PTV compass

THE PTV CUSTOMER FORUM FOR MOBILE PEOPLE
2ND EDITION 2010

ON FOCUS:

Intelligent Freight Transport

LOOKING AHEAD

People movers provide sustainable mobility

LOOKING ABROAD

Transportation issues and travel behaviour in North America

LOOKING TO THE FUTURE

Green Logistics is gaining ground

www.ptv.de/compass

Content

traffic mobility logistics.

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Editorial

A look to the future

Dear Readers,

One hundred years ago, the journalist Arthur Brehmer was able to persuade prominent authors to think about the future. An oeuvre was created which often predicts our accomplishments today with remarkable accuracy. One of the authors anticipated monstrous "air fleets of zeppelins", another assumed that in the year 2010 there would be "strawberries as large as oranges". Someone even perceived the invention of the mobile phone: "Citizens of the wireless century will go everywhere with their 'receivers'", is written in *The world in 100 years.*

We at PTV do not aim so high when we are looking to the future – or more specifically to future developments in mobility. We recently carried out the study "Intelligent Cargo Systems" for the European Union. This study was concerned with scenarios in freight transportation and examined the years 2020 and 2035. It showed which technologies will help us to create efficient and sustainable freight transportation. Because this should be our long-term goal.

A promising concept for sustainability and efficiency in city transportation are the automated people movers. There are currently around 150 such shuttle systems in the World. More than 50 percent of these are moving around North America. Their use in public transportation (PuT) has many attractive advantages for the city: carfree zones are created, air quality is improved and noise pollution is reduced. But what does its future development look like? With public transport of the future we will be driving with individually usable and automated driverless systems. These can be smaller cabin units or also entire underground rail systems.

Making forecasts based on well-founded data is one thing; forecasting what the new year will bring with it is another. So here there is just one more thing to say: I wish you a very merry Christmas and a successful start to the year 2011.

Cordially yours,

Hans Hubschneider

Hans Hubschneider
Chairman of the Board at PTV AG

Time travel into the future of logistics

That's pretty futuristic: parcels provided with all essential data that find the route to the customer themselves. Will this be the future of intelligent freight transport? Probably so – maybe not within the next ten years, but until 2035 for sure. The study "Intelligent Cargo Systems" has developed and investigated this and a number of other scenarios for freight transport in Europe. PTV's transportation experts have conducted the study on behalf of the European Commission. So, let us now travel forward in time and explore the logistics trends over the next few years.

Before we go to the first stop, let us take a closer look at the initial situation. The transportation experts have of course based their analysis of the freight transport scenarios on the growing challenges of the future. This includes the demand for more efficient and sustainable logistics services as well as global intermodal transport planning which is becoming increasingly complex.

The starting point: Today's technologies

Apart from the increasing energy costs and CO_2 emissions it is precisely the distribution of information and communication technologies (ICT) which currently plays a major role in the logistics sector. There are already numerous applications in global container traffic, such as seamless transport tracking & tracing using sensor technology – from container ID tags for cargo identification and CSD tags for container security to e-seals, which include information about the goods, and e-tags for logistics applications.

Moreover, an increasing number of companies use RFID technology (radio frequency identification) in order to control and manage transport, handling and storage operations. By means of advanced IT platforms, they book, monitor and route their vehicles. The trend is towards networked systems. First applications can be found in the field of traffic management based on up-to-date traffic information: traffic management centres have developed first cooperative systems, trips can now be optimised on the basis of traffic information and innovative applications in urban areas allow users to reserve loading bays, for example.

So, freight transport is becoming more and more intelligent. But what does "intelligent" exactly mean in this context? The research team has found the following four characteristics:

Key attributes for intelligent freight transport

- Paperless transport documents that accompany the goods across all transport modes in the form of digital information.
- Loading units make decisions autonomously in order to ensure optimum transport handling.
- Vastly standardised formats and interfaces for transport tracking, widespread use of planning and control systems.
- Dynamic data sources, including real-time information.

While we are heading towards the first stop of our journey, let us briefly take a look at the methodology: as part of the study, interviews were conducted during spring 2009. The participants were 15 qualified industry experts, including two logistics service providers, an industrial firm, three IT experts, an industry body, three consultants and two research institutes. Two scenarios have emerged: the 2020 scenario realistically outlines possible future changes in transport logistics which are

Since late March, two "SmartTrucks" have been deployed on Berlin's roads.

Photo: DHL

likely to result from the new technologies. The visionary scenario for 2035 describes further possible trends and developments based on new technologies.

Realistic: Future scenario 2020

The time travel begins

Arrival at the first stop. Looking ten years ahead is a relatively short period of time and does not go beyond our imagination. The experts classify the implementation as realistic since the technological development with its dynamic routing and planning processes, event management systems and networked systems has already mapped out.

The scenario shows intelligent freight transport in 2020 as expected by the experts under realistic conditions: an integrated business logic is available for the entire transport chain, standard formats and interfaces are used and transport documents are processed in a paperless manner, central backend systems can control transport processes, and autonomous decision-making has been implemented in the first sectors, such as transport of valuables or hazardous goods.

Now let's go to the second stop and see what freight transport could look like after another 15 years.

Visionary: Future scenario 2035

Intelligent cargo chooses the best route

The second scenario is based on the technological achievements in 2020. However, there will be a new process which starts from the shipping department. The cargo is turned into an intelligent shipment which is able to decide what kind of transport service it needs – always closely coordinated with the schedules from material flow and transport management. This means that there will be a paradigm shift from central to decentral planning. It is no longer a central planning point but the consignment itself that chooses the optimum route through the network.

Turning this vision into reality is based on the implementation of the technological development as described in the realistic scenario above. Moreover, the paradigm shift makes it necessary to fundamentally change the business and handling processes.

And what about the effects on traffic? As shown in the chart below, it certainly has a tremendous impact.

