Parcels, Addresses and Geocoding

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CoreLogic

- A leader doing business with leaders
  - Demonstrated stability during current downturn
  - $1.6 billion in revenue (2012)
  - More than 5,000 employees
  - More than 40,000 clients, including the top 100 mortgage lenders, 90 percent of capital market firms, 5 of the top 10 insurers
  - Financial strength and strategic client focus
  - CLGX Stock Symbol

- Split from First American Corporation in June 2010, establishing a new, independent public corporation that provides:
  - Unparalleled Information
  - Advanced Analytics
  - Customized Services

- We deliver insight into your business that:
  - Reduces risk
  - Improves performance
## Unparalleled Data Assets

### Public Record Data – Aggregated Standardized. Digitized.

- **Property Database**
  - Property & Lien Information Covering over 99%+ US properties

- **Criminal Database**
  - Defendant, Alias, Offense and Disposition details on ~335M records

- **Property Tax, Flood and Geo-Spatial Database**
  - Tax payment history on 145+mm parcels. Geo-coded parcel maps 120mm+. National Flood coverage

### Data Acquired From Third Parties

- **Credit History**
  - 25 million credit reports provided per year to lenders, auto dealers and other clients
  - Provider of “Tri-merge” credit report based on data obtained from credit bureaus

### Proprietary Data

- **Delinquency and Prepay Data**
  - Servicing Data covering 85% of US Home Loans
  - 50MM Active Loans; $6.8T in Balances

- **Asset & Mortgage Backed Securities Data**
  - Covering 98% of all Non –Agency MBS Deals
  - 5.7MM Active Loan Records; $1.47Tln of Balances

- **Multiple Listing Service Data**
  - Realtor submitted home data on 3/4 of all residential transactions. 51M historical records 3.5 M Active
  - Property detail, asking price and sales price data. Plus property photos

- **Under-Banked Borrower’s Data**
  - Data from PayDay Lenders, Rent to Own Companies and Various Other SubPrime Lenders
  - Payment Histories, Open and Paid loans. 250MM records on 40MM consumers

- **Multi-Family/Tenancy Checks**
  - Data from landlords and owners of multi-family properties
  - Nation’s largest provider of tenant background checks
Digital Parcel Data Provides the Solution Base For Innovative Telecom Applications

• What is parcel data?

• Challenges to building a parcel land base.

• Parcel based versus Postal based geocoding issues.

• Telecom case study.
What is Parcel Data?

- Parcel boundary data represents the legal extents of each taxable U.S. property address.
- There are an estimated 144.3 million privately owned parcels in the U.S.
- CoreLogic has converted and normalized about 134 million parcels from state, county, city, and town sources.
- As these digital parcel boundaries become available they are rapidly being incorporated into applications to enhance:
  - Geocoding accuracy
  - Risk assessment
  - Risk concentration
  - Many other uses where “granular” accuracy is important.
Parcels As The Relational Link

- The Parcel Identification Number (PIN) or Address links the physical parcel to real estate data; and
- Latitude/Longitude links the hazard risk and reg. compliance data to the parcel.
10 Challenges To Building A Land Base Using Parcel Data

1. CoreLogic collects from over 4,400 county/municipal sources to maintain 2,391 Counties (counties, cities, towns, villages etc).

2. Collection entities is often local government officials of widely variable degrees of sophistication and responsiveness – collection can take hours – or months – or years depending on the source.

3. Many data formats are received and every county has their own specific schema – there is not a standard schema that all counties/communities use.

4. Schema’s must be standardized, and standardized correctly in order to make the data useable.

5. Data is of varying accuracy from a spatial perspective and geographic idiosyncrasies must be dealt with – in a consistent manner.
10 Challenges To Building A Land Base Using Parcel Data

6. Local data projections are utilized and must be normalized to operate in a wider area.

7. CoreLogic has patented technology to do all the above in an efficient and consistent manner.

8. Legal restrictions on the data must be considered – not all data can be used as it desired without negotiation and in some cases legal amendment of existing agreements.

