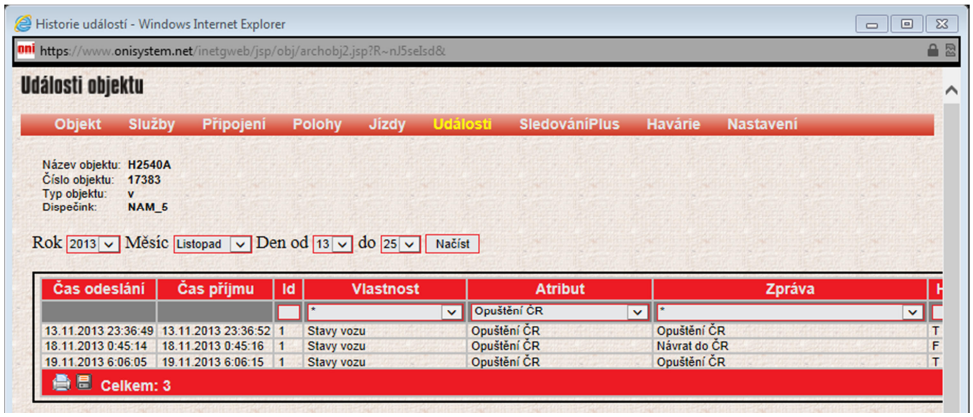
We believe that a very good result is the situation when the unit reported from inside of the metal container with wooden flooring, thanks to which it was able to receive (by reflection from the ground) and transmit signal. Although one cannot rely on this fact, these findings would make it possible to identify the OBU unit even in emergency situations, when the unit is located in a metal packaging or container (e.g. finding it more easily when stolen, etc.)

Below is a photograph showing the OBU unit enclosed in an ISO container:

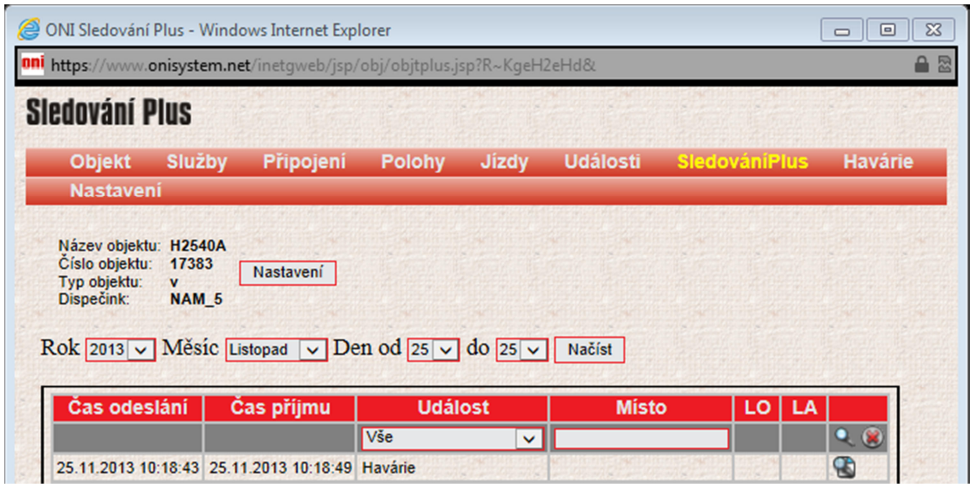
Practical testing of T&T Solution: Trace 1 (ZCHFP SR) Please describe the timing of the implementation of the pilot project and highlight respective activities	
Preparation	**Germany (Duisburg) – Czech Republic – Slovakia – Ukraine (Kalush) including a combination of road and railway transport** Description of the OBU unit which was used: The offered solution, due to its robust construction, is designated mainly for tracking and tracing the location of carriages or containers. The tracking unit is attached to the monitored object by using a set of bolts. It is lock protected to prevent any unauthorized personnel from detaching the unit.The unit is of highly resistant structure and made out of non-corrosive material. The electronics are protected against humidity by a seal made out of epoxide resin. The external non-corrosive pocket is tight-knitted to prevent from water penetration. The used devices fulfil the IP-code 65. The unit is able to detect different types of impacts (collisions) due to a 3-axle integrated acceleration sensor. This information could be sent via different channels to a stipulated place (SMS, e-mail, web portal, etc.). The unit without the additional sensors only registers its own internal temperature. A “geoplot” functionality could be used for location tracking. Geoplot provides 16 positions – stationary as well as dynamic. 1. The selected container was a tank container carrying a safe substance. 2. The container number is PCVU 125633-1. 3. The haulage is ensured by the company Lauterbach Speditions-GmbH, Berg. 4. OBU unit is manufactured by the company NAM. 5. The unit was affixed to the container in Dunajska Streda, on its way from Ukraine on 9.11.2013. After arriving in Dunajska Streda on 28.11.2013, the OBU unit was not dismantled, but it left for Duisburg. As of 16.12, it has not left Duisburg. It will be removed from the container on its way back to Slovakia. 6. The results of the journey will be processed in January after