Impacts on traffic

Impacts	Realistic scenario (2020)	Visionary scenario (2035)
Vehicle kilometers saved (%)	3	3.7–6.9
Decline in truck-related fatalities	135–271	238–445
Decline in truck-related minor injuries	1,519–3,037	2,676–4,990
Fewer injuries caused by trucks	435–870	766–1,429

Let us return to the current situation. We are now setting the course for future scenarios. The example of DHL SmartTruck shows how today's successful companies move forward into the future.

Heading towards the future: DHL SmartTruck

DHL, the expert for international express parcel and mail services, wants to make its pick-up and delivery services even more efficient. To this end, the project partners of SmartTruck have combined for the first time RFID, geo and telematics data with dynamic route planning. The German Research Center for

The results of the study and ideas for intelligent freight transport were presented for the first time at IAA. From left to right: Marcel Huschebeck (PTV), Vincent Kobesen (PTV), Joakim Svensson (Volvo), Wolfgang Höfs (European Commission), Boris Paul (DHL) and Kristina Stifter (PTV).

Artificial Intelligence (Deutsches Forschungszentrum für Künstliche Intelligenz) has developed the relevant IT architecture.

As part of the project, current vehicle and telematics data, such as vehicle position, loading status and traffic flow information, have been collected and transmitted to a dynamic system for route planning and dispatching. This system monitors the transport process and recalculates the trips and routes based on the current number of orders and traffic flow. The updated itinerary is sent to and displayed on the driver's mobile device so that express vehicles can be routed around inner city traffic jams, for example.

The RFID labels are used for sorting and packing operations. They are created on the basis of the daily planning results and make the drivers' daily work much easier. Incoming parcels are verified in the RFID tunnel and the data will then be forwarded to a member of the staff in charge. The drivers can see on their mobile devices how many parcels have to be loaded and they can contact their customers via SMS 30 minutes prior to their truck's arrival.

This will lead to efficient route planning, reduced CO_2 emissions due to traffic jam avoidance and detours, and of course, increased customer satisfaction. The future scenarios for intelligent freight transport are likely to produce similar results. There are exciting times ahead!

Marcel Huschebeck, Project Manager for the Research Study from PTV, says: "Only those who have a clear vision based on a well coordinated network will find optimum routes and tap the full potential in the future. We support transport companies by providing innovative transport planning systems that are designed to meet future requirements."

European perspectives

The study "Intelligent Cargo Systems" was commissioned by the European Commission, Information Society and Media Directorate-General, ICT for Transport. According to Wolfgang Hoefs, project manager, it is important to have a European transport policy which provides a higher level of road safety and efficiency and at the same time covers social and national interests.

Complexity, increased market fragmentation, investment demand and global dimension are the greatest challenges for the transport sector. The aim of the European Commission is to accelerate and coordinate the necessary processes. Therefore, numerous work programmes have been and will be launched. Companies are currently asked to submit their ideas for sustainable mobility and logistics concepts as part of the ICT's 7th call of the 7th framework programme. The budget for 2011 amounts to 50 million euros and for 2012 the 8th call for proposals will provide another 40 million euros for sustainable cooperative systems.

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Art or commerce? Nothing of the sort. The transportation modelling tool PTV Vision VISUM which was used for visualising a traffic assignment created this structure.

Traffic Software

Scientific Award 2011

The PTV Vision Scientific Award which is being staged for the third time encourages scientists to develop groundbreaking ideas. The closing date for applications is April 1, 2011.

The award is given to reward outstanding accomplishment in research using the transportation modelling tools VISUM or VISSIM. Scientists can submit their papers that have been presented or accepted at recent scientific conferences or published in specialist journals. Bachelor's, Master's and doctoral theses are also welcome. An international jury composed of transportation scientists will choose the best three submissions. The winner of the first prize will receive €2,500.00. "It is particularly important for us that entries not only contain a purely scientific quality, but also display a real effect in practice," says Dr. Axel Leonhardt, PTV Vision Product Manager.

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Truly inspiring innovations

The previous awards honoured outstanding performance in a wide range of research projects, such as the use of PTV Vision software for modelling global air traffic or methods which improve usability based on automatic parameter calibration or the development of new algorithms, such as LUCE (Linear User Cost Equilibrium). In the meantime, LUCE has been integrated into VISUM. It now provides users with a very efficient assignment method.

Photo: iStockphoto/Pali Rao

Learning wherever you want to: VISUM e-learning

Traffic Software

VISUM e-learning taster

If you'd like to start becoming familiar with PTV Vision VISUM, you can do so with our e-learning program: PTV now provides both a German and an English general introduction to VISUM.

"Since the e-learning course for the Junction editor module was so popular we decided to offer an e-learning course for VISUM too," says Eugen Hilbertz, Head of training PTV Vision. It is available to download from the PTV website free of charge. The course allows all those interested to try out VISUM functions interactively. They'll also receive initial support in the use of individual VISUM tools.

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Try out the course now and evaluate it

PTV is holding a prize draw for 3 x 1 day of training in VISSIM or VISUM in Karlsruhe. The prizes are drawn among the first 100 users that have tested the e-learning tool and filled in the evaluation form by February 15.

Traffic Software

PTV enters India

A handshake to seal the cooperation: Rishi Ahuja, Managing Director at Sunovatec India (l.) and Dr.-Ing. Thomas Schwerdtfeger, Member of PTV's Board of Directors and head of the business unit Traffic Software

PTV and the Indian company Sunovatech, a media design expert, have joined forces to open up India's market for transport solutions. To this end, they signed a cooperation agreement in October. Sunovatech India will distribute PTV products in India and its neighbouring countries.

"At many universities in India students learn how to use PTV Vision software to model and simulate traffic and transportation," says Dr. Gerhard Ploss, Director Traffic Software Sales at PTV Germany, responsible for business development in Asia. "We have thus already been able to secure a certain market share." Both partners are confident that their cooperation will enable them to further strengthen their position in the Indian transport sector which is currently dominated by transport solutions made in the US and Great Britain. Moreover, PTV wants to introduce its ITS products.