9. Maintenance of the file requires the process start all over again.

10. Finally – CoreLogic doesn’t just create this data as a product – we are utilizing it in our internal operations – this means that we got it right and we are committed to quality – we just don’t get quality complaints - the issues have been dealt with – because they we had to for the sake of our business.
Parcel Alignment

- Boundary Layers are aligned to parcel data
Street Centerline and Aerial Imagery

- During the alignment Process, aerial imagery and street centerlines are also referenced.
Alignment

Source data is misaligned
Alignment

Reference aerial imagery
Alignment to all other boundary layers
Parcel Data for Infrastructure
Property Tax Compliance
Provide Information to Project Engineers to Locate Features or Identify Unsuitable Environments

- Wetlands
- Endangered Species Corridors (CA Gnatcatcher)
- School Yards
PxPoint Geocoding

- A multi-national, state-of-the-art geocoding and spatial analysis library suitable for high-precision, high-volume applications.

- Accesses all available geospatial data from vendors such as NAVTEQ® and TeleAtlas®, including:
  - Street addresses,
  - Parcel-level data and intersections, and
  - Data collected and managed by clients (e.g. new streets).

- Full GIS functionality build into the geocoder for example:
  - Point to Point, Line or Polygon,
  - Point in Polygon
  - Polygon on Polygon
  - Buffering
  - Proximity
The Importance of Geocoding Accuracy

Geocode Difference Example, South Carolina

Town of Bowman

CoreLogic Geocode
7421 Charleston Hwy
Bowman, SC

Client Geocode
7421 Charleston Hwy
Bowman, SC

Orangeburg County
Examples of Why Parcels Are Important For Accurate Geocoding (Street Interpolation vs. Parcel Geocode)
Example of Geocoding Offset When Using a CASS Address Instead of the Actual Address
9 Digit ZIP Centroids vs. Parcel Matches
5 Digit ZIP Centroids vs. Parcel Matches
CoreLogic Overview Case Study

- Determining spatial accuracy.
- What is the enterprise economic and regulatory impact of spatial accuracy.
- What are the functional areas that are impacted by spatial accuracy.
- What is the Return On Investment to the Enterprise.
Network Addressability

- Normalized/Standardized land base:
  - Provides spatial accuracy across the enterprise resulting in economic and regulatory benefits to Marketing, IT, Engineering, Finance, and Treasury.
  - Delivers an enterprise spatial continuity; a process, method, and discipline throughout the enterprise accessible by all.

- Accurate service level determinants:
  - Delivers new revenue sources.
  - Enhanced customer service.
  - Reduces engineering costs.
  - Provides provisioning and inventory benefits.
  - Improved sales use and property tax determinants.
  - Local Franchise Authority Compliance.
Economic Impact Ongoing Expenses

- Labor Costs
  - Acquire data from governments.
  - Normalize and align data; parcels & boundaries throughout area of interest and provide spatial accuracy continuity and standardization of data.
  - Training costs.

- Cost to acquire data from governments year over year
  - Initial cost to acquire data, Ongoing cost to maintain data
  - Timeliness of data updates, Frequency of data updates

- Integration, Implementation, and Conflation costs for enterprise use.

- Ensuring legal usage,

- Speed of access to the data along with currency of updated data.
Case Study # 2

- Spatial accuracy impact on Sales / Use tax
- Building a defendable process against audits.
Case Study Sample Address Locations

- ZIP+4 Geocode does not match CoreLogic Parcel Geocode
- 964 municipal tax jurisdictions do not match
Case Study Sample Address Locations

- ZIP+4 Geocode does not match CoreLogic Parcel Geocode
- 1,460 township tax jurisdictions do not match
Spatial Accuracy Requires

- A USPS data base for address standardization
- A street file with address ranges
- Normalized and Standardized Parcel Shape files and County, Municipal, and Township Boundaries.
- Parcel Centroid.
- Dedicated team internally to maintain spatial continuity throughout the enterprise.
Questions

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