	signing the contract with the University of Žilina. **Photo documentation of the OBU unit attachment to a tank container of the company LC Lauterbach for route 1:** 
Testing	The web application allows for monitoring of basic parameters (map foundation, location, speed, covered distances, itinerary, logbook), or data export for further processing. Container track positions including speed profile on 14th of November 2013 on train and road on-carriage from Duisburg to loading site: 

	Explanation of coloured speed profile of the track:  Temperature profile on 14th of November 2013: 
Evaluation of Results	The position is recorder each 10 seconds at the territory of Czech republic and 20 seconds outside the territory of Czech republic. Internal unit temperature, battery voltage, different alarms are evaluated. The system records the time when the unit moved out or moved in to the territory of Czech republic. Most of container handlings by reachstackers and container cranes is detected by the unit and alarms sent:



Detection of container lifting from the terminal ground to road vehicle on 25th of November before on-carriage to Ukraine:



Practical testing of T&T Solution: Trace 2 Please describe the timing of the implementation of the pilot project and highlight respective activities	
Preparation	**<u>Germany – Czech Republic – Slovakia – Ukraine including inland waterway transport on the Elbe</u>** 1. Due to the fact that container transport of dangerous goods is currently not being used on the Czech part of the Elbe, container transport by inland waterway is only a simulation. The OBU unit is located in the pilot house of a push tug. 2. The OBU unit was placed in the pilot house of a push tug TR 17. **Photo documentation of the OBU unit attachment in a push tug TR 17 for route 2:**  3. The tugboat set off on the Elbe from Děčín on 22.11.2013 at 2:20 p.m. 4. In the first stage, problems with monitoring were detected. The reason behind them was low speed and smooth navigation on the Elbe, which the OBU unit evaluated as zero

activity. This represents a snooze phase for the unit when no information about the unit position is being recorded. This problem is eliminated at present.

5. The tugboat arrived in Hamburg on 9.12.2013. It left Hamburg on 10.12.2013, sailing back to Děčín.

6. On 26.12.2013, the tugboat arrived in the port of Štětí where the OBU unit was dismantled.

7. On 27.12.2013, the unit was transported to the terminal of the company Trans-Sped-Consult in Lovosice where it was made ready for its assembly on a railway tank container transporting a dangerous substance which was supposed to leave for Slovakia and return back again empty to the CR.

8. On 2.1.2014, the OBU unit was attached to the tank container which was ready for departure to Slovakia. Unfortunately, the OBU unit had to be dismantled immediately afterwards due to the events which took place in Prague. On 1.1.2014, Palestinian ambassador Djamal Muhammad Djamal died following an explosion of a vault in his Prague flat. There was speculation about it being someone else´s fault. As a result of the explosion, safety measures have been increased everywhere and therefore the OBU unit had to be removed from the container (black casing of the OBU unit could appear to someone to be an explosive device).

