INTERNET METRICS

Location Server Project

Interactive Gambling Bill 2001 Submission

Authors: Simon Dale, Ken Doig
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FOR MORE INFORMATION

Ken Doig
Siemens I&C Australia,
Trusted Networks,
Manager - Internet Metrics
Telephone: +61 3 9721 2368
Fax: +61 3 9721 2633
Mobile: +61 4 1122 5178
Email: ken.doig@siemens.com.au

VERSION HISTORY

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1	26-Apr-01	Simon Dale, Ken Doig	Draft
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TABLE OF CONTENTS

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1 INTRODUCTION

This document is a submission to the Environment Communications, Information Technology and the Arts Legislation Committee for the *Interactive Gambling Bill 2001*.

Siemens does not wish to offer any opinion as to the merits or otherwise of the policy issues relating to the bill. However, Siemens would like to make the Committee aware of an enabling Internet technology, (known as **Geo Targeting**) that was not considered in the NOIE submission *"Report of the investigation into the feasibility and consequences of banning interactive gambling"* , dated 27 March 2001.

Geo Targeting technology enables an Internet site to restrict access to a web site based on the geographic location of the web user.

This report describes Geo Targeting technology, its current sectors of use and its possible use in enforcing policy at interactive gambling sites.

2 GEO TARGETING FILTERING TECHNOLOGY

2.1 Technology Description

Geo Targeting technology enables Internet sites to control their services based on the geographic location of web users in real-time. In other words, web sites can now be made aware of the location of their visitors. In the past a visitor coming from the UK looked the same to the web site as a visitor coming from the next suburb.

This technology is implemented by interfacing the web site to a Location Server that maps the Internet Address of the user to a country, state and city. Siemens resells and co-develops this technology with our US alliance partner Digital Envoy. Within the Asia Pacific region, Siemens is the exclusive reseller of the technology marketed as NetAcuity^{TM}.

With NetAcuity the geographic filtering is performed by the Internet site and not the Internet Service Provider.

A typical application of the NetAcuity would be where a web server wishes to provide customised content to a user based on the users location. A portal site might wish to give local weather information to visitor without the user needing to customise their portal with cookies or a login process. The concept is shown in Figure 1.
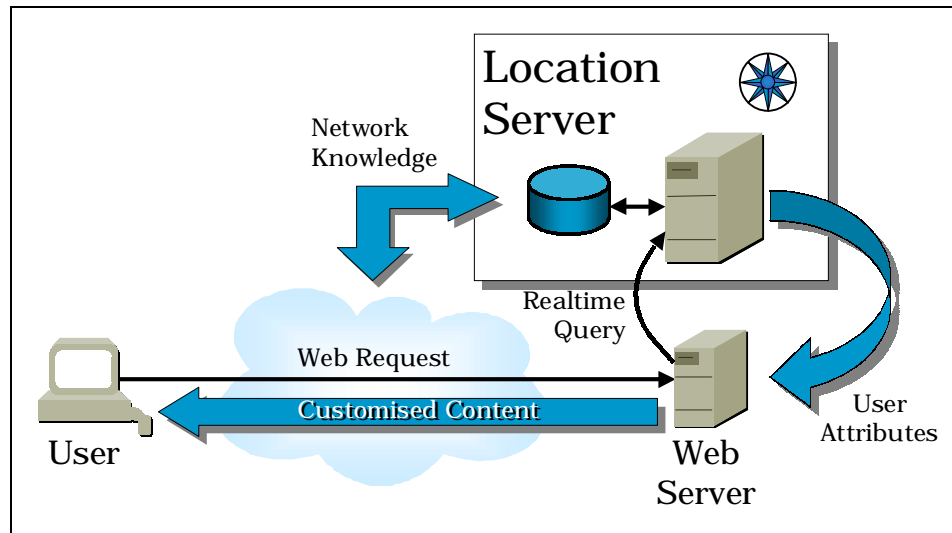
Figure 1 Location Server Overview

2.2   Accuracy

The accuracy of NetAcuity for identifying a users country has been benchmarked by our customers at 99%. (See http://www.digitalenvoy.net/press12-18.htm)

For each location provided, the country, state (or region) and metro area (or suburb) are provided including a confidence rating for each. The confidence rating varies from 5 (highly accurate) down to 0 (location unknown). There are independent confidence ratings for country, state and city.

2.3   Costs

The cost of implementing NetAcuity is modest and involves the purchase of a server (approximately $10,000), a once off set up cost ($15,000) and a data licensing fee of between $50,000 and $250,000 depending on the volume of traffic to a site and the level of location accuracy required. A site wishing to implement country based geo targeting would cost less than $100,000 per annum.

