



RESO®

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REFLECTING ON
THE PAST

LOOKING TOWARD
THE BEAUTIFUL
FUTURE

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2018 FALL CONFERENCE

OCTOBER 15-18, 2018 • THE PFISTER HOTEL • MILWAUKEE, WI



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R&D Workgroup

Greg Moore – Workgroup Chair

R&D Workgroup Chairperson



Greg Moore, VP – Technical Systems

Greg has been involved in Real Estate Technology for 32–years and at RMLS for 16. As Vice President of Technical Systems, he provides leadership and general oversight of RMLS’ technological goals and activities. He facilitates the technical requirements for systems development, data processing, hardware services, network communications, and management information services to accomplish the company’s goals and objectives.

Antitrust

RESO strives to increase competition in the marketplace and will not be a forum for anti-competitive conduct. The RESO Antitrust Policy governs the activities of RESO and its members, including this meeting. A link to the policy was emailed to you with the meeting agenda. Please consult RESO's counsel if you have any questions about the policy.

R&D Workgroup Agenda

Welcome – anti-trust

R&D Workgroup Charter - updated

A Moment for Rob Overman

Unique Agent Identifier

REBR – Display Rules (Matt provided an outline)

New Construction / Developments

Different property class with custom DOM calculation?

Currently the DD supports “New Construction” listings

Image Tagging/Computer Vision

Introducing the Association of Real Estate Photographers

Backlog review (time allowing)

R&D Workgroup Charter

The RESO Research and Development Workgroup's purpose is to solicit and review submitted business cases and underlying business needs, opportunities and challenges from the real estate industry and identify how RESO can directly contribute benefits for the business needs of the industry with solutions developed through the creation and evolution of RESO standards. The Research and Develop Workgroup performs a careful and critical examination of the submitted business cases and coordinates the delivery of potential solutions through standardization with other Workgroups and individual subject matter experts within the RESO community.

A Moment for Our Friend Rob

“Rob Overman had a hemorrhagic stroke after an abnormal formation of blood vessels (arteriovenous malformation, or AVM, for those who like to google) ruptured. He suffered a massive brain bleed and was taken to surgery. The neurosurgeon was able to stop the bleeding, drain the blood, and remove the remaining abnormal vessels.



Rob is home and continues his recovery

Agent Unique Identifier

To clearly identify distinct Agents and Brokers; listing and selling, across multiple MLSs for content management, de-duplication of display and statistical reporting the RESO Board has asked the R&D workgroup to investigate sourcing or creating an agent unique identifier.

Bill Kellogg from ShowingTime, Eric Bryant from Benutech and I have discussed options:

- The NRDS ID covers ~70% of real estate licensees but we're striving to come up with a 99% source. RESO is inquiring if NAR would create an ID for non-Realtors.
- The only "True" Universal ID, is the Social Security#. Therefore the only 100% solution is to Encrypt, the SS#'s, through Clear Text. The issue then becomes who is the entity responsible for that encryption and storage? If the issue is that important, RESO would be the logical choice, to take on that responsibility.

I'd appreciate your insights and assistance

REBR for Display Rules

The Business Cases

An MLS (or other licensor) sends a technology provider more fields than allowed to be displayed under the terms of an IDX or VOW license and needs a way of communicating what information may be displayed under one or more licenses. Examples:

- Some roster information may be sent to providers for the purpose of verifying whether a data license is still in force, for de-duplication of listings, and for other means – display of that information is not allowed.

- A provider may be allowed to download a single data feed to be used for both VOW and IDX implementations. How is the provider to know what data may be displayed only under VOW rules, what data can be displayed under IDX rules and, per the example above, what should not be displayed at all?

REBR for Display Rules

Proposed Modification to RuleBook Syntax

1. Add items to RuleBook Scope:
2. Add “OriginatingSystemID” to describe what organization this applies to.
e.g.: OriginatingSystemID = “A00000002”;
3. Add “Type” to describe what kind of business rules these are:
e.g.: Type = “IDX Display”;
Enumerations (open):

IDX Display

VOW Display

Content Maintenance [“Listing Input” too limited?]

DISCUSS: Rule Type Enumerations

DISCUSS: make Type mandatory?

The purpose of leveraging the RuleBook syntax in this way is so that technology providers can request just the business rule types they need.

REBR for Display Rules

Proposed New Business Rule: MAY_DISPLAY

Description: This rule specifies whether a field may be displayed. Display context is determined at the RuleBook scope level.

Example of Structured English:

“The field MemberMlsId may not be displayed”

REBR Syntax:

MAY_DISPLAY

FIELD *aFieldName*

[YES | NO]

//Yes=“May be displayed”

//No=“May not be displayed”

_end_Rule // Marks the end of this rule

QUESTION: Should we refer to the PAYLOAD or RESOURCE in some way, not just the field name?