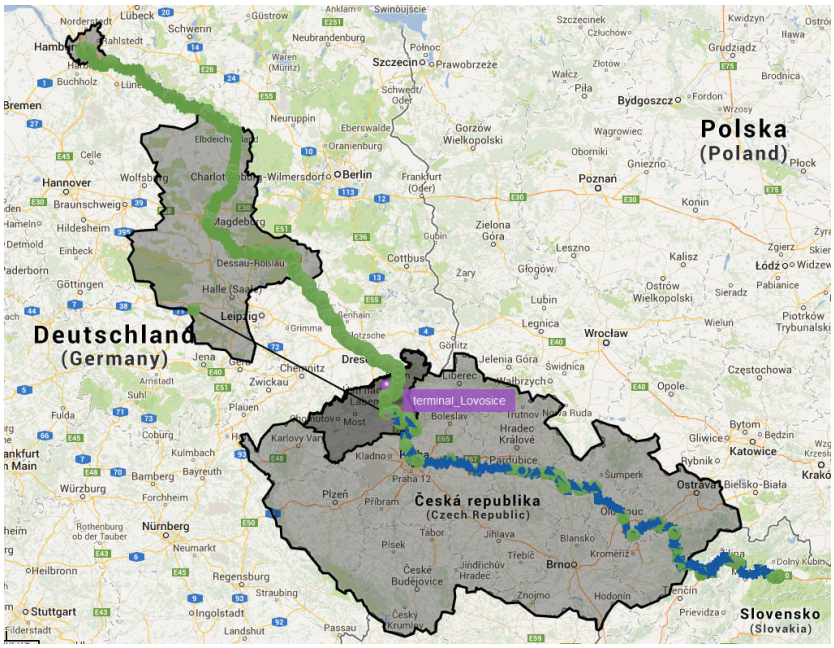
9. The reporting period has been shortened and it is currently set to a 3-minute interval so that it would be possible to check what impact this will have on the battery life and to test whether there are not any “dead” spots on the route where the unit would not report on time because the satellite is not visible there, or because there is no GSM signal.

10. The OBU unit was attached to a tank container of the company NTR no. DCXU299106-4 on 7.1.2014 in the evening hours. This container has been loaded on a railway car no. 31 54 457 5087-1 and sent on the Lovosice – Lisková route. The container is expected to return back to the Lovosice terminal in about one week.

11. The container carries a dangerous chemical (as seen from

the container identification in the below photographs). It is a transport of sodium chlorate UN 1495. The container is marked in compliance with RID regulations applicable for the railway transport of dangerous goods. Sodium chlorate is used mainly as a non-selective herbicide. From the chemical point of view it is a substance that is oxidizing, irritating and dangerous for the environment. In terms of transport, chlorate is classified in class 5.1 – oxidizing agent. Sodium chlorate causes barrenness of soil.

Photo documentation of the OBU unit attachment to a tank container of the company NTR for route 2:

	12. The OBU unit was removed from the container on 14.1.2014 in the Lovosice terminal. 13. The current battery capacity is 56 %, after nearly three months of operation.
Testing	**Record of route 2 in the Positrex application:**  **Record of route 2 in the DEKRA application:** 

	Note: A new function has been put into operation within the application which is able to generate and display the data of the individual routes as per the individual days. Previously, this function did not exist.
Evaluation of Results	The tugboat with the OBU unit has completed the Děčín – Hamburg route and it is on its way back. The OBU unit was then attached to a tank container loaded on a railway car heading for Slovakia. Upon the arrival of the container in the destination station in the Lovosice terminal, the OBU unit was dismantled from the container.

Practical testing of T&T Solution: Trace 3

Please describe the timing of the implementation of the pilot project and highlight respective activities

Preparation	**Belgium (Antwerp) - Germany (Duisburg) – Czech Republic – Slovakia – Hungary (Budapest) and back including a combination of road and railway transport**

