Address varieties in India.
Address varieties in India..

- Addresses come in different shapes and sizes:
  - Building’s Names
  - Street Names
  - Points/Person of Interests (POIs)
  - Workflows

- A more Detailed Workflow:
  - A-161 Raheja Atlantis Sector 31 Gurgaon (on weekdays) B-15 Gulmohar Park New-Delhi 110049 (on weekend)

- A Threat:
  - House No xx Village xx PO xx PS xx Distt Jalandhar Rural Punjab I Want All Products Which I Had Already Been Ordered Should Be Original Otherwise I Take Strict Action Against U Bcz I M Cid Officer From Punjab When Last Time I Ordered Curren Watch The Mirror And Second Hand Arm Was Broken ,I Adampur, Punjab 144201
Even when people write “good” addresses...

- **Pin Code Problems**
  - Median area of a pin-code is ~90 sq km
  - Around 30% of written addresses have incorrect pincodes

- **Multiple localities in a town**
  3 “Rathtala”s in Kolkata. Now, combine that with wrong pincode

- **Similar sounding areas**
  “Amrit Nagar” vs. “Amrut Nagar” in Mumbai

- **Misspelling**
  “Andheri Wast” – Andheri East or Andheri West?

- **Poor language skills**
  “Beside” can mean anything from “next to” to “in the general neighbourhood of”
In summary... on a good day

Source: Factor Daily, August 12, 2016 Article on Delhivery
.. And on a typical day!!

Source: David Parkins, The Economist, March 5 2016 Issue
Solution: What is needed

Ability to derive location information from user Addresses

- Address Disambiguation
  - Cleanses it (error in spelling etc.)
  - Returns details such as City, Pin Code, Locality, Sub-Locality, POIs, Door number, etc.

- Geocoder service
  - Resolve each feature to a point/polygon on the map + properties of that point/polygon

- Online Maps?
AddFix: Technical Overview

Address Data
- Learn the names of localities, sub-localities etc.
- Learn hierarchical relations between different entities
- Learn aliases and incorrect spellings

Location Data
- Generate polygons of “learnt” localities
- Consume and extrapolate rooftop level geocode information
Thank You!