Putting Real Estate's Hottest API to Work: How to Leverage RESO's Free, Open Source ID System

Adopting the RESO OUID
Organizational Unique Identifier

A RESO White Paper



The Case for an Organizational Unique Identifier

Quick question: How many Multiple Listing Services are there in the U.S.?

Ask that question to 50 top real estate executives, and you are very likely to get 50 different answers. For years, no one knew what the precise answer was, not even the National Association of REALTORS®, and they've been tracking MLSs for decades!

That's because real estate lives in a world filled with acronyms. Even MLSs frequently refer to themselves solely by their abbreviations. That causes duplication.

Did you know we have had as many as a half-dozen RMLSs in the U.S. at once? The same is true for real estate brokerage firms that share the same name but operate in different markets. Even technology providers often share similar names or use the same acronyms.

This has caused a vexing problem in the real estate industry much bigger than having an exact count of how many MLS there are.

The Multiple Market Quandary

How does a brokerage, or its data technology partner, dealing with multiple property data feeds - coming from various states and involving different data providers, firms and vendors - trace their data accurately? With all the risk of duplication that has been inherent in the system, this challenge hasn't been easy. Some would argue it's been nearly impossible.

And this problem has become exacerbated as more and more brokerages, MLS technology providers and other firms expand their reach. As technology has enabled more firms to cross county lines and state borders, data challenges have become more complex as individual firms have to handle more property data feeds than ever before.

RESO heard loudly about many of these challenges from its members. The issue first emerged in the RESO Research & Development Workgroup, where business problems are first evaluated within RESO.



Greg Moore, Chief Technology Officer of Regional Multiple Listing Service, Inc. (RMLS) in Portland, Oregon, heads up the R&D Workgroup (video overview of this Workgroup is at https://youtu.be/pxVpo46FYwc). R&D Workgroup members agreed that RESO should take on this business challenge.

Moore partnered with RESO member Bill Kellogg, CIO of ShowingTime. RESO member Kellogg was among the first to raise his hand. Kellogg was struggling internally at his firm with the same issues – as many others were – and was already knee deep into exploring ways to solve this problem.

The RESO Solution

Together, Moore and Kellogg worked to help lead the effort that created the RESO Organizational Unique ID. Most importantly, they wanted to create an accompanying API that would be made available to anyone - not just RESO members - to help solve these problems.

What would emerge from their labor is the RESO OUID with a Web-based API Identification tool. It's designed to help solve many a laundry list of problems that RESO members were having, by providing, as Moore noted, "a single source of truth." With the deployment and industry adoption of the RESO OUID and its underlying API, Moore said, "RESO would become that source of truth."

What is OUID – RESO's Great API ID Tool?

The official RESO Organizational Unique Identifier, or OUID, gives each organization within the Real Estate industry a unique ID. It includes the industry's most comprehensive-and current-list of Realtor Associations and MLSs, as well as system technology partners, and other affiliated businesses and data providers.

RESO collaborates with the National Association of REALTORS®, Realtors Property Resource (RPR), and others to make sure the underlying list of organizations remains the most current list available anywhere, updating its list regularly.

RESO created an Organizational Unique ID API to allow any organization to query the API and provide back basic organizational information. This includes the organization's name, city, state and zip code, along with the most critical data point: its Organizational Unique ID.

Data providers then include their OUID in data feeds to those receiving the data, so the receivers of the data can accurately identify the organizational source, or publisher, of each piece of data in an aggregated database. This information also is included in RETS data feeds to denote the publisher of the data.

Tying the new RESO OUID into this process is important as it gives everyone the ability to source all data, something that until now has been infrequently possible.

The RESO OUID and its API provide the answer to the question:

Where did this data come from?



Business Cases for the RESO OUID

There are many business cases for the use of the RESO OUID. As explained, MLSs and data providers can use the OUID to "tag" their data showing that they are the publisher, or source, of the data that is being distributed to licensed technology partners.

For brokerages utilizing data, the RESO OUID helps them better manage multiple feeds and overlapping service areas. They can gain an explicit notation of data originator. More importantly, the OUID API de-duplicates the content and knows how to select the original content and not the duplicate. The notation of the original source is in the data allows the correct data to be kept.

For technology partners, they can use the RESO OUID to match an MLS to its related Association or Associations. This has been a significant challenge for many tech providers, especially startups, and having access to this information is important.