Learning from India

India's transport planning seems to be on the right path, despite the fact that the Indian economy could grow by another two percent, if it improved its infrastructure. And companies like PTV can learn from India because many traffic situations in Western countries are completely different from those encountered in India where motorists have to share the roads with hoards of cyclists or motorcyclists. "Results from our studies in this field can for example be used to enhance PTV's software tool VISSIM and to contribute to improved microscopic simulation of bicycle traffic," explains Ploss.

About Sunovatech India

- Headquarters : New Delhi, India
- Foundation: 1999
- Portfolio: 3D solutions, for example 3D traffic simulation

See traffic simulation on YouTube

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Transport Consulting

Formula 1: Grand Finale

Thousands of spectators watched the Formula One drivers fight for the world championship in mid November. Of course, safety was an important issue during this event, on both the circuit and the access roads.

The track itself has the many specific characteristics that make it the most advanced and spectacular Formula One circuit in the world. In 2009, Qualisec with headquarters in Salzburg, Austria, developed a comprehensive safety concept to ensure safe and smooth flow of traffic entering and leaving the Formula One arena. As part of this project, Qualisec asked the German company PTV to analyse the performance of all transport modes. Using the transportation planning software PTV Vision, they developed a multimodal traffic simulation which included all modes of transport in one model. For the 2010 championship finale PTV and security experts from Qualisec enhanced the model during a software training so that it was possible to precisely model and visualise the behaviour of the Formula One fans at the grandstands.

Traffic simulatioin for Formula One in Abu Dhabi

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Traffic Software

Moving people

Safe, eco-friendly and efficient

The wish list for the city of tomorrow is long. The urban environment should be quiet but full of active life. It should be environmentally friendly but constant mobility must be guaranteed. One solution is the use of people movers.

Even if they are driven without drivers, to describe people movers as headless would not be right: These shuttle systems are fully automated. They don't know anything about heavy traffic, congestion or even parking problems. On the contrary, they provide urban citizens with the chance of travelling efficiently, environmentally friendly, individually and safely. There are currently around 150 of these systems worldwide. Around one fifth of these are used in simple public transport services like those at airports.

Users can simulate transportation on people movers and personal rapid transit systems using PTV VISSIM.

The reason why these vehicles are becoming more popular in modern city transportation can be seen in the example of Venice. In April an automated people mover (APM) came into operation here: Its 900-metre long shuttle route connects the Isola del Tronchetto to the Piazzale Roma. Offices and car parks can be found on the island. The APM can move 3,000 people an hour to the centre in only 3 minutes. In particular, the lagoon city aims to direct the large number of tourists. In the long term the inner-city traffic can be reduced in this way.

While APMs are based on lines and timetables, personal rapid transit systems (PRT) are demand based. This means PRTs drive as the passengers require: When boarding the vehicle at the stop, the passengers state their destination. The shuttle will then take the shortest route to their destination. What different PRT systems are currently available on the market, what potential do they hold and which analysis methods experts can use; that's what experts discussed at the end of September at the PRT@LHR 2010 at the Heathrow Academy in London. And amongst them were traffic and transportation experts from PTV.

People Mover – 3 questions to Dr.-Ing. Peter Mott, Head of Support, Training and Business Development Public Transport

Compass: What are the challenges for transportation planners when using people movers?
Mott: The most important question is how to design the transport system so that it can meet demands despite its relatively small vehicle size not only during normal traffic times, but also during peak periods.

Compass: Have the transportation experts at PTV been thinking about this question?
Mott: Of course. We have modelled both people movers and personal rapid transit systems with PTV Vision. VISUM evaluates the number of passengers and the utilisation of line and route, even for short intervals, for example 30 minutes. Also, the operating costs and fare revenues can be estimated. With the microscopic simulation in VISSIM users can calculate parameters such as waiting time or passenger boarding and alighting times as well as the number of required vehicles and their operation time.

Compass: What would you recommend to transportation planners?
Mott: Macroscopic procedures appear useful in larger networks and for line and timetable based systems. In smaller networks the microscopic view is the most suitable – in particular when demand based control procedures and a highly differentiated view of the traffic and operational processes are to be considered.

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Traffic Software

Seamless travel environment

PTV and GEVAS software have joined forces to pursue a very new and unique course: since October they have been offering a range of seamlessly integrated transportation solutions. This new range of ITS solutions and services was presented for the first time at ITS World in Busan, Korea, in late October.

ITSseamless is a solution which covers all offline and online data modelling processes. The software also includes data management – from data contol and strategy management to individual services. The products and services of both companies are based on a modular structure. Their optimally interacting components help to make traffic flow safer and more eco-friendly. ITSseamless is of particular interest to cities, conurbations and regions that want to use their road network in a highly efficient manner, and, at the same time, offer their citizens innovative services.

The ITSseamless solutions can be divided into four main areas:

- Traffic Data Management – Administration, Modelling and Forecast
- Smart Traffic Control – Traffic Management
- Cooperative Mobility Services – Cooperative Services
- Strategy Management – Optimum Coordination of Control and Information

For more information about ITSseamless, please visit www.its-seamless.com.

ITSseamless

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Photo: iStockphoto/Jim Jurica

PTV NuStats, North America

Transportation issues and travel behaviour

NuStats was founded in 1984. Since April 2010 the company operates as a wholly-owned subsidiary of PTV AG, Germany. Over the past 27 years, PTV NuStats has established itself as the preeminent U.S. survey science consultancy specializing in complex travel behaviour research. They remain the leading transportation consultancy in data quality, innovation, rigorous survey practices, and reputation. Specifically, the firm is a recognized leader in designing and executing creative survey methods, applying state-of-the-art qualitative techniques, and interpreting data that are critical to modellers.

