

# Geo-targeting on IP Address

## Pinpointing Geolocation of Internet Users

People seldom find what they are looking for on the Internet because information is often presented to a worldwide audience and disregards the different cultural and geographical needs. On the other hand, companies are having problems reaching their target groups on-line. That's why on-line advertising has proven to be quite inefficient so far. A solution to these problems lies in IP targeting. Let's see how location awareness on the Internet can be helpful for both users and service providers. Geography matters, and the Internet is no exception to this rule.

By Alex van Leeuwen

### Real-time geolocating

IP targeting basically enables websites to recognize the geographical location of visitors in real-time, e.g. at the instant someone enters a website, it is recognized that the visitor is from Paris, France. Based on that knowledge, content can be shown which is likely to be relevant to visitors from this country, region or city. Also based on the knowledge, the decision can be made not to show certain content to that visitor. Besides the possibility of offering different content to different geographical groups, IP targeting also enables on-line advertisers to reach geographical target groups. This makes on-line advertising a lot more efficient because it reduces the 'waste'.

### IP Addresses

This kind of geo-targeting is based on IP addresses. IP addresses are those sets of numbers that you regularly see on the Internet and consist of four blocks of numbers: either in a URL or at the bottom of your screen: 64.41.241.254. An IP address can be compared to a telephone number, but for the Internet: it is needed by computers to communicate with each other. Anyone entering the Internet does this through an IP address which is immediately known to other parties contacted. It is impossible to communicate without IP addresses. Worldwide, a maximum of 4.25 billion IP addresses can be issued because the four blocks range from 0 to 255. At this moment, about 1.3 billion are actively in use.

### Users' Privacy Intact

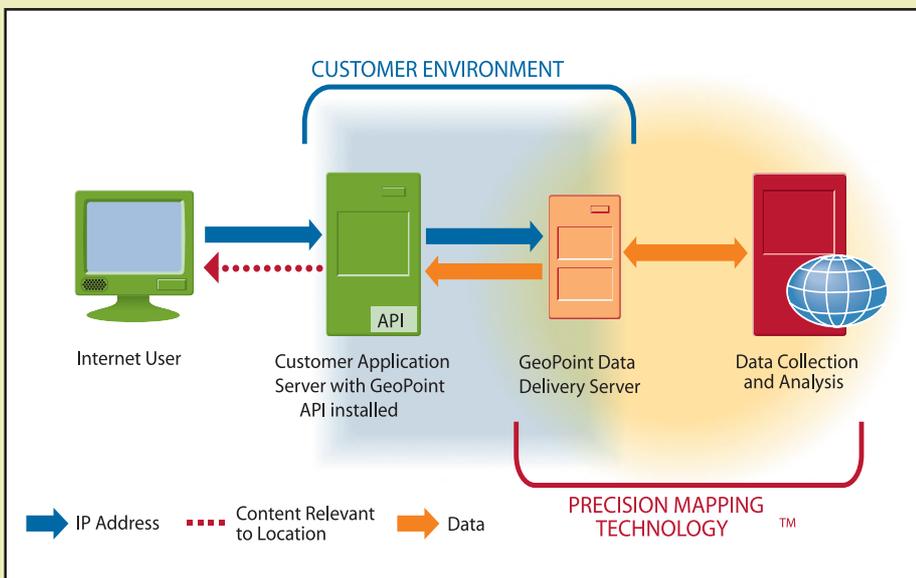
An important characteristic of these IP addresses is that they have been distributed randomly. Companies that offer IP targeting constantly monitor IP addresses on the world wide web and check which locations belong to them. By doing this, information on the location of computers is gathered, not about the user himself. This is one of the biggest advantages of IP targeting:

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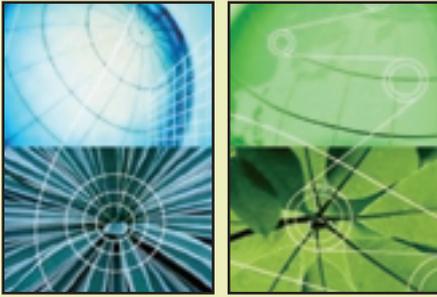
getting: it is completely non-invasive and anonymous. It does not rely on cookies, profiles, registration data, click stream data or any other invasive techniques to identify the geographic location of an Internet user's IP address and is incapable of collecting other personally identifiable information such as a person's name, home address, business address, email address or Web usage habits. Because IP addresses can be shared by hundreds of different devices over the course of a few hours, individual privacy is further ensured. You could say that IP targeting companies are creating the Internet's telephone directory, although a telephone directory gives information on numbers and addresses while geo-targeting on IP addresses protects the privacy of individuals by focusing exclusively on Internet infrastructure information. Such a database only offers the knowledge of the geographical location of an IP address with resolution limited to zip code, nothing more and nothing less.

### Location Aware Contents

So now you know a website visitor is from Paris, France. What do you do with this information?