1. The selected container was a tank container carrying a dangerous substance.

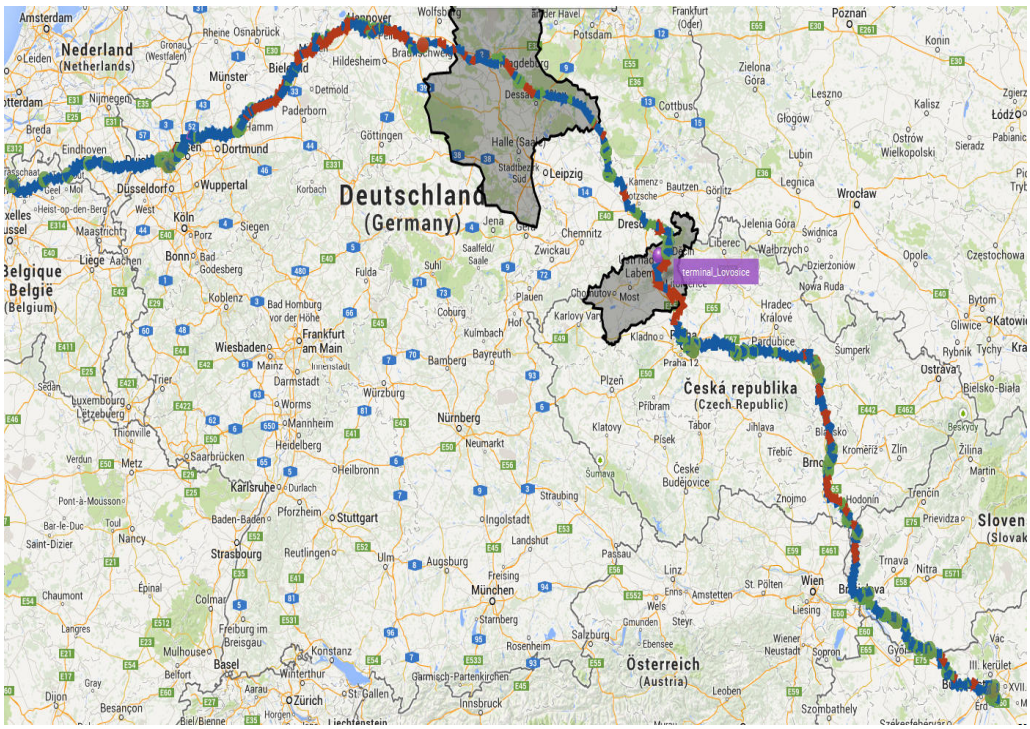
2. The container number is RCLU3351052.

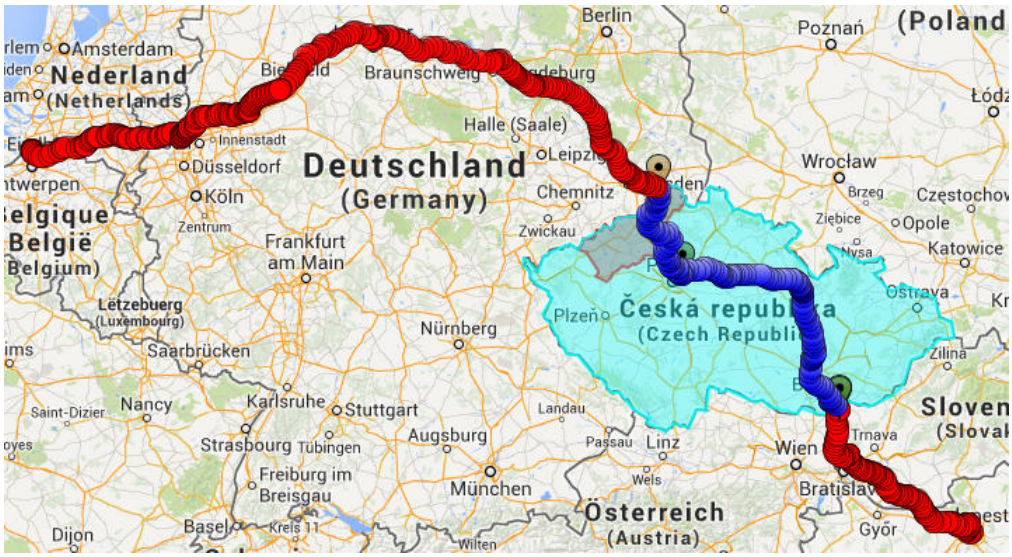
3. The haulage is ensured by the company Lauterbach Speditions-GmbH, Berg.

