



**2017 Fall Conference**

GETTING DOWN TO BUSINESS  
UTILIZING DATA STANDARDS

## Real World Success with RESO Standards: A Case Study by Homes.com



# SPEAKER

# BIO PAGE

## Shaun York | Executive Director of Technology

Shaun is the Executive Director of Technology for [Homes.com](https://www.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.



Email: [shaun.york@homes.com](mailto:shaun.york@homes.com)

Phone: 850.350.7828

## Brian Heasley | Director of Data

Brian is the Director of Data for [Homes.com](https://www.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.



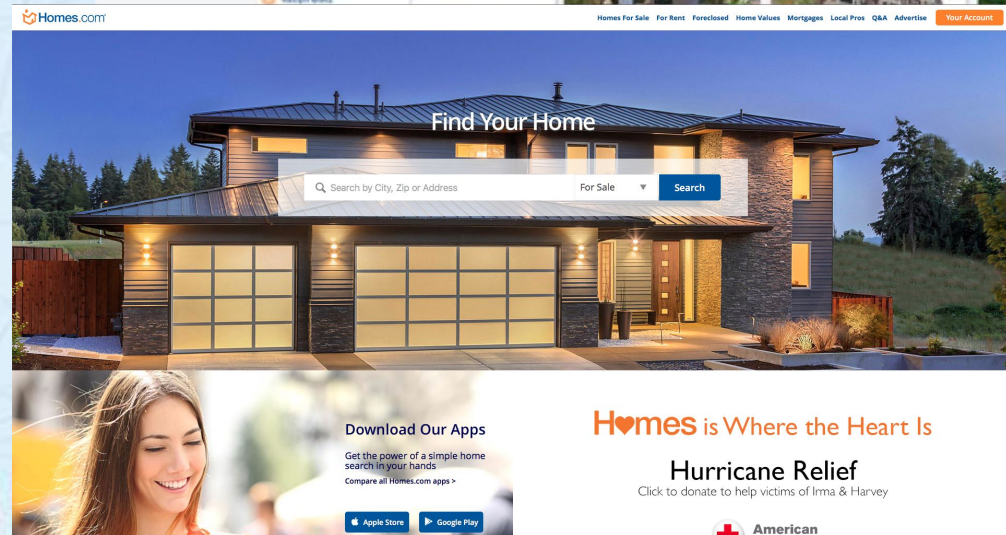
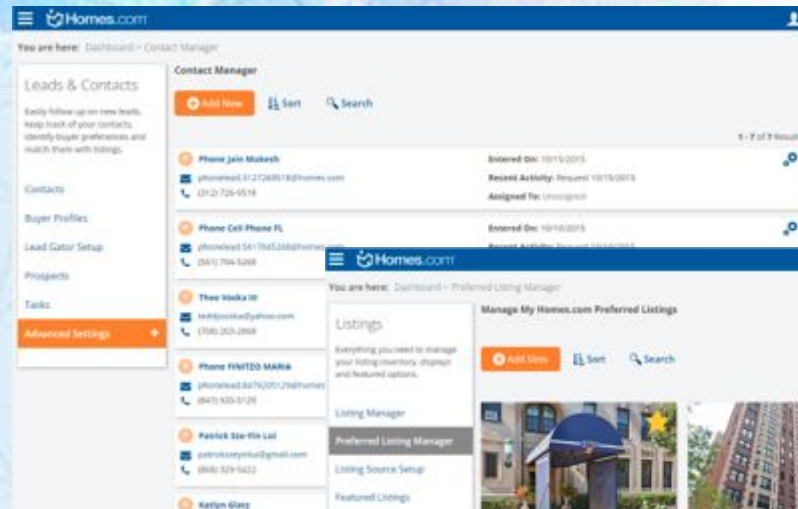
Email: [brian.heasley@homes.com](mailto:brian.heasley@homes.com)

Phone: 850.350.7853



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





# Expectations

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/>)
- Clarity 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



# Resources

(cont.)

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



# Data Dictionary

## Development Effort (on RETS)

- Framework and first listing source
  - 228 dev hours
- Second listing source
  - 46 dev hours
- Third listing source
  - 24 dev hours





# Data Dictionary

(cont.)



## 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



# Results

(cont.)

## 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?



Email: [shaun.york@homes.com](mailto:shaun.york@homes.com)

Phone: 850.350.7828



Email: [brian.heasley@homes.com](mailto:brian.heasley@homes.com)

Phone: 850.350.7853





# THANK YOU EVERYONE

