

PTV xServer

The new generation of server components
for the development of mobility services



A plus factor for developers



To stay ahead of your competition in the field of mobility services it is essential to efficiently use state-of-the-art technology, to profitably apply existing tools and to flexibly react to customer needs. You require ready-to-use software components, which allow you to create an intelligent environment for your services, offering you and your customers real added value.

Using uniform standards

PTV has developed a new generation of software components for mapping, routing, geocoding and local search, which is universally based on standard Web Services interfaces.

A technical framework that fits

Standardised SOAP interfaces ensure a consistent system and easy integration. The PTV xServers are C++ modules that are integrated into a scalable Java Communication Framework. Client-Services can therefore be easily incorporated and enable faster time-to-market, regardless of the application technology you use.

The PTV xServers, which can be clustered, run on Windows and Linux and use the full performance of multiprocessor systems.

Benefit from the map format of the future

The PTV xServers are based on the new map technology PTV TiledMap. This means that digital geography, which is used by the components, can be easily updated or extended. The optimised data access helps to considerably increase system performance.

Detailed maps of Europe and North America and a less detailed map of the world are available for the PTV xServers. Further detailed maps can be supplied upon request. NAVTEQ, TeleAtlas, AND and smaller local suppliers provide the raw data.

A wide range of applications

- ▶ Route planning, even dynamic, with the PTV xRoute Server
- ▶ Map display with the PTV xMap Server (static as bitmap) or with the PTV xVector Server and the PTV xVectorMap Plugin (interactive as vector maps)
- ▶ Converting postal addresses into coordinates (geocoding) and vice-versa (reverse geocoding) with the PTV xLocate Server



Powerful modules

Calculating routes

PTV xRoute shows you the way: it calculates the route between two geographic coordinates and generates a route list. The route can be visualised with the PTV xMap Server or the PTV xVector Server.

The journey time is calculated on the basis of the type of the street and a freely selectable vehicle profile. The user can choose between the shortest, fastest or most cost-efficient route. Routing takes any number of stop-off points into account. Numerous additional parameters provide an even more detailed route calculation.

Additionally the PTV xRoute Server offers a wide range of functionalities:

- ▶ Detailed route planning for pedestrians, cyclists and car drivers
- ▶ Calculating distance matrices
- ▶ Dynamic route planning taking current traffic information into account. PTV provides a solution which connects the most important traffic information sources.
- ▶ Calculating and comparing motorway toll in different European countries
- ▶ Editing, blocking or opening road sections with the Road Editor – as required

Geocoding addresses

The PTV xLocate Server shows you the geographic location of your addresses. It turns postal addresses into geographic coordinates in order to display them on digital maps.

They can be used for route calculations, visualisation on maps, proximity search or other geographic selections and analyses. What is more, geocoded addresses are the key to data exchange between different geographic information systems (GIS). This also works the other way around: if the server receives co-ordinates via a GPS module, for example, it will transform the data into addresses (reverse geocoding). This is an important function for tracing & tracking applications.

The PTV xLocate Server

also provides the following functions:

- ▶ Address geocoding, i.e. translating the address into different coordinate formats and systems (WGS-84, GeoDecimal, GeoMinSec, Mercator etc.)
- ▶ Geocoding in single or batch mode
- ▶ High error tolerance for typing errors and sound-alike names by using different search methods (binary, fuzzy, phonetic) which can be combined with each other
- ▶ If the data entered by the user are not clear, the user can choose from selection lists
- ▶ Numerous configuration, analysis and weighting options

Displaying maps

Benefit from two components which can be used alternatively: the PTV xMap Server visualises static maps as bitmaps while the PTV xVector Server combined with the PTV xVectorMap Plugin provides interactive vector maps. Both solutions allow you to include routes from the PTV xRoute Server, traffic information, POIs as well as other points, lines, polygons or areas in the map. Numerous configuration options for colours, texture, line thickness or freely selectable icons help you to easily design your individual maps. Thanks to an intelligent interactive concept the objects remain selectable and can be used for further applications, such as displaying additional information via mouse-over effect.

The PTV xMap Server

- ▶ Supports different bitmap formats (jpg, png, gif, bmp etc.)
- ▶ Provides various pre-configured map profiles for the look&feel you need
- ▶ Different layouts for all kinds of mobile devices

Additionally, the PTV xVector Server and the xVectorMap Plugin provide

- ▶ Novel, interactive map navigation – seamless and without interruption
- ▶ Fast zoom and move functions: navigate the map to get the view that you need
- ▶ Distance calculations (direct distances) on the map
- ▶ ActiveX Control for different internet browsers

PTV xRoute Server

PTV xLocate Server

PTV xMap Server

Your advantages using the PTV xServers

Use the PTV xServer components to develop mobility services in an easy and sustainable manner.

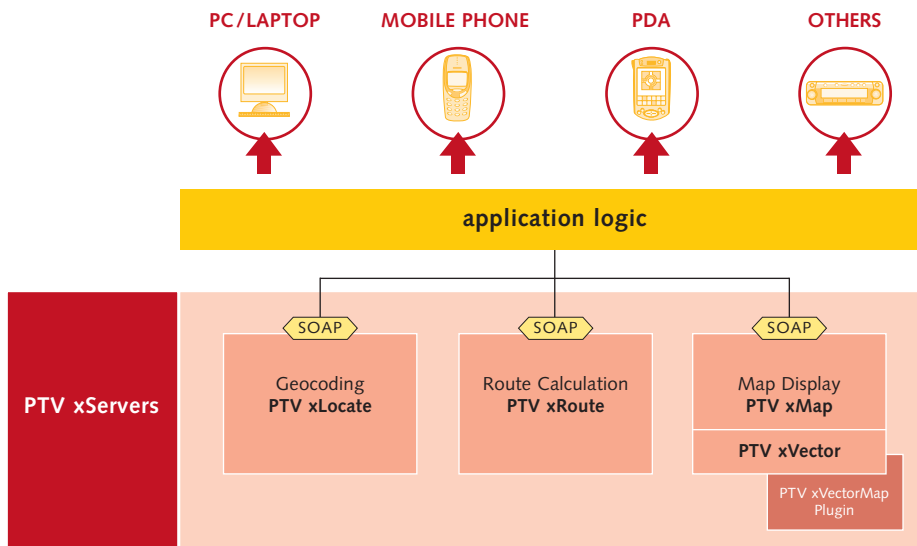
▶ **Only one software solution for different map sources.** With the flexible PTV xTechnology you no longer have to manage and adjust different types of map instances. You can easily update the data.

▶ **Maximum performance.** Computing processes and data access have been optimised for maximum performance, thus efficiently using your microprocessor capacities.

▶ **Easy integration into existing applications.** PTV xServers can be easily integrated into new or existing applications. They are based on standardised Web Services interfaces (SOAP XML) and include numerous integration tools, such as code samples and client classes.

▶ **For all countries and languages.** The PTV xServer are unicode-ready. The software can read Chinese, Arabic and Latin characters and convert them for further processing.

▶ **Stability and scalability – even at high capacity utilisation rates.** Multiple capacity tests have proven the efficiency of the PTV xServers, also in extreme situations. Higher access rates can be quickly handled thanks to easy scaling: "Grow as you go".



Interested in testing the PTV xServer for free?
Simply get in touch with us by sending an E-mail to: mobility@ptv.de



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