REBR for Display Rules

Example

RuleBook

SCOPE (

Name ="IDX Rules for MyMLS";

OriginatingSystemID ="A00000002";

Type="IDX Display";

)

_begin_Scope

MAY_DISPLAY NO FIELD MemberMlsId _end_RULE

MAY_DISPLAY NO FIELD MemberLoginId _end_RULE

MAY_DISPLAY NO FIELD MemberNationalAssociationId _end_RULE

_end_Scope

_end_RuleBook

New Construction / Developments

To facilitate cooperation between developers, builders and real estate professionals RMLS™ is developing a New Construction Information Record to provide detailed information about new upcoming developments and construction. The New Construction Information Record will be a new data set for RMLS™. The concept is that a development with more than two lots can share detailed information about the development with RMLS™ subscribers. At the time that a lot is ready to be marketed individually then the Seller's Agent would add an active Listing. The ML# of the listing(s) will be referenced back to the New Construction Information Record.

New Construction / Developments

| New Construction Information Record (NCIR) | | |
|--|----------|---|
| NCIR will be required when any public marketing occurs. | | |
| Field Name | Required | Field Type |
| Seller's Agent/Brokerage Firm Information from Listing Contract | | |
| Seller's Agent | Yes | Multiple fields to denote Seller's Agent |
| Seller's Brokerage Firm | Yes | Multiple fields to denote Seller's Brokerage Firm |
| Location Information | | |
| Community Name | Yes | Free Form Text - 40 Characters? |
| Address | Yes | Multiple Fields: Address, City, State, Zip |
| Latitude | Yes | Map Point |
| Longitude | Yes | Map Point |
| School - Elementary | Yes | Pick List, based upon area number/map point |
| School - High | Yes | Pick List, based upon area number/map point |

New Construction / Developments

| New Construction Information Record (NCIR) | | |
|--|----------|---|
| Field Name | Required | Field Type |
| Builder/Community Information | | |
| Builder Name | Yes | Free Form Text - 40 characters |
| Sales Office Days/Hours | Yes | Free Form Text – 40 characters |
| Incentives | Yes | Free Form Text - 200 characters |
| # of Homes to be Built | Yes | Numeric Field - 3 digits max |
| # of Homes Completed | Yes | Numeric Field - 3 digits max |
| # of Homes Under Construction | Yes | Numeric Field - 3 digits max |
| Community URL | Yes | URL field 500 characters |
| Community Features | No | Free Form Text - 100 characters |
| Price Range | Yes | Numeric Field - 8 digits min / max |
| Price Range Description | Yes | Free Form Text - 20 characters |
| Square Foot Range | Yes | Numeric Field - 5 digits min / max |
| Stories Range | Yes | Numeric Field - 2 digits min / max |
| Bedroom Range | Yes | Numeric Field - 2 digits min / max |
| Bathroom Range | Yes | Numeric Field - ## format min / max |
| Garage Range | Yes | Numeric Field - 1 digit min / max |
| Floor Plan Names | Yes | 5 Free Form Text fields - 20 characters max |
| Additional Information | | |
| Buyer's Agent Commission (BAC) and BAC Type fields | Yes | Numeric and Pick List (% or \$). Use existing fields structure. |
| New Construction Information Record Public Remarks Field | No | Free Form Text - 1,000 Characters. Same business rules apply as other public remarks fields |
| PDF Upload: Permit five (5) PDF documents under the category of "New Construction Information". The PDF's are private and only to be available within RMIweb. | | |

New Construction / Developments

DOM/CDOM

For Residential listings where Year Built Description (YBD) is proposed, under construction or new, DOM and CDOM (where appropriate) accrual calculations will be altered to reset to zero when YBD changes between proposed, under construction and new.

- While a listing is proposed or under construction DOM will be calculated separately during each construction phase. CDOM will not be calculated when YBD is proposed or under construction.
- When a listing transitions to the Year Built Description “NEW” the Seller’s Agent is required to submit the date from the Certificate of Occupancy into the New Construction Supplement form. That date will be the date used to start DOM/CDOM accumulation.
- For listings that have Year Built Description “NEW” and the status is Pending (PEN) or Pending Lease Option (POP), DOM/CDOM will not accrue while in those statuses.

REcolorado New Construction

Currently provides two Resi subtypes: New Home Plans and New Home Communities

- Supports describing a new community that is being developed, and plans (to-be-built) that will be available in that community. Launched in 2014.
- Plans could also be used by custom builders / build on your own lot.
- Plans can be entered with or without an address and have fewer required fields than Residential Detached/Attached.
- Supports combined resale and new construction searches in Matrix and REcolorado.com

New Home Communities Input

Status Agent Info **General Info** Community Info Site Info Remarks

Community Location

Community Name* County *

Street # Street Dir Street Name Street Type

City * Zip Code * State * Metropolitan District

Latitude Longitude

To set the latitude and longitude, click "Set Lat/Long". On the map click where the property is located, adjust the blue pin, then click Done.