These indicative costs would not represent a significant financial burden on interactive gaming sites.

2.4   Current Examples of Uses in Internet Sector

There are a number of diverse markets and applications for geo targeting which reduces the commercial reliance on a particular industry sector. This makes the business particularly attractive as it is underpinned by an enabling technology for a number of applications. It is envisaged that more applications will emerge as the industry becomes aware of the technology and the market matures. The key market segments identified are briefly described below.

2.4.1   Online Ad Targeting

The targeting of online advertising based on location has been done for some time in an ad hoc fashion by the banner ad companies. Generally the data used is limited to the US and not compiled in a methodical or comprehensive way. As a result, the geo targeting of online material has been a fairly lame service. The quality of the data outside the US has meant that few publishers use this feature of the ad servers.

Another factor that limited the take up of geo targeting up till now is the sophistication of the advertisers and their agencies. They are both still adjusting to the potential of on-line advertising which has yet to find it's right level relative to other advertising mediums.

The surplus of advertising inventory has also limited the need for targeting as an advertiser is simply given more page views to compensate for the fact that the ads aren't being accurately targeted.

In spite of the above and the soft market for online advertising, there is a keen desire to implement the comprehensive geo-targeting that NetAcuity can provide. The ad server companies understand the concept and have the infrastructure in place to rapidly implement the technology.

2.4.2   Web Content Localisation

Any web site whose visitors are distributed over a large geographic area will cover a range of cities, states, countries, legal jurisdictions, and language and currency groups. The differing visitor requirements for content based on location can be satisfied by the NetACuity which can categorise the geography of a user prior to any content being returned to the visitor. Hence a portal can return customised weather, language, currency, legal disclaimers or products without the user having to tell the site their location.

There is particular application for this service in highly regionalised markets such as the US (varying state laws, taxes, climate etc) and Europe (varying languages, countries, currencies etc)

2.4.3   Online Fraud Detection

For consumers purchasing goods online by credit, the merchant bears the risk of fraudulent transactions. As a result, the merchant or the card acquirer often offer a per transaction service to asses the risk of the online transaction. The risk is returned to the merchant as a number between 0 and 100 with 0 representing certain fraud and 100 meaning no risk at all. It is then upto the merchant to accept or reject the transaction based on the tradeoff between lost business through rejected transactions and the risk of accepting a fraudulent transaction.

There are a number of companies that specialise in online fraud detection and make use of internet location databases to provide additional information to correlate with other transaction data. The underlying database of NetAcuity contains a great deal of information relevant to fraud detection in addition to the location of an IP address: domain name location, business owner of the allocation, network, domain and domain name details of the users email account.

We are currently in discussion with a number of the top fraud groups who specialise in this area. The Internet Metrics group provides an opportunity for these groups to outsource the collection and maintenance of internet infrastructure. We are also exploring the characterisation of internet fraud 'signatures' that can help improve the identification of potential fraud emanating from the internet.

In contrast to others, this segment is less volatile and represent substantial customers with long term contracts. The pricing for this market is based on a pure transaction based fee model. This model allows the revenues for the internet metrics group to grow with the exponential growth of online business.

2.4.4   Internet Demographics

Companies such as Red Sheriff and AC Nielson specialise in collating web traffic demographic information. Internet location information provides a more detailed location profile of a web sites demographics. NetAcuity provides the link between the online demographic world and real world demographics. By post processing realtime ISP dial-in logs it would be possible to locate dial-in users down to the Telstra exchange level which roughly equates to postcodes.

Internet Metrics is in discussion with a number of web demographics firms with a view to be able to provide enhanced location services to existing clients.

2.4.5   Digital Rights Management

Digital Envoy have found the geographic restriction of streaming media sites to be a key driver in the US market. A site may have their internet broadcasting rights restricted to a particular country eg Canada and not US or restricted to a particular state or DMA (Designated Market Area).

In Australia, the very slow takeup of broadband services together with being a demographically homogenous island nation, has meant that this is not yet a relevant market.

Again, as with the web content localisation market, it is most relevant to the more regionalised broadband markets such as the US and Europe

2.4.6   Cross Border Regulatory Control

Most Governments are wary of the internet from a control and regulatory viewpoint. Regulations, taxes and policies are based on physical borders which are not present on the Internet.

Most government and regulatory bodies need to operate on the internet and more particularly, control what their citizens can and can't do. NetAcuity gives the information these groups need to enforce policy and regulation. A number of recent cases (eg Yahoo in France) have highlighted the fact that governments want this type of filtering to be put in place.

We are in discussion with a number of gaming providers and authorities who have an immediate requirement for geo-targeting technology.

