



SURVEY ARTICLE

Survey of GeoGet for Moderately Connected Internet Regions

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Abstract: IP Geo-location mapping is based on delay measurement approach. In this approach the correlation depends on the delay and distance between clients and landmarks. In previous geo-location mapping schemes, first it needs to identify the distance between geo-locations and clients, depending on that delay is calculated. In present work, in the moderately connected internet regions. The data contains number of delay, distance pairs depending on the hosts. There are two assumptions, one is if the distance is more the delay is also more, second is if distance is less it takes less delay. From these observations we can create Geo Get, which is novel IP Geo-location mapping technique for moderate internet regions. The traditional linear measurement schemes are not suitable. In this work we are proposing Geo Get, which is depends on closest shortest rule. It means if the distance is less delay is less and vice versa.

Keywords: Geo Get, IP Geo-location, delay, distance, closest shortest rule, GeoPing, GeoLim

1. Introduction

Knowing the geographical location of an Internet host is of importance to many of today's Internet services. The Global Positioning System plays a vital role in mapping any part or any place in the world. Accurately locating the geographical position of Internet hosts has many useful applications. Geolocation identification is the identification of internet connected regions. Geolocation means identifying the landmarks with connected internet regions. For identifying geolocations radio frequency methods will be used like Time Difference of Arrival

(TDOA). TDOA systems maintain geographic information. Geolocation identification is done by using RFID, IP addresses. Geo Track infers location based on the DNS names of the target host or other nearby network nodes. Constraint-Based Geolocation (CBG) is one more technique to calculate the geographic distances from the landmarks to the target host have to be estimated based on delay measurements between these hosts. Geolocation works by using WHOIS database for IP address searching. IP address may include location information like country, region, city etc. We can also know the information like speed of internet, connectivity etc. Some existing approaches are latency measurement-based geolocation technique, chart analysis which provides a pictorial representation

2. Back Ground

There are three techniques used in IP Geo-location mapping. They are GeoTrack, GeoPing and GeoCluster. By using GeoTrack we can trace the path from host to target depending on this we can determine the routers addresses. From available routers, the router that is nearer to target is selected. Next, GeoPing assumes that the hosts are spread in nearer geographical locations so the delay may be low. Based on ping times we can know the distance between geo-locations and targeted client. GeoPing estimates the target location to be the same as that of the node with known location having the most similar ping values. Thus, the accuracy of GeoPing is limited by the distance to the nearest probe. In GeoCluster there are many IP addresses grouped as a cluster. This information is collaborated with the user registration records in web based services such as e-mail services. This technique has drawbacks like scalability, reliability etc. In this technique the data is not available for public access.

3. Related Work

In present work we proposed Geo Get, this scheme differs with other schemes in following aspects. The Geo Get is based on closest shortest rule. This rule is based on linear correlation between delay and measurement. Geo Get which uses many locations called as land marks, maintaining these landmarks is effective. There are many geo-location mapping schemes that does not depends on delay measurement. A simple policy which allows the users to enter the geo-locations manually. NetGeo and IP2LL collects the results form WHOIS database by querying it. The problem with WHOIS database is that it may contain outdated data or inaccurate

data. WHOIS database may not map correctly current IP address and owner IP address a large ISP contains many IP addresses that may be used by many other users but WHOIS database returns single value for whole block. The users can use the IP addresses from ISP block that addresses can be reusable.

4. Conclusion

In this work we observed the relationship between delay and distance in large moderately connected internet regions. This work mostly depends on closest shortest rule. For this purpose we implemented a solution called Geo Get, which is depends on closest shortest rule. Geo Get mainly uses land marks called as geo-locations. Next we calculated the distance between client and geo-locations depending on that delay is calculated. Next we used a two-step probing method to identify the geo-location of a targeted client, from small area to large area. Then we compared the Geo Get results with traditional schemes like Geo Ping, Geo Lim to identify the performance. It gave the effective performance compared to traditional schemes.

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