4. Loading took place on 2.2.2014 on the terminal of the company METRANS in Prague, Uhřiněves.

Photo documentation of the OBU unit attachment to a tank container of the company LC Lauterbach for route 3:

5. The container left Prague for Budapest. The container travelled through the Czech and Slovak territory by rail, and road transport was used for the last few kilometres to the place of unloading. On the way back (from 4.2.2014), the journey was implemented in the same order, i.e. the container travelled from Budapest for several kilometres by road, where it was reloaded

	on a terminal onto a wagon. Through the Slovak and Czech territory (via Prague and further), the container travelled by rail up to Duisburg, where it arrived on 15.2.2014. Originally, the container was supposed to be reloaded on waterway transport and continue down the river to Antwerp. Upon a price calculation that was conducted, the transport company ascertained that, compared to road transport, river transport is significantly more expensive and slower, and thus the container was sent by a road vehicle. The container left Duisburg on 20.2.2014. From Antwerp, the container got back to Prague in the same way, i.e. by road to Duisburg where it was reloaded onto rail transport. In Prague, the OBU unit was removed from the container on 22.2. 2014. 6. The capacity of the OBU unit is currently 22 %. 6. The OBU unit interval on route 3 was set to 3 minutes, apart from the Duisburg – Prague route, where the interval was reduced to 90 seconds. The reason for the reduction is testing the OBU unit at a very low battery capacity (whether the OBU will be recording defects when reporting).
Testing	**Result of pilot route 3 in the Positrex application:** 

	Result of pilot route 3 in the DEKRA application: 
Evaluation of Results	The container with the OBU unit passed through a predetermined route. The monitoring interval of the OBU unit was set to 3 minutes. On the stretch Duisburg – Prague, the reporting period was reduced to 90 seconds to test the behaviour of the OBU unit at a very low capacity.

Planning of Meetings

Please describe timing of regional meetings and transnational Pilot Project Workshops for implementation of the activities.

29.1.2014	Work meeting in Ústí nad Labem	completed
January 2014	Commencement of the third pilot route	completed
Feb/March 2014	Pilot Project Workshop CZE – Slowakei – Ústí Region	scheduled
March 2014	Work meeting of the project partners in Halle	scheduled
May 2014	Final Pilot Project Workshop in Magdeburg	scheduled

Next Steps

What are the next important steps for the project implementation and the respective timeline?

1. Evaluation of pilot testing (route 1, route 2, route 3) and preparation of a final report regarding the pilot project.

2. Preparation of route 4 of the pilot project.

3. Geofencing – possibilities of statistical evaluation and providing information to public authorities (police, rescue system units, etc.).

4. Description of the DEKRA database interface with the individual programmes used by transport companies.

5. Identification of specific information for transport which is important for rescue units in case of an accident.

Contacts	
Ladislav Špaček SCHP ČR	Telefon:+420 266 793 574 Mobil: +420 739 063 080 E-Mail: ladislav.spacek@schp.cz
Václav Živec SCHP ČR	Mobil : +420 724 007 393 E-Mail: zivec@lcsokotrans.cz
Jan Sixta Ústecký kraj	Mobil: +420 737 203 642 E-Mail: sixta@artech.cz
Drahoslav Tesař Ústecký kraj	Telefon: +420 475 657 113 Mobil: +420 733 787 738 E-Mail: tesar.d@kr-ustecky.cz
Jiří Došek DEKRA Automobil a.s.	Telefon: +420 267 288 312 Mobil: +420 602 619 427 E-Mail: dosek@dekra-automobil.cz
Jana Stoklásková DEKRA Automobil a.s.	Telefon: +420 267 288 282 Mobil: +420 725 946 367 E-Mail: stoklaskova@dekra-automobil.cz
Jaroslav Čermák ZCHFP SR	Telefon: +421 918 861 842 Mobil: +421 903 861 842 E-Mail: jcermak@duslo.sk
Juraj Jagelčák Žilinská universita	E-Mail: Juraj.jagelcak@fpedas.uniza.sk