The reselling agreement with InMax T&C in Korea is a direct result of governments wanting to regulate cross border internet traffic. In this case between North and South Korea.

It is envisaged that Governments will be a key customer for geo targeting technology and will in some case mandate this type of filtering for site within their country.

3   RELEVANCE TO AUSTRALIAN INTERACTIVE GAMBLING

Geo targeting can be used by Interactive Gambling Service Providers (IGSP) to comply with government policy that refers to the geographic location of the user. Specifically it can be used to block access based on the location of the user.

For example an IGSP that was enabled with NetAcuity would know the location of origin of all web users that come to their site. If a user comes from Australia, access to Interactive Gambling on the site could be blocked.

Geo targeting technology has the benefits of being able to set up reciprocal interactive gambling arrangements between countries whereby policy may restrict an Australian IGSP from providing gambling services to a list of countries.

Further, use of Geo Targeting allows government policy to be adhered to at the IGSP sites themselves rather than requiring any involvement by Internet Service Providers (ISPs) to implement policy.

- End Of Submission -

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Ken Doig
ken.doig@siemens.com.au
p 61.3.9721.2368
f 61.3.9721.2433
m 61.4.1122.5178
885 Mountain Highway
Bayswater, Victoria 3153
Australia

digital™
envoy
We make web sites smart™

Digital Envoy™ is the global leader in geo-targeting technology. We build geographic intelligence into Internet applications. Our patent-pending **NetAcuity**™ technology makes e-commerce and information sites more successful by providing highly-focused, customized experiences for the user.

We are a leading source for next generation information, dynamic tailoring and customization on the Internet that provides you with instant, precise, geo-targeted customer information, while respecting the privacy of the Internet user.

NetAcuity™
at Work

NetAcuity™ technology enables you to instantly determine the precise global geographic location (country, region and metro-area), as well as the connection speed of your users – all without the use of cookies or inaccurate third party databases. This patent pending technology does not collect any personal information (such as street address, e-mail address, or phone number) so your users can feel secure in the knowledge that their privacy is not being violated when they log on to your site.

Digital Envoy™ – The Global Leader in Geo-Targeting Technology

Global Coverage – Provides Country, Region, City, Metro Area Data and Connection speed for _All_ Countries Worldwide.

Exceptional Accuracy – Get Correct Information For Your Specific Needs. Country targeting accuracy in excess of 99% worldwide.

Speed – We Offer the Fastest Geo-Targeting Technology Available with Latency well under 1 ms.

Reliability – No Down Time for Your Web Applications.

Power – Can be Easily Deployed on Any New or Existing Application. And, it's Scalable!

Privacy – Users' Privacy is Protected. No Cookies are used; No Personal Information Collected.

Technical Support – Regular and Custom Installation Backed by 24/7 Technical Support.

Digital Envoy™
Can Make
your Website Smart

Virtually any website can benefit from using NetAcuity.™ Knowing where your visitors are coming from geographically can help you target content, products and services, store locations, advertising, language, and weather while also providing a more enhanced user experience for your users.

Here are some examples of how our customers are using our technology:

Digital Rights Management

A software company which sells downloadable encryption software over the Internet needs to ensure that users from countries embargoed under US law do not have access to this software. NetAcuity™ allows them to know the country in which a user is located with 99+% accuracy, enabling this company to obey legal restrictions.

A downloadable music company needs to make sure it is allowing users to download music where it is permitted to do business under contract. NetAcuity™ allows this customer to comply with its contractual obligations.

E-Commerce

An apparel company sells clothing online but wants to serve climate-appropriate products depending upon the region. NetAcuity™ allows them to promote heavy wool sweaters to people in New York during the winter while promoting lighter wear in Florida.

A large retail department store would like to promote overstocked inventory in its brick-and-mortar stores using its website. NetAcuity™ will allow them to offer special sale items to its customers in geographically targeted areas. The department store will also be able to direct its customers instantly to the nearest store location.

Streaming Media

A French television station is an affiliate of a large American entertainment company and can only broadcast/webcast within France. NetAcuity™ allows the station to restrict access to those outside of France, thus adhering to their broadcast rights agreement with the entertainment company.

Advertising

A large ad-serving network has increased demand for geographically targeted banner advertisements. NetAcuity™ allows them to target down to the metro area even outside of the United States. An airline, for example, might want to advertise a special rate for a flight out of Chicago and only needs the banner ad served to people in the Chicago area.

Language, Currency and Content

A specialized equipment manufacturer markets and sells its equipment to many different countries on its website. The price of its equipment varies from country to country depending on many factors such as currency conversion and payment methods. By deploying NetAcuity™ the manufacturer can immediately direct its visitors to an appropriate language site while also delivering the pricing specific to that country.