Community Details & Availability

Community Status *

Builder Name*

Price Type *

Estimated Community Opening *

Estimated Amenities Opening

New Home Sales Hours

Home prices starting at *

Taxes

Community Website

Are Amenities Completed?

New Home Plans Input

Status Agent Info General Info **Building & Site Info** New Home Info Interior Info Remarks

Square Feet & Basement

Sqft Above (Estimate)* Basement Size Options* Basement Type Options* Finished Basement

Sqft Total (Estimate)*

Sqft Other Finished (Estimate)

Sqft Other Finished Description

Available Features

Interior Features

- ☐ Eating Space / Kitchen
- ☐ Finished Basement
- ☐ Five Piece Bath
- ☐ Handicap Accessible
- ☐ Jack & Jill Bath
- ☐ Jet Action Tub
- ☐ Kitchen Island
- ☐ Master Bath

Fireplace Locations

- ☐ Basement
- ☐ Bedroom
- ☐ Dining Room
- ☐ Family Room
- ☐ Fireplace Included in Plan
- ☐ Kitchen
- ☐ Living Room
- ☐ Master Bedroom

Smart/Connected Home Features

- ☐ Air Quality Monitor
- ☐ Alarm/Security System
- ☐ Audio/Video Controls
- ☐ Carbon Monoxide Detector
- ☐ Ceiling Fans
- ☐ Dishwasher
- ☐ Door Locks
- ☐ Driveway

Total Bathrooms*

Total Bedrooms*

REcolorado New Construction – In Development

Majority of Colorado builders provide information to BDX. Builders (and agents supporting builders) asked REcolorado to get data and updates from BDX.

REcolorado receives BDX's XML feed and is developing system pull the data into Matrix:

- Parsing XML feed and creating logic to identify new/changed/deleted records.
- Adding another subtype for BDX-only: Spec Homes.
- Using RETS Update to push communities, plans, and specs into Matrix.
- Will support combined resale and new construction searches in Matrix and REcolorado.com.
- Also developing a photo/tour upload portal using RETS Update.

Image Tagging / Computer Vision

Computer vision / image tagging has many applications for real estate.

- Using RESO standard enumerations
 - Room identification
 - Identifying rooms and common exterior spaces can assist MLSs by providing descriptions for new listings and their image stores. This may also possibly assist with ADA compliance. The 1.7 version of the Data Dictionary enumerates room descriptions.
 - Interior and exterior features
 - Identifying room and exterior features (enumerations) can augment or enhance listing data. RESO standards can be utilized by targeting the enumerated features and rooms.

Image Tagging / Computer Vision

- **Compliance**
 - Regardless of where you are in the world, you need to comply with the real estate privacy and security laws. If your images contain license plates or people's faces, in many countries you are breaking the law. To eliminate this risk, integrate a computer vision solution with your website to automatically detect sensitive content in images. Save money on a quality team and easily remove your non-compliant photos before they reach your users.
- **Making the search experience more visual**
 - Let the viewer filter the thumbnails by desired room type and feature
 - Organize the photo gallery by grouping images according to room type
 - Browse images hands-free using Voice Search
- **Improving CMAs**
 - Provide more specific and visually similar CMAs
 - Add a layer of room-by-room visual comparison to CMAs

Starting a Listing from Photos

- Starting a Listing from Photos
 - Using the geolocation from the photo header to lookup the address, MLS area, schools, neighborhood, tax id,
 - Auto-fill from public records.
 - Post and receive room types and features/enumerations from a computer vision partner.

Introducing the Association of Real Estate Photographers



The Association of Real Estate Photographers has formed to work with MLSs, RE portals and other users of listing photography to cooperate and educate the industry on the use of copywritten images taken by professional photographers.

Developing standards for use of images sourced from a professional photographer will help the RE industry ensure images can be maintained by MLSs for their compilation while also setting guidelines for distribution to brokers and other 3rd parties. Guidelines for use while marketing the listings, post marketing (comparable) and attribution are to be defined. A partnership for protecting and enforcing image and MLS copyright are also to be discussed.

R&D Links

Business Cases

<https://members.reso.org/display/RD/Business+Cases>

Next Meeting

Thursday December 6th 2pm eastern-time

<https://global.gotomeeting.com/join/655061925>

To join the R&D workgroup

Click the Join R&D Workgroup link

members.reso.org/pages/viewpage.action?pageId=983942

SOCIAL MEDIA

Follow us and see what's happening on our social media sites!
Real Estate Standards Organization, #RESOStandards,
@RESOStandards & RESO!

Use the conference hashtag #RESO18



THANK YOU!
COMMENTS OR QUESTIONS?



Cheers!