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Keeping track of web site visitors with IP geolocation – Dec 2009

By Bob Tarzey, Service Director, Quocirca Ltd

Have you ever wondered why, when you visit some web sites, they seem to magically know something about where you actually are? This is achieved using IP geolocation services.

The one thing that is known about you when you turn up at a web site is the IP address from which the device you are using originates. IP addresses may be permanently associated with a given device, or dynamically assigned on connection to the internet; sometimes many devices may share the same public IP address but will be geographically close anyway.

Either way, with a real-time geolocation service, an IP address can be used to make a web site visit more relevant and personal by knowing a visitor's actual geographical location.

Although no personal information is associated with an IP address itself, information available from the Internet Corporation for Assigned Names and Numbers (Icann), and its subsidiary bodies, is useful enough to tie down the likely location of many web surfers.

Icann assigns IP addresses via five Regional Internet Registries (RIRs) that cover Europe, North America, Latin America, Asia Pacific and Africa. The RIRs then assign the address to various internet service providers, telephone companies, educational institutions, government bodies and large corporations.

This data is in the public domain and, as many of these organisations have a regional focus, it is possible to tie the location of an IP address to at least a country, if not a smaller geographic area, such as north east England, Brittany or southern Spain.

Geolocation services providers, such as Quova, IP2 Location, MaxMind and SiteBrand, take this data and enrich it with other information. This enables them to provide even more finely tuned data about a given IP address, in many cases

down to a region with a radius of 50-80Km, and sometimes a given town or city.

Geolocation databases can be procured and installed on-premise alongside a given web server, but this requires regular updates as geolocation data constantly changes, not least as new IP addresses are assigned.

However, given the transactional nature of geolocation (send an IP address, receive a co-ordinate) it is well suited to be delivered as an on-demand service where the data is kept up to date by the provider in a single centralised database.

This is especially true as Icann moves from IPv4 to IPv6, and IP addresses from a four part/32-bit to a six part/128-bit identifier, which will hugely increase the size of the databases in question and make distributing them problematic.

Geolocation service providers generally charge on a per-lookup basis. The value their customers get in return for this is in two areas. First it enables them to enrich the experience of a web site visitor, and second it avoids displaying information or conducting transactions that may be illegal or inappropriate in certain places.

Potential customers are pretty fickle, especially on the internet when other resources are just a click away. Using geolocation, online retailers can make the entry page relevant for each visitor based on their location. Most obviously, local languages can be automatically selected, and other examples include book e-tailers showing the best sellers for a given country, and online ticket agencies listing local events.

For retailers with both an online presence and bricks-and-mortar stores, an association can be made between the online visitor and their nearest physical store. This could be to advertise a seasonal sale, or to advise the customer that a particular item is in stock around the corner should they want instant gratification rather than

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waiting a few days for delivery. Such an association allows retailers to capitalise on the tendency that some customers have to 'research online and buy offline'.

When it comes to avoiding certain transactions altogether, this can be for cultural or legal reasons. There are some laws that explicitly ban the selling of certain goods in certain countries. For example, gambling is illegal in certain US states, and Germany bans the sale of Nazi memorabilia. An online auction site might want to restrict access to certain items, as some countries do not allow alcohol, for example. A seller of fine whiskies might as well avoid taking an order in the first place if the buyer is based in Saudi Arabia.

IP geolocation allows web site owners to recognise that their individual online visitors also exist somewhere in the real world, and to improve the customer experience and convert more visitors to paying customers.

More information is available in Quocirca's freely available report Customers in the Real World here:

http://www.quocirca.com/pages/analysis/reports/view/store250/item22075/?link_683=22075

About Quocirca

Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

Quocirca works with global and local providers of ITC products and services to help them deliver on the promise that ITC holds for business. Quocirca's clients include Oracle, Microsoft, IBM, O2, T-Mobile, HP, Xerox, EMC, Symantec and Cisco, along with other large and medium sized vendors, service providers and more specialist firms.

Details of Quocirca's work and the services it offers can be found at <http://www.quocirca.com>