Moreover, technology providers often work with multiple Associations that are located next door to each other. Because these MLSs and Associations share county borders and state lines, they often share the same members. Many real estate agents are members of more than one Association to gain access to multiple MLSs. The RESO OUID helps brokerages and their technology firms – and others – solve the myriad of challenges this brings when supplying services to these customers.

Incorporating OUID into the Data Dictionary

The RESO Data Dictionary Version 1.5 and beyond features standardized containers for the Organizational Unique ID Store at the MLS and technology partner (data distributor).

This API can be used to extract active and inactive information about organizations.

The RESO Data Dictionary dataset for a query within the API include the OUID, active, org, type, city, state, country and zip. The RESO OUID API is available to everyone, not just RESO members. It is a public API, meaning there are no credentials required to query the Organizational Unique ID dataset.

Examples of search queries can be found on RESO's website on the Organizational Unique ID API page at https://www.reso.org/ouid-api/.

The Industry Embraces RESO OUID

Since its launch in 2017, the RESO OUID and its API have gained broad and rapid adoption. In April 2017, the RESO Data Dictionary Version 1.5 was released and ever since then it has included standardized containers of the Organizational Unique ID for MLSs and technology partners (or data distributors).

Today the RESO OUID and its API are being used in numerous ways by firms serving all aspects of residential real estate in markets located throughout the U.S. The savings generated by the effort in terms of time, productivity and costs savings are significant, according to the half-dozen brokerages, technology, and consulting organizations who contributed to this White Paper.

This RESO OUID White Paper reveals numerous ways the real estate industry is seeking to leverage the OUID, that collectively are making significant contributions to increasing productivity and efficiency as it saves companies money and time.

Let's explore the specific examples of how two real estate brokerage firms, technology firms, and consulting firms that have each adopted the RESO API and are leveraging this technology today—in different ways, yet all highly valuable to their business operations.



Brokerage Focus

NextHome

NextHome, Inc. is a national real estate franchise with consumer-focused branding, technology, and marketing. By integrating custom developed technology and innovative software partners, NextHome provides an all-inclusive, automated and user-friendly hub for its members across the country.

It owns the NextHome and Realty World Northern California & Northern Nevada franchise networks with over 450 offices and more than 3,500 agents. The company closes over 19,000 transactions annually worth over \$6B in volume.

How NextHome Uses the RESO OUID and its API

With technology a core component of NextHome's rise to - and growing - success, Bryce Johnson, Software Engineer at NextHome and active RESO member, keeps an eye out for ways to improve efficiencies. Johnson's work at NextHome includes developing custom franchise and corporate tools, reporting, and software integrations.

For more than a year, NextHome has been using the RESO OUID with its API to help it manage its data feeds.

"Associating a feed to a business entity gets complicated as multiple Real Estate Associations can be part of one MLS," Johnson pointed out when describing how NextHome benefits from using the RESO ID data tool. "Other factors can exacerbate these complexities," Johnson added.

"Multiple MLSs and Associations can join together on a Technology Company such as CARETS (carets.org). The feeds we use can come from a Technology Company or an MLS," he said.

"Keeping track of the original data, its source and its affiliated organization are problematic for any company. Additionally, the industry is anything but static," Johnson pointed out.

"The difficulty tracking these entities is compounded when MLSs and Associations merge or join different groups," he added. NextHome uses the RESO OUID and its API to solve for all of these challenges.

The RESO OUID project IDs and tracks of each Association, MLS, and Technology Company.

As for the future of the RESO OUID and its API? Johnson thinks it's bright, considering the challenges any company faces when they try to figure things out on their own.

"Digging for this information is extremely difficult as many Associations leave websites up with outdated data and often identify themselves with varying names or an unspecified name," he said. He gave this fictitious example: The name Central MLS may work regionally but is difficult to find nationally.

Johnson said the importance of the RESO OUID project is that it provides the current data on the state of Associations, MLSs and technology companies—and the data is well organized and "freely available" to everyone.



RE/MAX

The RE/MAX network has over 120,000 agents in more than 100 countries and territories. Nobody in the world sells more real estate than RE/MAX, as measured by residential transaction sides.

Dedicated to innovation and change in the real estate industry, RE/MAX launched Motto Mortgage, a ground-breaking mortgage franchise brand, in 2016 and acquired booj, a real estate technology company, in 2018. It has been one of the earliest adopters of technology among major national brands, having debuted many cutting-edge tech innovations years before its major competitors.