More than 50 research projects annually

PTV NuStats conducts approximately 50 to 70 research projects annually, most of which focus on transportation issues, travel behaviour, and public transit. Furthermore, they have conducted comprehensive behavioural and preference surveys in nearly every major U.S. metropolitan area, as well as in the Caribbean, South America, and the Middle East. While their authority in the transportation survey market remains unparalleled, PTV NuStats has catapulted to a broader and more diverse level of consulting, as demonstrated by two notable recent project wins.

California Household Travel Survey

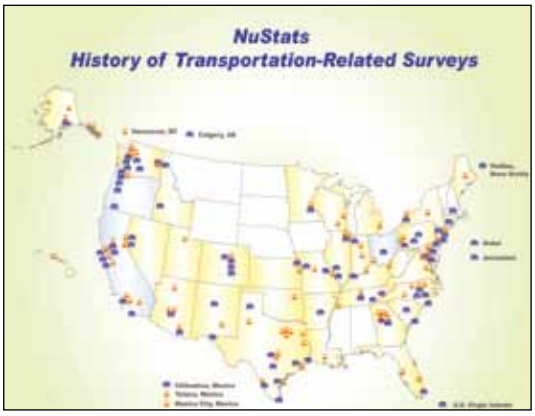
National Cooperative Highway Research Program

This study is the single largest regional household travel survey effort ever undertaken in the U.S. Over the next two years, PTV NuStats will collect travel data from 60,000 households, and GPS data from 5,000 household. The survey data will feed into the Statewide Travel Demand Model Framework for a variety of specific applications: route choice and activity space analysis, model network development, congestion management planning, emissions modelling, national emissions and GHG research, physical activity/health research, and intelligent transportation systems/operations travel time and speed analyses.

Infinitely more complex than a typical household travel survey, the CHTS will also collect data to inform the California Energy Commission and the California Air Resources Board on Californians' emissions, fuel use, and fuel economy. To satisfy this component of the survey, PTV NuStats will use on-board diagnostic sensors that monitor vehicle performance and store high-resolution engine operating parameters to gather data for emissions modelling and analyses.

Effect of Socio-Demographics

This is the sixth in a series of seven strategic issues that will have significant implications on, and contributions to, the U.S. transportation system over the next 50 years. The current modelling practice for most State Departments of Transportation and Metropolitan Planning Organizations is the basic four-step approach that has been used since the 1950s. While informative, this approach is limited in its ability to link the data to policy concerns in a relevant way. The goal of NCHRP 20-83(06) is to improve travel behaviour forecasting



As shown in the map above, PTV NuStats has conducted travel-related surveys across the U.S., in Canada and Mexico, and in the Caribbean and Middle East, all lending to PTV NuStats' diverse and far-reaching practice and expertise.

models by creating a series of models that are wider in scope and that can be tied together into future scenarios, not only to analyze trends, but also to calculate the magnitude of them.

In this effort, PTV NuStats will assess the relationships between socio- and demographic factors and travel demand, develop tools to monitor how these are likely to change over time, and provide guidance to transportation agencies on adapting to these future scenarios. The impact of this research on transportation agencies will affect land use and development decisions; the manner in which transportation facilities are maintained; the criteria by which investments are prioritized; and the degree to which responsibility is shared among local, regional, state, and federal governments and the public.

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Logistics Software

TomTom/TeleAtlas and PTV extend their collaboration

"We are pleased to be able to further extend our collaboration with PTV. It is great that our maps and location-based content will form a strong base for PTV's new products," says Maarten van Gool, Managing Director of TomTom Licensing (previously TeleAtlas). PTV and TomTom, whose licensing division TeleAtlas has become the world's leading provider of location-based information, have signed a global multi-year agreement: TeleAtlas will deliver navigation and location content to be used in creating innovative software products for the logistics industry.

PTV will incorporate information from TomTom's comprehensive global digital map database MultiNet in order to provide its customers with additional solutions for route planning, trip optimisation and sales force management. Moreover, they can leverage Logistics, a digital map database specifically designed for fleet owners and operators of large trucks and other road-restricted vehicles, and application developers.

The agreement gives PTV access to more products, such as Points of Interest, 2D City Maps and Speed Profiles, a product that has been derived from aggregating and processing more than two trillion GPS measurements. It allows drivers to identify optimal routes and to more accurately estimate travel times.

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Software components: the right tools for individual solutions

PTV Loxane, France

Integration Trophy 2010

Round-up of the competition organised by PTV Loxane for all the integrators of the vendor's mapping components. The Integration Trophy for PTV Loxane components was awarded to Parabellum Geographic Insight on Thursday, October 14, 2010. This geo-strategic consulting company integrates the LOXANE X component in its indiGO solution.

Developer's day at PTV Loxane

Every year for the past five years, PTV Loxane has brought together its integrator partners on the occasion of its Developers' Day. All participants come to explore and consolidate their understanding of the tools and components proposed by PTV Loxane via presentations of concrete case studies, examples of integration, and so on. In the course of this day-long session of technical exchanges, PTV Loxane announced the results of its Integration Trophy competition: the 2010 winner is Parabellum Geographic Insight.

The indiGO solution rewarded

Solution for consumer markets

indiGO stands for "Indice Géographique d'Optimisation" ("Geographical Optimsation Index"), which targets the potential consumer expenditure of French households. This solution is a decision-making aid that provides a response to the recurrent problems of economic stakeholders, whatever their sector of activity:

- Sectoring of the sales force: how best do I work my zone?
- Management of shopping centres/distribution networks: how do I best allocate my sales areas to the various categories of consumables?
- Sales and/or marketing action plans: how do I optimise my service according to local demand?

In the world of geomarketing, measuring the consumption expenses of households at a local level is a vital tool. Parabellum has therefore created a reference base called indiGO, enabling in particular the quantification of a consumer market for a given territory, as well as the evaluation of a set of markets incorporating the consumer expenses of French households and levels of over- or under-consumption.

