Employment Data
Using InfoUSA Data Points

presented to

Caltrans

presented by

Cambridge Systematics, Inc.

Sean McAtee

December 28, 2016

InfoUSA Data - Legal

➤ The data is licensed to CS and Caltrans.

  » We don't own the data

  » We must keep it confidential

  » We can't contact firms based on the list

➤ **DO NOT DISTRIBUTE** raw data outside Caltrans and CS

➤ Delete the raw data one year from initial delivery

  » Data was received on August 30, 2016

Key Fields

➤ Location

» Latitude, Longitude, Match Code

» Address information

➤ Business Info

» Company

» Employee Size (5) – Location

» NAICS Code

CAMBRIDGE SYSTEMATICS

Import to TransCAD

➤ Save XLS file as a CSV

➤ Load the CSV into TransCAD
  » Automatic Lat/Long detection
  » Give the layer a good name (e.g., InfoUSA)
  » DBD file will link to original CSV file
  » Best to export the DBD file to get a more standard file

➤ **Try It**

CAMBRIDGE SYSTEMATICS

Check the match codes

➤ Check the Matches:
  - » 0   SITE LEVEL **– OK!**
  - » 2   ZIP+2 CENTROID **– OK??**
  - » 4   ZIP+4 CENTROID **– OK??**
  - » P   PARCEL **– OK?**
  - » X   ZIP CENTROID – **Probably not OK!**

➤ How many businesses and employees are in each category?
  - » Use **Dataview → Group By**

CAMBRIDGE SYSTEMATICS

Check the match codes

MATCH	Businesses	Employees	Businesses (%)	Employees (%)
0	2,232	20,109	28%	36%
2	24	272	0%	0%
4	43	178	1%	0%
P	3,851	25,347	49%	45%
X	1,705	10,476	22%	19%

Check the Match Codes

➤ About 20% of records don't match!

➤ Possible solutions
  » Compare zip codes to TAZs
    ▪ Are some cities zip codes small enough??
  » Try the TransCAD geocoder
  » Try ArcGIS Online
  » Try Google or Bing
    (they don't like you to batch geocode though!)

CAMBRIDGE SYSTEMATICS

Assign Employment Types

TABLE 2.3: EMPLOYMENT CATEGORIES AND NAICS CODE

Employment Type	NAICS Group Codes	Industry Examples
Retail	441 - 453	Retail Trade, Food Service
Service	511 – 519, 531 – 562, 611 – 624, 711 - 721	Real Estate, Services
Government	491, 921 – 922, 927, 928	Postal Services, Public Order, Justice
Finance & Insurance	521 - 525	Insurance, Banking, Securities
Wholesale	423 - 425	Wholesale Trade
Manufacturing	311, 312, 315 – 322, 324 - 339	Product Manufacturing, Apparel Manufacturing
Agricultural	111 - 115	Crop Agriculture, Forestry, Fishing
Medical	621, 622, 623	Hospitals, Ambulatory Health Care Services, Nursing, and Residential Care Facilities
Other	211 – 238, 313, 314, 323, 481 – 488, 492, 493	Transportation, Utilities, Construction

CAMBRIDGE SYSTEMATICS

Assign Employment Types

➤ Review categories using online tools

➤ Create a lookup table to assign employment types

» Generate 3-digit codes
» Get list of all unique codes
» Create lookup table
» Join and Fill

CAMBRIDGE SYSTEMATICS

Aggregate to TAZ Layer

➤ Create necessary fields

➤ Use the **Fill → Aggregate** Command

   » Fill each type with a different selection set?

   » Separate total employment into columns in the point data?

CAMBRIDGE SYSTEMATICS

Next Steps

➤ Check Total county-wide employment

» How does the total compare to the current model?

» How does this compare to LEHD and other sources?

➤ Check TAZ and District employment

» Compare to current model

» Compare to LEHD and other sources

➤ Re-visit geocoding options

CAMBRIDGE SYSTEMATICS