Real World Success with RESO Standards: A Case Study by Homes.com
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Shaun is the Executive Director of Technology for Homes.com focusing on data acquisition and aggregation efforts in addition to building enterprise and MLS client solutions. He has over 10 years of experience working in real estate product delivery. Shaun is an active member of the RESO community and looks forward to the continued growth of the standards in pursuit.

Brian Heasley | Director of Data

Brian is the Director of Data for Homes.com. He leads multiple development teams primarily focused on data engineering and ETL. He has been working with real estate data since 2006, and had been attending RESO conferences since 2014.
Throughout our history, Homes.com has provided advertising and marketing services to help real estate professionals connect with homeowners, buyers, and sellers. We value our industry partnerships, including real estate agents, brokerages and franchises.

In an industry where technology, businesses and market conditions are perpetually shifting, Homes.com is a name that embodies stability, integrity and innovation.
Why Participate?

Undertaking a change to the foundation of your product is labor intensive and risky. To add to this it’s only magnified when dealing with early adoption. So why did Homes.com agree to participate in this case study with RESO?

- Vested interest in supporting RESO’s mission as a charter member
- See value for our customers in consistency across both the transport and format of real estate data
- Reduced maintenance and management
- Change is inevitable
Charter

Our goal for the case study was to validate the effectiveness of implementing RESO standards, both Data Dictionary and Web API, in relation to our current listing data operations. We planned to evaluate this across four specific development themes:

1. Time to build new MLS feeds
2. Time to convert existing MLS feeds to new vendors
3. Time to update established MLS feeds
4. Time to troubleshoot listing issues
What were our development expectations entering into this case study?

1. Integration of the first two to three MLSs will require the largest effort
2. Front loaded development
   - New framework
   - New tools
3. Consistency reducing complexity
   - Authentication and authorization
   - Query strings
   - Classes
   - Field names
Engagement (to date)

- 6 MLS partners
- 3 vendors
- Data Dictionary 1.5 & 1.6 Platinum certified
- Web API 1.0.2 Gold, Bronze, & Core certified
- Data Dictionary consumed over both RETS & Web API
Resources

Training engagements
- RESO Workgroups
  - DD (https://www.reso.org/data-dictionary-workgroup/)
  - Transport (https://www.reso.org/transport-workgroup/)
- Clareity Developer Workshop
- Peer-to-peer
- Data partners

Documentation utilized
- DD 1.6 Wiki (http://ddwiki.reso.org/display/DDW16)
- Web API 1.0.2 (https://www.reso.org/reso-web-api/)
- RESO Collaboration System (http://members.reso.org/)
- Vendor and MLS implementation guides
- Internal Confluence pages
Supporting software features deployed:
● Proprietary, micro-service oriented framework
● Message queue system
● NoSQL database

Supporting hardware features deployed:
● Public and private cloud resources
● 90 cpus in 44 virtual servers
Development Effort (on RETS)

- Framework and first listing source
  - 228 dev hours

- Second listing source
  - 46 dev hours

- Third listing source
  - 24 dev hours
Lessons Learned

- What has worked well?
  - Uniform resources and field names
  - Closed enumeration lists
  - Good wiki/field documentation

- What still needs some attention?
  - Open enumeration lists
  - Image URLs vs image raw data
  - Not a turn-key solution without good transport
  - Open, expansive standard creates more work
Web API

Development Effort

- Framework and first listing source
  - 165 dev hours

- Second listing source
  - 16 dev hours
Lessons Learned

- What has worked well?
  - Uniform class names
  - Simplified, human-readable query syntax
  - Query consistency speeds development for new feeds

- What still needs some attention?
  - Variances in authentication/authorization model
  - $format parameter loosely supported for JSON and/or XML deliveries
  - Inconsistencies between business rules established for RETS and Web API formats
    - Variances in listing count due to opt-in discrepancies
  - OData documentation is expansive
  - Web API documentation could have more real estate focused queries/examples
Moving Forward

Growth

- What have we done to prepare for ongoing changes in the standards?
  - Work group involvement
  - Versioning
  - Certification level handling
Results

In production currently
- 3 MLSs on Data Dictionary
- 2 MLSs on Web API

Still a work in progress
- OpenID Connect
- Data Dictionary versioning
Results
(cont.)

Implementation

○ Data Dictionary (on RETS)
  ● 193 planned dev hours
  ● 299 actual hours

○ Web API (with Data Dictionary)
  ● 162 planned dev hours
  ● 163 actual hours
Benefits realized

- Data Dictionary (on RETS)
  - 25 dev hours reduced to 16
- Web API (with DD)
  - 25 dev hours reduced to 2
  - 2!
- Improved category matching
- Tech debt reduction

Charter

1. Time to build new MLS feeds
   - 92% reduction in dev time!
2. Time to convert existing MLS feeds to new vendors
   - 92% reduction in dev time!
3. Time to update established MLS feeds
   - Review still in progress
4. Time to troubleshoot listing issues
   - Review still in progress
QUESTIONS?

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THANK YOU EVERYONE