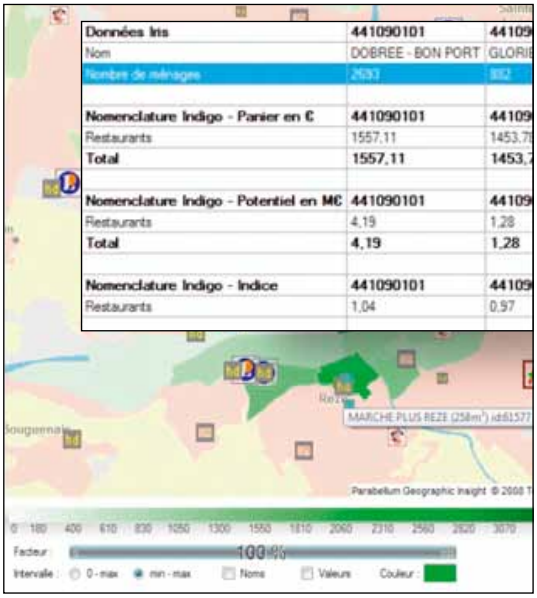
Parabellum chooses to integrate LOXANE X

The LOXANE X component offers remarkable ease-of-use: Parabellum has placed layers of clickable polygons (districts, communes, departments, etc.) that the user chooses individually or by using the circular or rectan-

Parabellum, a Geostrategy consulting company, is mainly involved in supporting its customers in the analysis and understanding of Points of Sale, in order to generate expansion and optimisation strategies for their networks.

gular selection tool. Users can also enter the name of the town and the street name for rapid location on the map. The integration solution was chosen for:

- Its display qualities
- The results viewer: the user has a view centred on the chosen zone. A layer of polygons represents the value to be displayed according to an appropriate colour scale.



Comprising several million records, the potential of the indiGO base is expressed through the interface of the LOXANE X component. The objective is quite straightforward: to supply users with a powerful and easy-to-use application allowing them to explore the geo-localised data.

"The mapping zones are totally integrated in the solution, and they are rendered easy to manipulate thanks to the LOXANE X interface. The tool presents a consistent environment which makes it possible to envisage the development of other business applications", says Charles Tabourot, Director of Finance and Operations.

A professional and impartial jury

This year, alongside Sébastien Béolet, Kernel and Component Development Manager, representing PTV Loxane, the jury was made up of four members from diverse backgrounds:

- Jean-Philippe Guillaume, Editor-in-chief, Supply Chain Magazine
- Thierry Jaffry, project engineer, Industry & Supply Chain hub, ALTI
- Philippe Laroque, IT Department Manager, University of Cergy, member of the ETIS lab at the CNRS, and author-translator of several IT works
- Guy de Mulder, Sales Executive Fleet EMEA, TELE ATLAS

The innovative positioning of the solution proposed by Parabellum is recognised for associating a digital tool shipping well-conceived ergonomics and functionalities with a paper geomarketing analysis medium. "The jury congratulates Parabellum for the quality of its application, especially insofar as IT is not its core business", Sébastien Béolet adds.

Parabellum strong points

- Innovative solution
- Major practical applications
- Bringing to the fore PTV technologies
- Quality of the solution
- Non-core IT company that has developed an excellent product

This year, the prize takes the form of a "media plan" designed to publicize the prize-winner and their winning application: press release, dedicated article in the PTV Loxane newsletter and production of a company video; as a final touch, the winner will benefit from a platform to present their solution at the annual PTV Loxane event on Thursday, December 9, 2010.

And the winner is ...

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Photo: iStockphoto/Sean Locke

PTV Loxane, France

Exapaq chooses PTV Loxane solutions

Exapaq signs a major contract with PTV Loxane for optimising and navigating its drivers' trips. Exapaq, specialist in the express delivery of parcels weighing less than 30 kg, has chosen PTV Loxane for the implementation of solutions for optimising and navigating its rounds. PTV xServer components now constitute vital tools on the express transport and delivery market.

Scheduling trips automatically

Exapaq provides its branches and network in France with a solution for automatically scheduling trips which incorporates the following functionalities, for example:

- Geocoding and geolocation
- Rounds optimisation
- Driver navigation
- Tracking vehicles and displaying routes on a centralised mapping base

"Exapaq recognises the experience and expertise of PTV Loxane in the implementation of business solutions for internationally-oriented carriers", explains Mr. Patrick Cavoué, Information Systems Director, Exapaq. The project is therefore now based on a twin PTV solution:

- PTV xServers for the centralised mapping application serving the 60 branches in France for geocoding, geolocation and scheduling of the 2,000 trips per day.
- Map&guide fleet navigator as the onboard application for the daily guidance of drivers towards a fixed destination.

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Benjamin Brousse, Corporate Accounts Manager, PTV Loxane: "With the signing of this new contract, PTV Loxane has underpinned its position as European leader for mapping solutions in the transport industry, and more specifically for the express transport and delivery market. Indeed, eight main players represent almost 80% of the market share in France – Geodis, DHL, TNT, Heppner, Gefco, Dachser, Schenker et Kuehne+Nagel – and they all already use PTV xServer solutions".

Exapaq, the parcel specialist

Exapaq handles the collection, transportation, tracking and delivery of parcels and documents which thousands of French businesses entrust it with every day.

To run this business, Exapaq draws on a network of 60 sites in France and some 2,000 employees who enable the company to make deliveries for over 100,000 companies and businesses daily. Exapaq is part of Geopost (number one in France and number two in Europe), the parcels subsidiary of the La Poste group. Exapaq is also a partner of the DPD network and provides, with its DPD Classic service, a powerful network that is recognised for its quality and reliability, supporting the growth of its customers throughout Europe.

PTV Benelux

Atlantic Container Line integrates PTV software

Atlantic Container Line (ACL) is a well-established organisation specialising in sea freight. To ensure efficient road transport, ACL uses a PTV xServer in addition to the TLNplanner route planning system. The use of PTV software means that each agency has the same results and guarantees consistency.

