

# Chicago GeolP: A cursory look



John Kristoff  
[jtk@cymru.com](mailto:jtk@cymru.com)

# Je vais programmer quelques trucs

- Using Maxmind's free GeoIP data
- Focus on Chicago and surrounding area
- Research (and code) some stuff relevant to this event
- Time to prepare: a long weekend
- Time to work: a few hours
- Output quality: what do you want for nothing?

# Input Data Summary

- GeoLiteCity August 2015 data set
- 1,662,482 address blocks (ranges)
  - 3,614,369,848 addresses covered ~84%
  - NOTE: GeoLite address blocks != CIDR prefixes
- 717,551 Geo-locations
  - Warning: ISO-8859 encoded

# Chicago Address Data Overview

- 6669 blocks (ranges)
- 8,420,454 or almost 0.2% ( $\sim \frac{1}{2}$  of a /8)
  - Illinois: 23,588,201 (0.5%)
- 232 /32's
- Largest block (range): 393,216 addresses (six /16's)
  - Any guess to who these are assigned?

# Chicago Block Summary

- 445 different address block (range) sizes
- 2481 /24 (or equivalent)
- 1223 /25 (or equivalent)
- 599 /23 (or equivalent)
- 320 /22 (or equivalent)
- 232 /32's

# GeolP Chicago

- Area codes:  
309,312,408,630,646,666,708,773,847,948
- Many postal codes, mostly 606-something
- Most latitudes ~41 degrees, longitude ~ 87 degrees
- Oddities may be due to correction requests or bugs?

# Results usually good, not perfect

## Example:

- 50.57.26.160 – 50.57.26.175
- Postal code is 01234 (bogus)
- Area code is 646 (Brooklyn)
- City, state is listed as Chicago, IL
- Rackspace → CyberlinkASP assigned addresses
- CyberlinkASP apparently has a facilities in Chicago
- Traceroute seems to confirm this block is used locally

# Rough routing estimate

- Evaluted the .0 address of the starting address
- 1880 - 33491 Comcast
- 1083 - 7018 AT&T
- 204 - 16586 Clear Wireless
- 187 - 6079 RCN
- 179 - NA
- 170 - 174 Cogent
- 169 - 23352 Server Central



# Questions Unanswered

- Comparison to other cities/states
- Reachable and serviceable addresses
- IP address reputation analysis
- Route, trace path and RTT analysis
- IPv6
- DNS / WHOIS associations