Microsoft®
Virtual Earth™

Platform Services for Location-Based Solutions

The Microsoft® Virtual Earth™ platform is an integrated set of services providing quality geospatial data, rich imagery, and cutting-edge technology that helps organizations visualize data and provide immersive end-user experiences. By developing on the Virtual Earth platform, you can create immersive experiences for desktop or mobile devices based on high-resolution map detail, aerial imagery, bird's eye[1] views, and 3D city models. The Virtual Earth platform includes maps optimized for mobile devices, more international coverage and capability, deeper and richer data and images, and enhanced performance.

Start working with the Virtual Earth platform:

: : **Virtual Earth Map Control.** The Virtual Earth Map Control API lets users make requests via JavaScript to an AJAX map object. The Map Control enables rich mapping and enterprise-class application development with an intuitive JavaScript programming model.
: : **Virtual Earth Web Services.** Developers can now take advantage of the new Virtual Earth Web Services API, which offers static map images (.gif, .jpeg, and .png), direct map tile access, one-box search functionality, geocoding, reverse geocoding, and routing.
: : **MapPoint® Web Service.** The MapPoint Web Service is a programmable Web service hosted by Microsoft and used by enterprises and independent software developers to integrate location-based services, such as maps, driving directions, and proximity searches, into software applications and business processes.

Virtual Earth Platform Features:	Virtual Earth AJAX Control	Virtual Earth Web Services	MapPoint Web Service
Geocoding			
Geocoding. Get the most accurate locations around the world through integration of multiple geocoders and datasets with MapView, Reverse IP, and Culture to provide to most relevant and accurate results.[2]	X	X	X[2]
Reverse Geocoding. Find the closest street address based only on latitude and longitude coordinates from a GPS or other geospatial device.	X	X	X
International Geocoding. Enable users to find international addresses with more precision with reverse geocoding, now available anywhere Virtual Earth has routing.	X	X	X
Expanded Number of Rooftop Views. Create detailed maps to help users find locations with rooftop accuracy. Virtual Earth now offers 85 million unique addresses—more than 70% of all addresses in the U.S.	X	X	X
Routing/Directions			
One-Click Directions. Provide directions in one click, including route options by shortest time, shortest distance, or traffic flow—without having to enter a starting address.		X	
Expose Route Geometry. Use route geometry to perform spatial queries and draw customized routes on maps to feature on a Web site or within a mapping application.	X	X	
Localized Directions. Localized market support is supported in the API along with localized maps and walking[3] and driving directions in 13 languages.	X	X	X
Landmark Hints. Offer customers in the U.S. and Canada turn-by-turn directions that feature familiar landmarks, such as gas stations and fast-food restaurants, by name.	X	X	
Parse/Search			
Enhanced Location Search. Find locations using alternate and similar spellings, resulting in a more relevant search experience.	X	X	X
Proximity Search. Return a list of points of interest based on proximity to a selected location.[4] Deploy flexible ways to search for additional points of interest along a specified route.[5]	X	X	X
Property Filtering. Refine any business listing search by filtering on properties such as user rating, cuisine, atmosphere, and amenities. Get suggestions on filters that can be used to further refine a business listing search.		X	
Find Locations. Customize search results with the find method, which sends the resulting pushpins directly to a shape layer. The user can then toggle layer visibility and manipulate layer content.	X	X	X
Extended International Parsing Capabilities. Develop applications with better match rates for addresses in Australia, New Zealand, Canada, and Puerto Rico.	X	X	
Map Tiles/Imagery			
Bird's Eye[1] View. Use the bird's eye[1] view to enjoy continuous panning as the scenery moves across the map, even in 3D. Bird's eye hybrid adds street names to the bird's eye maps to provide better visual context and orientation.	X	X (tiles only)	
Aerial Views. Rich aerial photography provides deep and accurate data overlaid on maps.	X	X	X

Locate. Innovate. Integrate.