Atlantic Container Line has been sailing the North Atlantic routes since 1967. ACL's strength lies in container, project and oversized cargo, heavy equipment and vehicle transport. The company was originally established as a consortium of five European shipping companies (Cunard, the French Line, the Holland-America Line, Wallenius and Transatlantic). In 2001, ACL was taken over by the Grimaldi Group of Naples, Italy.

Global services

Every year, around 5,000 customers use ACL's direct container and Ro/Ro service(s) to South America and the Mediterranean. Ro/Ro services are also offered from North America to the Middle East, Australia, Far East, South Africa, Eastern Africa and Russia through a network of transport partners.

TLNplanner & PTV xServer

The five Grimaldi Logistics Management (GLM) centres in Europe (Antwerp, Liverpool, Le Havre, Hamburg and Gothenburg) plan their routes with the TLNplanner. ACL has opted for this tool to ensure consistency for every individual supplier.

The use of the PTV xServer components has enabled ACL to integrate iATLAS into its own in-house system. This allows the Sales and Customer Service departments to determine prices in line with the TLNplanner standard. Twenty employees use PTV products each and every day at the various GLM centres.

Easy calculation of prices thanks to PTV's xServer

Integration of PTV systems

In the beginning, there was a lack of conformity between the various PTV and ACL products in a number of areas. "But, thanks to the professional support of the PTV employees, all results are now consistent, as indicated in the TLNplanner," explains Frans van Kerckhoven, Manager of European Logistics.

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Photo: Ball Packeging Europe

Thanks to PTV Map&Market/Personal, Ball Packaging Europe's customers have their beverage cans delivered in the most efficient way. For example Kjetil Dahlhaus in Heppenheim: The manager of Bembel-With-Care sells cider from the Odenwald mountains as fashionable drink.

Logistics Software

Efficiently transporting beverage cans

Clack! Zzzzish! Who doesn't know the sound of a can being opened? However most people don't know much about the journey a beverage can goes through from an unshapely tin plate to the thirsty consumer. Those who know are Ball Packaging Europe. The company is one of the leading beverage can producers in Europe and delivers to around 400 filler points. Transportation amounts to a good 60 million kilometres a year. The company has now greatly reduced this amount of kilometres using PTV Map&Market/Personal.

Understanding transport structures

Beverage can production is greatly influenced by strong seasonal fluctuations. Short notice production peaks are the norm. For Ball Packaging the question is: Which plant should we use for production? And in such a way that the transportation costs for customers such as Coca Cola or Heineken are kept as low as possible and the capacities of production sites are utilised as well as possible.

Did you know?

The first beverage can celebrated its world premiere in 1935 with Krueger's Beer. But if you wanted to reach its contents, you first needed to flex your muscles because the beer cans used to weigh five times more than today and had to be opened with a sort of dagger. However this didn't stop its popularity: Even in the first year of sales more than 200 million went over the counter.

There is always more than one plant as possibility for the production of a required beverage can. The planning task is therefore to give the orders to the best suitable production plants. "This is why we brought software help from PTV into the equation", says Nicolai Dortmann, Supply Demand/Logistics Director at Ball Packaging. "Our aim is to display our goods flows for the whole of Europe and to optimise them." In order to show where possible savings can be made, the company uses the distance calculations between plants and customers. "The automatic generation of clear maps saves us lots of time and creates transparency", says Dortmann.

Production planning support

Ball Packaging stored the customer and plant structures in the geomanagement software PTV Map&Market/Personal. When new orders arrive and the assigned capacities are not sufficient, the tool can help to calculate the best combination of availability and transport costs. The Supply Chain Manager can decide which customer is delivered to by which plant. "The amount of work involved in the optimisation process meant that it didn't happen very often", says Dortmann. "Now, with the planning tool, all addresses are exactly geocoded and every freight is calculated to 100 metres accuracy and is optimised." This means the company can shorten delivery times and reduce empty runs. At the same time, it is saving freight costs and is doing something for the environment: less empty kilometres occur and therefore less CO_2 for transportation.

Ball Packaging Europe supplies around 300 to 400 beverage filling plants for its customers. With Map&Market/Personal, the company can now display and analyse its goods flows.

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Logistics Software

Green logistics is gaining speed

Larger logistics companies are taking a leading role in carbon-neutral transport. The fact that medium-sized companies can also provide green transportation is shown by the example of the South German forwarder Wildt. For the last six months Gerd Wildt has been providing carbon neutral transportation for his customers.

Reliable and environment-friendly – is how Gerd Wildt describes his fleet. This includes 50 towing vehicles and over 80 trailers and semi-trailers. More than half of the vehicles are classed at Euro-5 or more. In order to be even more economical, the forwarder is continually optimising its transportation planning. "Our first priority is to avoid carbon dioxide", says Wildt. For example by avoiding empty runs. With the help of driver training, his crew has also learned to drive fuel-efficiently. Throttled trucks – that means the motors are working in the most resource-efficient range – this also reduces CO_2 emissions.

Making carbon-neutral trips

Unfortunately these large vehicles cannot drive without creating carbon emissions. However CO_2 can be compensated for using financial services: The customers' money is used to support special climate protection projects. These ensure that the tonnes of CO_2 emitted in Germany is saved somewhere else – for example by building a hydroelectric power plant in Asia.

Serious climate protection projects are certified. The WWF Gold Standard has the highest quality criteria. Access to such projects is made possible by partners such as the Swiss non-profit foundation MyClimate. "This is easily implemented in practice", says Wildt. In order to plan optimum routes, the forwarder has been working with the transportation route planner map&guide professional from PTV for around 15 years. Since 2009 this has provided an emissions calculation certified by TÜV. "This kind of emissions calculation would be too complicated to do by hand. With map&guide I have the result within a minute and can quote a price even during the first consultation", reports Wildt. He sees the market of the future with eco-efficient logistics services – even for medium sized companies.