An example of geo-targeting flowchart (Courtesy:Quova)



Well, to begin with, you could offer him the content on your website in French, as it is likely that this is the visitor's native language. Of course, you should still offer the visitor the possibility to choose another language, but it is safe to assume that French would be the preferred language. What else can you offer a visitor based on this knowledge? Your multilingual website offers French, so it's safe to assume that you are interested in this market. Therefore you should have an idea what items are interesting to this particular target group. Logically, you offer him books, CD's, etc. that are popular in France, not a US best-seller. By doing this you're not only increasing the service towards your visitors, you're increasing your sales and avoid annoyance of offering articles that are probably not relevant to the French market. You could even choose to adapt the layout, navigation or colors of your website to the cultural characteristics of specific countries.

## E-commerce

Have you ever tried to buy an electronic device at Amazon.com? The ones who have, might find that in some cases it is still easier to just go to the store. First, you try to find the item, say, a digital video recorder and go through all the screens needed to complete your purchase. Once you found it, you fill in your personal data and credit card number. The instant you push the "buy" button, a note will appear saying the article you've ordered cannot be shipped outside the US. For a shopkeeper everything is better than a situation like this. Here's a customer with his shopping cart standing at the counter and willing to spend his money. The only thing the e-shop can say is "sorry...". One of the problems e-tailors have to deal with is "shopping cart abandonment". A customer fills his/her basket and in the end decides not to buy anything. Of course, it will always remain easier to abandon a virtual shopping cart instead of leaving a supermarket without buying anything, but the percentage at this moment lies between 25-77% (Source:Netmarketing) . IP targeting might

just provide a solution to these problems. Because the country of a website visitor is recognized instantly, it would be possible to immediately inform the customer that it might not be possible to deliver the item to that particular country due to different screen formats, voltages, etc. Based on the knowledge of the visitor's country, even an alternative might be presented.

## Corporate Websites

Usually the most customer unfriendly sites are corporate websites. The moment you have found the right site doesn't mean you received the information you're looking for. Corporate websites usually offer the same content to a diverse audience. The language is usually English, which is not exactly the best way to address visitors from Spanish, French or Chinese speaking countries. Even US citizens are not serviced properly by some corporate websites. Americans understandably tend to think that .com sites are for the US market, but

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corporate websites usually aren't. After visitors of corporate sites have made the effort to choose their language and/or country, they try to find the information they are looking for. The effort is entirely made by the website visitor, but on the Internet usually visitors do not want to make too much effort. If the effort required is too high, visitors will leave...and see what competitors have to offer. The Internet cliché 'the com-



petition is only one click away' is contradictory to the situation mentioned above: exactly because it is so easy for website visitors to visit the competitor, it should be possible for them to find the information they need with a minimum of effort. IP targeting enables corporations to increase the service towards website visitors by decreasing the effort they have to make. Additionally, it makes it possible for companies to enforce the 'think global, act local' strategy to their on-line activities.

## Fraud Detection

One of the biggest concerns of e-tailors is the number of fraud payment transactions with credit cards that take place over the Internet. IP targeting can be of added value in this field, because suspicious international payment transactions can be monitored easier. The criteria of deciding when a transaction can be labeled 'suspect' lies with banks and credit card companies. With IP targeting it is possible to establish the location of a transaction with great accuracy. Suspicious transactions can be detected instantly and monitored. Thus a transaction made in one country, using a credit card from different country with a billing address in a third country, can be labeled suspicious with a high degree of probability.

## Digital Rights Management and Territory Management

The Internet poses a serious problem for broadcasting companies. Issues regarding DRM and Territory Management received a lot of attention recently. Suppose an Internet portal buys the rights to broadcast a sports event over the Internet in one country. That portal has to be able to exclude visitors from other countries from watching that sports event. IP targeting



A possible example of geo-targeting on IP addresses in business - according to the user geolocation, the internet server suggests the user to browse the local website of the company in user's national language.

enables this with the highest accuracy available at this moment. Similar examples can be thought of for the music industry.

### On-line Campaigns

IP targeting enables webvertisers to offer their customers a better product because advertisers are able to reach specific geographical target groups. Basically, visitors can be targeted on a country, region or city level. Also, different messages can be shown in one campaign. An airline company that advertises tickets for flights from New York to London, is able to target people from that city or state. Showing this banner to residents from San Francisco would obviously be a waste of advertising money.

### Detecting Students and Other Segments

The kind of IP targeting discussed so far mainly concerned with the location of IP addresses, but there are other ways to use

IP addresses. For example, the IP addresses of all universities and colleges worldwide were also mapped, thus making it possible for advertisers to detect and target students throughout the world. This is mainly interesting to companies that have students as a target group e.g. banks, insurance companies and companies that are interested in students for recruiting purposes.

### Never 100%

As mentioned before, IP targeting also isn't flawless. The present accuracy is about 97.5% on country recognition and this will never become 100%. The main reasons for this lie in the existence of dynamic IP addresses and organizations that enter the Internet through one proxy server. These cases are very difficult and sometimes impossible to map. It is however safe to say that at this moment IP targeting is by far the most accurate way to determine the location of Internet users in real-time. Although not flawless, the unsurpassed accuracy makes IP targeting the best

option to increase service towards website visitors and to reach geographical target groups on the Internet. Geo-targeting will play a key role in the future of online marketing. Many businesses - both online and offline - would greatly benefit by developing local marketing campaigns that recognize geography's role in consumer purchase behavior.

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*A possible example of geo-targeted advertising in travel business. The advertisement is shown only to Internet users with a relevant geolocation regarding the subject of the advertisement.*

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