

## PRESS RELEASE

### **Berlin in Google Earth: the first city in the world to be shown as a realistic 3D image.**

**LandXplorer-Technology from the 3D Geo GmbH presents 3D-worlds in the Internet. Data remains the sovereign possession of the respective cities. Large amounts of data can be processed easily. Interactive worlds are coming soon.**

**Berlin/Potsdam, 03 | 08 | 2007.** Berlin is the first city in the world viewable as a 3D image in the Internet; wide stretches of the city can be seen in realistic 3D quality. On 8 March 2007 Harold Wolf, Berlin's mayor and senator of the Ministry of the Economy, Technology, and Women, switched on the city-model for the virtual global platform Google Earth, making it accessible to the general public for the first time. Berlin beat Hamburg to the punch, which had announced a similar Internet debut on 17 January, however Hamburg is not yet online. The model is so true to the original that a virtual jaunt through Berlin gives the viewer the impression that he is actually strolling through the German capital on his own two legs. Viewers can call up the Berlin 3D-model initially at this address: [www.virtual-berlin.de](http://www.virtual-berlin.de). After that, one can see it via the global visual platform in Google Earth.

### **Up Close to Reality**

Starting today you can via your computer monitor walk through the Brandenburg Gate as if you were really there, or "fly" over other interesting sights. A total of 44,000 buildings in the center of Berlin can now be seen in 3D-format. The superb photographic quality of 50 of them gives viewers an exact architectural representation of the façades' features. Visitors can even virtually enter five special buildings: the Reichstag (German Parliament), the Main Train Station, the DZ Bank on Paris Plaza (the former DG Bank), the Sony Center, and the Olympic Stadium.

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In order to mirror reality as close as possible, approximately 5,000 Berlin facades were exactly copied, meaning they were photographically reproduced in a real-to-life way. The remaining buildings were then texturized, partially using generic features taken from the automatic real estate databank (the ALK). The buildings' roofs were illustrated based on aerial photographs. By using this method, viewers are shown a real-to-life picture, even though real-life images are not used in all areas.

### **Bundled Know-How**

Software-systems-technology specialists from the Hasso Plattner Institute (University of Potsdam) developed the technological basis for the 3D Berlin model. 3D Geo GmbH, a spin-off company of the Hasso Plattner Institute, located in Potsdam, Germany, provided the software for the 3D-models as well as the real-to-life look and presentation modus for Google Earth.

The 3D-software "LandXplorer", which was developed in Potsdam, is able to automatically process large amounts of data and elegantly portray 2D-images in a real-to-life third dimension. The 3D Geo-Creator for Google Earth converts 3D models into the format required by Google Earth. "In the first step of the production process, we create out of 2D map data a kind of 'building-block model', upon which we overlay façades (provided by special suppliers) in step two", says Marc Hildebrandt, director of 3D Geo.

### **The Production of 3D City Models**

The details of the production process are more complex. A 3D city model can be based on a wealth of various data taken from photogrammetry, terrestrial surveying, or external data. A digital terrain-model forms the foundation of the models which in turn are based on the respective raster data taken from the survey data. On top of this foundation, information in the form of raster and vector-data can be laid. The crucial components of a 3D city-model are, however, the buildings which are illustrated in a concrete way along with the open-areas inside them. In order to create the third dimension, various foundations are used. The simple building-block models are usually based on cadastral-data; for detailed illustrations aerial-photography or aerial laser-scanning data are used. The photographs of facades are laid over

the “naked” buildings by an automated process. Special applications link additional information to the models such as street names, how the buildings are used, and more.



## **Secure Data**

Here is an important notice to city-model users: in the case of Berlin, the 3D-model does not change owners, but rather the data remains the sovereign possession of the city or local authorities. 3D Geo manager Marc Hildebrandt explains, “When using our software-solutions, the data remains on the customer’s server and does not move into the access to third parties.” Hildebrandt further explained that because this solution protects data from falling into the hands of third parties, cities and other local governments can present their situation-specific and up-to-date geo-data on public platforms such as Google Earth any time they like.

## **Applications on the Advance**

City and regional planning are among the classic uses of 3D city-models. Visualization offers significantly more variation and interactive possibilities in illustrating urban structures, compared to 2D drawings, cardboard or wooden models. The interactive real-time surroundings allow the observer to move around freely within the virtual environment. In addition, various time-layers can be easily visualized in the model. By way of the Internet, citizens can easily take part in process stages. Aside from showing the bare physical features of the city, other characteristics such as the age structures of the population can be shown.

By having city models built, urban economic sponsors show their openness to innovation. Additionally, they help promote themselves in the inter-city urban development competition, and attract the favor of local businesses as well.

Tourism also profits from this approach. Cities with high touristic potential can persuade tourists to come to their cities by placing their information about their attractions in the Internet. On top of that, the various historical, developmental stages of the city can be shown. Other items of interest such as hotels and information about transportation and connections can also be integrated. In the area of catastrophe management, the city models

can provide a valuable service by predicting the direction of the flowing water in flooded areas.



Hildebrandt says, "With the debut of Berlin as the first photographically real-to-life 3D city in the world to appear in the Internet, the entire 3D-world has been given a further thrust forward. In 2 years at the most, nearly every major city in the world will be online in 3D form." In the future, 3D-worlds will be enhanced by interactive contents. For example, Professor Döllner of Hasso-Plattner Institute says this about future applications: "A tourist strolling through virtual streets will be able to look for a particular restaurant, or shop in virtual stores, or even meet friends."

### **Information in the Internet:**

**Information about the LandXplorer family of products can be found at this link: [www.3dgeo.de](http://www.3dgeo.de)**

**Berlin in 3D: [www.virtual-berlin.de](http://www.virtual-berlin.de)**

**Berlin 3D in Google Earth is a project of Berlin Partner GmbH and the Berlin senate ministry of the economy, technology, and women (department III C).**

**Informationen about Hasso-Plattner-Institute: [www.hpi-web.de](http://www.hpi-web.de)**

6,800 characters

## **the enterprise:**



3D Geo GmbH is a spin-off company of the renown Hasso-Plattner-Institute. It develops and distributes software solutions for real-time 3D visualizations, management and the delivery of geo-information.

Interactive geo-documents, which form the basis of the solutions, integrate complex 2D and 3D geo-data into dynamic visualizations and guarantee access to the contained geo-information in a task and user-specific manner. Geo-documents, on the basis of built-in digital rights, support the controlled and secure distribution of embedded geo-information via digital media of all sorts.

The software portfolio of 3D Geo GmbH allows for an easier and results-oriented arrangement and display of your spatially-oriented information. It also supports solid and effective decision-making and opens up new dimensions of geo-data information-values.

The technology of 3D Geo GmbH removes the initial obstacles connected with using, processing, and distributing spatially-oriented data and information, and considerably reduces the amount of time needed for setting up and learning to use the product. The 3D Geo technology provides society on a broad basis with geo-information in an accessible product; it opens up a wide range of applications for daily use in fields such as education, business, and even leisure. Typical users are private companies, public institutions, local governmental bodies, and private users.

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