Setting yourself apart from the rest

Green and competitive

And Wildt isn't the only one who thinks this: surveys such as the "Branchenkompass 2010 Transport" show that in Germany every third company in retail and consumer goods is ready to pay additional costs for green transport solutions. Green logistics products provide transportation companies with the possibility of setting themselves apart from the competition. Wildt intends to use this competitive advantage. He has analysed his customers and evaluated which customers would have an added-value through eco-efficient transportation. One of these was the solar technology company Gerold Weber Solartechnik. "We sell and install solar systems for heating water and supporting heating systems as well as solar systems for electricity generation. We also provide wood boiler and small cogeneration units", says managing director Gerold Weber. We are an eco-friendly company, our customers are environmentally friendly. "So it's easy to understand why I immediately took the chance to provide eco-efficient delivery."

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Forwarder Gerd Wildt (left.) presents Gerold Weber from the same-named company for solar technology with the first certificate for eco-efficient transportation – generated by the transportation route planner map&guide.

Photo: PTV AG/Michaela Gabriel

Thomas Friderich welcomed all guests. More than 170 transportation experts from around the world attended the 20th PTV Vision Users Group Meeting.

Traffic Software

Follow your visions – make a difference

PTV Users Group Meeting

How can we plan traffic and transportation in a modern manner? And what are the tools that we can use to achieve this goal? These were some of the issues that around 170 transportation experts discussed at this year's national and international PTV Vision Users Group Meeting. The conferences which took place in Karlsruhe and Baden-Baden attracted attendees from around the world to learn more about the latest PTV Vision developments, to share their knowledge and ideas with peers and to celebrate the event's 20th anniversary.

"The latest VISUM release includes numerous usability refinements that reduce the number of mouse clicks needed to perform a function," explained Klaus Nökel, head of the Vision Software Development division, during the Users Group Meeting. The software now provides a matrices editor for improved input data management. The new scenario manager helps users to compare output data more easily. Moreover, users will benefit from a number of user interface enhancements. "For example, the map display has been updated to an improved look and users can now set custom colours," said Klaus Nökel. The size of the stops can be displayed variably. This is a helpful feature for users who want to visualise transition points.

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Tobias Kretz presented the latest pedestrian simulation features in VISSIM.

Better parking with VISSIM

Lukas Kautzsch, product manager at PTV Germany, presented the new VISSIM features: until now, it has not been possible to simulate the search for an available parking space in an optimal manner. The software has been extended with destination coordinates so that it is now possible to determine the attractiveness of a parking space. "We have allocated groups to the parking lots," said Lukas Kautzsch. "This means that each driver of a simulated car will select any type of parking space of a specific group." As a result, there will no longer be any traffic jams in the simulation.

Tried and tested

Plenty of use cases showed how PTV Vision is used in practice: Karen Giese from PTV America, for example, talked about transportation planning during the Olympic Winter Games which took place in Vancouver, Canada, in 2010. For this event the organisers expanded Vancouver's public transport system on a large scale and PTV supported the entire planning process. "With VISUM we showed them how traffic dramatically increases within 15 minutes after an ice hockey game," she said. Based on this knowledge it was possible to optimise traffic routing in order to avoid massive traffic jams. "Scenario models definitely helped them to be better prepared for these situations," commented Karen Giese.

Traffic Software

Road safety

Andre Münch, PTV AG (2nd f.l.), Hans-Joachim von dem Osten, Thüringisches Landesamt für Bau und Verkehr (state office for construction and transport) (4th f.l.) and Isabell Viehmann, Bauhaus University Weimar, Professor for Transport Planning and Traffic Engineering (3rd f.l.) with their guests from Bosnia and Herzegovina.

Bosnia and Herzegovina belongs to the countries which has been offered the prospect of EU accession. In order to become a member state, the candidate country must bring its institutions and judicial system up to EU standards. A particular emphasis is placed on the optimisation of the country's infrastructure. During a conference in Weimar, Germany, government officials from different ministries in Bosnia and Herzegovina met road safety experts to share their knowledge and expertise in this field. PTV and the Bauhaus University in Weimar have jointly organised this event.

TAIEX (Technical Assistance and Information Exchange Instrument) is an instrument that is managed by the Directorate-General Enlargement of the European Commission. It supports partner countries with regard to the approximation, application and enforcement of EU legislation. It facilitates the delivery of appropriate tailor-made expertise to address issues at short notice by coordinating support requests. Study visits give officials the opportunity to see and learn from examples of best practices.

The three-day event primarily focused on basic administrative procedures, such as motor vehicle registration and driving licences. Road safety was another important aspect. Andre Münch, PTV, talked about the analysis of accident data using two software solutions at different application levels: the network analysis at macroscopic level with VISUM and at microscopic level with the EUSka accident analysis tool.

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Traffic Software

Intelligent concepts for urban transport

PTV ITS Conference

The future belongs to cities: by 2025, more than 60 per cent of the world population will live in cities, according to Franck Leveque, Vice President Growth Consulting, Frost & Sullivan Germany. He was one of the six renowned speakers at the international PTV ITS Conference in Düsseldorf, focussing on solutions "Towards Smarter Urban Mobility".

PTV's 8th ITS Conference attracted more than 70 ITS experts from around the world who listened intently whilst speakers presented their views on current ITS issues. There were also plenty of networking opportunities and chances to share their ideas and expertise with peers. And the sessions included numerous practical examples. For example, Heiko Böhme, general project manager of the Dmotion project, talked about the project "Düsseldorf in Motion". As part of Dmotion, the capital city of Northrhine Westphalia has developed an integrated traffic information service which collects data on Düsseldorf's entire road network. PTV provided the software which calculates the data in real time. "Our aim is to reroute road users onto alternative routes in the event of traffic jams by strategically managing signal control systems, variable message and direction signs," explained Heiko Böhme.

More detailed information about the past conference.

Heiko Böhme focused on innovative and integrated traffic management.