Internet

Web Server

API

Data Base

Digital Envoy™
NetAcuity™

Server

Web user
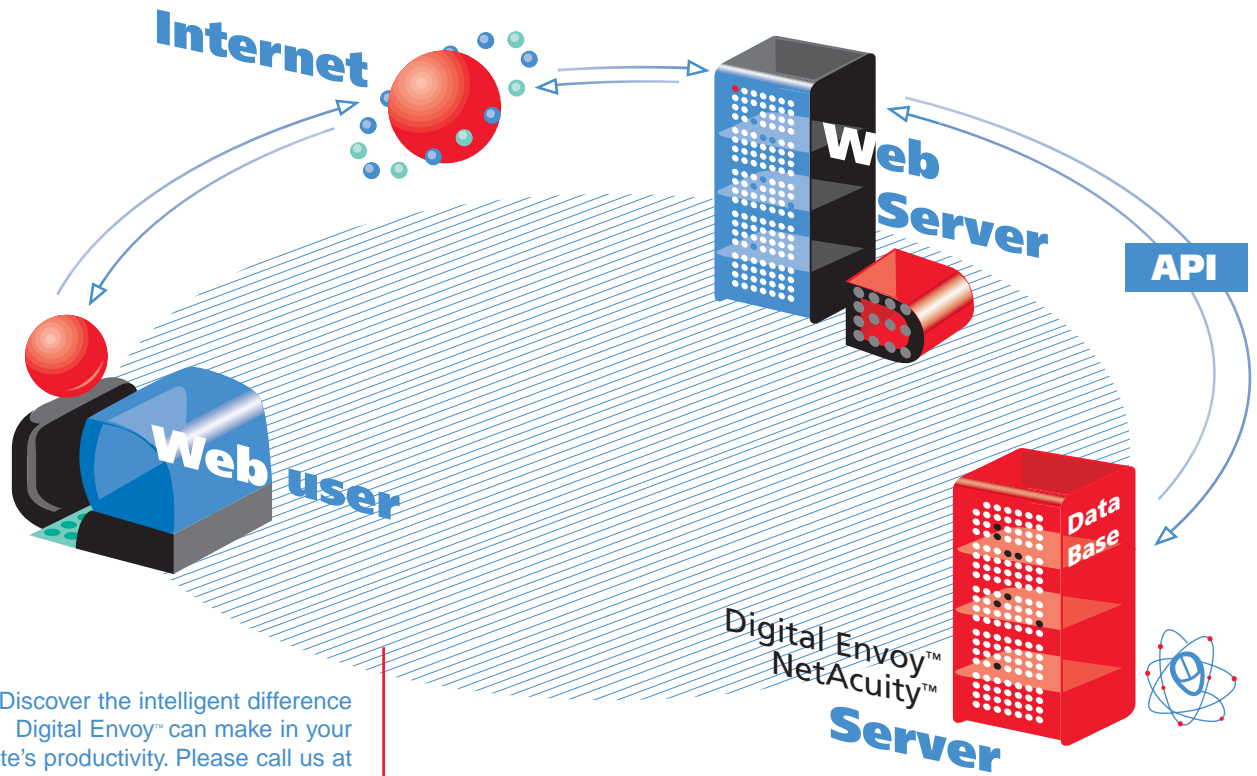
Discover the intelligent difference
Digital Envoy™ can make in your
website's productivity. Please call us at
678.474.9766, e-mail us at
info@digitalenvoy.net or visit our
website at www.digitalenvoy.net.

Make Your Website Smart!

NetAcuity™ Technology Information

Operating Systems	Compatible With All Operating Systems
API Language	C, Perl, Java
Response Time	< 1 Millisecond
Geo-targeting Availability	Country, Region and Metro-Area Targeting – Global Coverage
Uptime	99.99%
Updates	Automatic, Weekly with no Performance Impact

NetAcuity™ Technology

Digital Envoy's patent pending NetAcuity™ technology allows accurate targeting down to a metro level for users worldwide. NetAcuity™ has also been built with reliability and ease of use in mind. Weekly updates are done automatically and with absolutely no downtime for your NetAcuity™ enabled application.

How NetAcuity™ Works

NetAcuity™ centers around more than 20 patent pending methods and analyses that accurately and confidently determine the geographic location of users down to a metro level worldwide. In addition, NetAcuity™ is designed in such a way as to have minimal impact on your current Internet applications. This is done through easy implementation and transaction times of less than a millisecond. No Internet application should settle for less accuracy, coverage or reliability!