

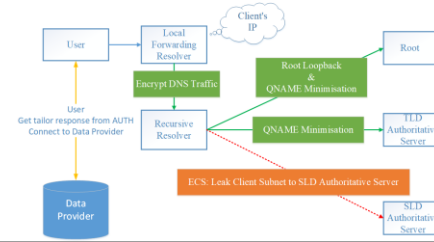
## Mitigating Client Subnet Leakage in DNS Queries

Lanlan Pan, Xuebiao Yuchi, Xin Zhang, Anlei Hu, and Jian Wang

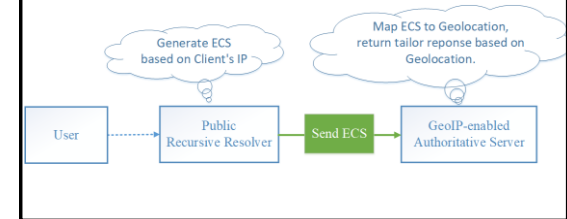
[https://github.com/abbypan/dns\\_test\\_eil](https://github.com/abbypan/dns_test_eil)  
abbypan@gmail.com

IEEE PST 2018

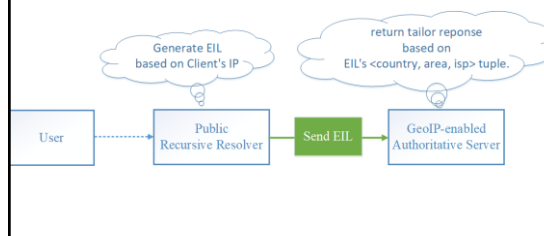
## DNS Privacy, ECS(client subnet)



## ECS: Client Subnet

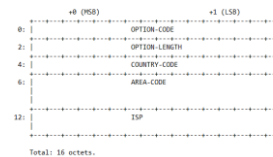


## EIL: <COUNTRY-CODE, AREA-CODE, ISP>



EIL Structure:  
<CN, 35, TEL> indicates <China, Fujian, China Telecom>

- COUNTRY-CODE: 2 octets, defined in ISO3166
- AREA-CODE: 6 octets, ISO 3166-2's country subdivision code
- ISP: 4 octets, using shortcut names, unique in COUNTRY



## Support ECS and EIL at the same time

GeolP-enabled AUTH can directly support EIL.

Recursive Resolver can choose to send EIL query to replace ECS query for user privacy concern.