Traffic Software

Transferring transportation knowledge to East Asia

The 17th ITS World Congress, which took place in Busan, South Korea, is the World's largest event for ITS experts, transportation planners and road traffic managers. PTV also participated in this important congress and presented PTV Vision, its software suite for transportation planning and traffic engineering, the PTV TrafficPlatform for ITS applications and the latest PTV TrafficCountManagement version. Another highlight was ITSseamless developed by PTV and GEVAS software.

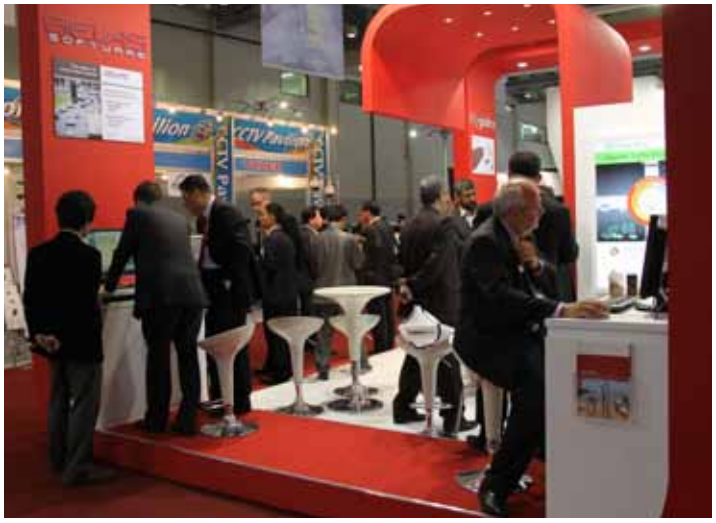
New VISSIM features

PTV Vision with its modules VISUM and VISSIM is the worldwide leading software suite for transportation planning and traffic flow simulation. Pedestrian simulation in VISSIM is of particular interest to the traffic and transportation sector in East Asia, since many countries in this region need solutions that assist them in balancing the impacts of high population density and traffic volumes on the one hand and a poorly developed infrastructure on the other hand.

TCM compares traffic and environmental data

VISSIM 5.3 provides a module which allows the user to flexibly adjust the routes selected by pedestrians according to the current situation. The "dynamic potential" estimates the travel time to the destination or to the next via point. As a result, pedestrians (in the simulation) can avoid major crowds at an early stage, and thus save a lot of time. To this end, they do not necessarily take the shortest route, but the quickest one. Another new module allows users to visualise "dynamic partial routes" in order to model queuing scenarios in a realistic manner.

The latest PTV TrafficCountManagement (TCM) version now compares traffic data and environmental data, such as air pollutants and particulate emissions, so that regulations on the restrictions of vehicle movements can be evaluated. Moreover, it is possible to identify correlations between traffic and air pollution.



PTV's stand at ITS World. Many visitors were keenly interested in PTV's wide range of products for transportation planning and traffic simulation.

Comments on ITS World Congress

"Notable was a trend towards deployment of ITS technologies. In a workshop about cooperative systems before the congress, it was clearly stated that for the OEMs such systems have left the research departments and are now in development. So before long we will see cooperative systems on our roads." **Dr. Thomas Benz, PTV**

"The participation in the ITS World Congress was very interesting from PTV Vision's point of view. We had the opportunity to talk to numerous customers and partners from Korea and the region and to discuss and agree on further campaigns or activities. In this context, I would like to mention two highlights: We have signed a letter of understanding with the Japanese company FORUM 8, a worldwide leader in the field of "Virtual Reality" (3D animation). We are confident that this cooperation will lead to a wider distribution of our product VISSIM in Japan. Moreover, we want to develop a nationwide transportation model for South Korea together with our partner Professor Seonha Lee from the KongJu University." **Lajos Zubor, Director Sales PTV Vision.**

Meet PTV at these international events!

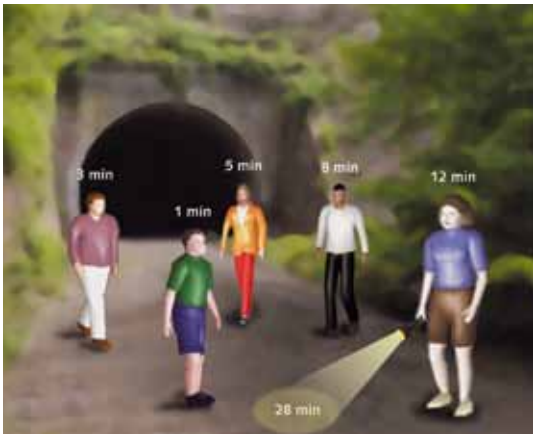
23.01. – 27.01.2011	TRB 90th Annual Meeting	Washington D. C.
08.02. – 10.02.2011	LogiMAT	Stuttgart
01.03. – 05.03.2011	CeBIT	Hanover
14.03. – 15.03.2011	Andinatraffic	Bogota
16.03. – 17.03.2011	Heureka	Stuttgart
29.03. – 31.03.2011	Traffex	Birmingham
06.04. – 08.04..2011	PTV Vision Users Group Meeting	London
10.05. – 13.05.2011	transport logistic	Munich
25.05. – 27.05.2011	Intertraffic Eurasia	Istanbul

Train your brain with PTV

The tunnel scenario

Five people must walk through a dark tunnel. However, only ever two can walk through the tunnel at the same time. A torch with a battery that will last precisely 28 minutes will give them light. The five people walk at different speeds: one person needs 12 minutes, the others need 8, 5, 3 and 1 minute(s). In what pairs do they have to walk through the tunnel in order to get to the end before the torch battery dies? A tip: Everyone always walks the entire length of the tunnel.

You will find the solution on our website at www.ptvag.com or ask our transportation experts for PTV VISSIM pedestrian simulation.



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We welcome your input, feedback and suggestions. Please get in touch with us!

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