Virtual Earth Platform Features (continued):	Virtual Earth AJAX Control	Virtual Earth Web Services	MapPoint Web Service
Traffic Flow Data. Virtual Earth now supports traffic-tile fetching containing rendered traffic flow data.	X[6]	X	
Localized Maps. Provide localized maps applications in U.S. English, German, French, Spanish, and Italian in Western Europe (in addition to English elsewhere, and Japanese in Japan).	X	X	X
Enhanced 3D Experiences. Create more realistic 3D worlds with 3D models in more than 250 cities: enhanced resolution detail reveals more buildings, small terrain features, building textures, and trees that enhance overall realism in select cities.	X		
Maps for Mobile Devices. Mobile applications feature geocoding and new maps optimized specifically for mobile devices. Mobile platforms supported include Windows Mobile, RIM BlackBerry, and the Apple iPhone.		X	X
Tile Over-Fetching. Programmatically enable tile downloading to either increase panning performance or optimize page load time.	X	N/A*	N/A
Tile Layers. Easy-to-use tile layer interface used for adding, deleting, showing, and hiding tile layers.	X	N/A	N/A
Weather Integration. Near real-time weather patterns and cloud algorithms are provided.	X		
Other Developer Features			
Support for Open Standards. Support for KML and GeoRSS. Import shapes, pushpins, and polylines using widely used standards for geographically encoded objects.	X		
Info Boxes. Shapes can store HTML and CSS content providing the ability to fully customize the look, feel, and content of information boxes. These boxes can also be shown or hidden programmatically.	X	N/A	N/A
Keyboard and Mouse Events. Override almost any default keyboard or mouse event, and change it to execute any Virtual Earth map action.	X	N/A	N/A
Shapes and Shape Layers. Customize and modify pushpins, polylines, and polygons, line colors and widths, and transparencies of shapes, as well as add custom icons. Shape management capabilities allow grouping of pushpins, polylines, and polygons and the ability to show or hide a group of shapes, as well as make changes to individual shapes. Add multiple pushpins in a single call with enhanced performance over adding multiple pushpins separately.	X	N/A	N/A
Import 3D Models. Import 3D models in Virtual Earth 3D with Live Search Maps collections or referenced via HTTP.	X	N/A	N/A
Small Navigation Controls. Control how end users interact with the mapping interface by utilizing different options for the size of navigation controls.	X	N/A	N/A
Mini-map. The mini-map provides a small map legend from a higher view, giving users better bearings as they navigate. The mini-map uses a box to indicate the section of map currently being viewed as it relates to a larger map section.	X	N/A	N/A
Upload Custom Point of Interest Data. Enterprise customers can upload any of their own spatial data to our cloud and serve it down to their customers saving overhead and increasing performance.			X
Custom Pushpin Libraries. Select from the dozens of custom pushpins in our library or provide your own to give your maps an even richer experience.		X	X
Pushpin Collision Avoidance. Allow users to zoom out on a map to better visualize a cluster of geocoded points. They can also zoom in to get more information on an individual site.	X	X	X
Localization Support			
Driving Directions. Czech - Czech Republic; Danish – Denmark; Dutch – Netherlands; English – Australia; English – Canada; English – India; English - United Kingdom; English - United States; Finnish –Finland; French – Canada; French – France; German – Germany; Italian – Italy; Norwegian (Bokmal) – Norway; Portuguese – Brazil; Spanish – Mexico; Spanish – Spain; Spanish - United States; Swedish - Sweden	X	X	X
Map Labels. English - United States; French – Canada; French – France; German – Germany; Italian – Italy; Japanese[7] – Japan; Spanish – Mexico; Spanish – Spain; Spanish - United States	X		X
Geocoding. Czech - Czech Republic. Danish – Denmark; Dutch – Netherlands; English – Canada; English - United States; Finnish –Finland; French – Canada; French – France; German – Germany; Italian – Italy; Japanese – Japan; Norwegian (Bokmal) – Norway; Portuguese – Brazil; Spanish – Spain; Spanish - United States; Swedish – Sweden	X	X	X
Map Control Dashboard. English, Italian, French, Spanish, German, Japanese	X	N/A	N/A
Platform Support			
Browser Support. IE6, IE7, Firefox 2, Safari 2 (Mac), Safari 3 (Mac)	X	X	X

*N/A means not applicable; an unchecked box means that the feature is not available in that platform.

[1] Available in many metropolitan areas. Not available for government customers.
[2] MapPoint Web Service does not include Map View, Reverse IP, and Culture contextual information.
[3] Walking directions are available in the United States and the European Union.
[4] Virtual Earth Map Control only supports searching for YP listings.
[5] Search along route supported by MapPoint Web Service only.
[6] Traffic tile overlays available only for authenticated paying customers.
[7] Only available in the Map Control.

▶ **Learn More**

To get the latest news and resources for developing on the Virtual Earth platform, please visit: **http://dev.live.com/virtualearth/**

You can also review regularly updated articles about developing on the Virtual Earth platform, guidance on using the map control, as well as documentation for all the platform components at the MSDN Virtual Earth Development Center located here: **http://msdn.microsoft.com/en-us/virtualearth**