How RE/MAX Uses the RESO OUID and its API

Technology has long been a pivotal driver in helping RE/MAX deliver advanced tools to its brokerages and agents, resulting in a better experience for sellers and buyers. Dan Troup, veteran RESO brokerage volunteer and Director of Data Operations & Strategy at RE/MAX LLC, is one of the brokerage world's most respected tech leaders.

Troup said RE/MAX adopted the RESO OUID almost immediately.

"We started using it as soon as it was launched," Troup said. "And we continue to provide feedback to help improve it."

RE/MAX uses the RESO OUID for two of its largest systems:

- Keeping track of all MLS sources.
- Managing association to MLS relationships in our CRM.

"Having one list for all MLS sources and associations has been very helpful to RE/MAX," said Troup, whose team handles data feeds from more than 600 MLSs in the U.S. alone.

As for the future, Troup is enthusiastic about discussions to add agent and office identifiers as the next phase of RESO's efforts to untangle duplicative data.

"We would love to see this expand into the agent/office identifiers," Troup said. "This is an industry problem that RESO can solve."

Technology Firm Focus

ShowingTime

ShowingTime is the leading showing management and market stats technology provider to the residential real estate industry. The company has more than 1.2 million active listings subscribed to its services and schedules some 60 million showings a year.

Its MarketStats division provides interactive tools and market reports for MLSs, associations, brokers, agents and other real estate companies, along with recruiting software that enables brokers to identify top agents. ShowingTime products are used in more than 350 MLSs representing over 1 million real estate professionals across the U.S. and Canada.

Just within the last year, ShowingTime has signed 35 new MLS-wide licenses, including new services for the Greater Greenville Association of RE-ALTORS®, First Multiple Listing Service of Atlanta, and The MLSTM of Los Angeles. In May 2018, the company launched an enhanced agent-to-agent messaging platform to equip more than 950,000 real estate agents in 350 U.S. and Canadian markets to connect through ShowingTime via texts, mobile app, email, and desktop.

Involved in these technology efforts is Bill Kellogg, one of the leaders behind the creation of the RESO OUID.

How ShowingTime Uses the RESO OUID and its API

Kellogg said that ShowingTime was a user of the RESO OUID "before it was released!" That's accurate as Kellogg started using it as soon as it was created - and before it was published - because he had an immediate need.

"We had just acquired <u>Showing Suite</u>, and we used it for the internal conversion between the two companies," Kellogg explained.

He noted that both ShowingTime and Showing Suite were nationwide firms and they needed a single source for identification reference.

"We wanted one source instead of having some ambiguous lookup table, so this (RESO OUID) was a good approach for us," Kellogg said.



But Kellogg used the RESO OUID at Showing-Time for a lot more purposes than acquisition assistance. The needs emerged from the business challenges he faces every day at ShowingTime.

"We work with 350 feeds right now, and it's always a challenge with our technology providers to resolve MLS codes," he said. Kellogg noted ShowingTime also has a need for resolving MLS Scheduling challenges, and the RESO OUID comes in handy there are well.

"At ShowingTime, we do a lot of cross MLS scheduling when people do data shares," he added, giving the example of the Great Lakes Repository where all the data from all the participating MLSs in Michigan is distributed to all the other MLSs and ShowingTime MLS scheduling is available in almost all of them.

"Pretty much every one of them is a client of ours, but everybody refers to MLSs in different ways," Kellogg said, and that's the challenge throughout the industry. He notes you'll find multiple MLSs or associations that refer to themselves by a code of "METRO" in data. "Columbus Board of Realtors exists in Georgia, Nebraska, and Ohio" he said, adding, "Resolving that is painful."

The bigger problem: "There's no consistent language for saying where this listing come from or where should the showing request go," he explained. And it goes beyond technology and data providers as today, Kellogg observes, "even MLSs are doing data shares, and sometimes they have to communicate back to their members."

Collaboration is another obstacle Kellogg had to address. "We work with a lot of tech firms that integrate with our showing technology. If a MLS wants ShowingTime scheduling to be available to an alternate vendor, like Cloud MLX, we need a common language," Kellogg said. "It isn't practical to have a translation table for every tech firm, forcing us to translate each other's data from scratch for each MLS," he added.

Kellogg also points out that name changes can also be problematic. But with the RESO OUID, while the MLS name changes, its code stays the same.

"There are some MLSs that are on a third or fourth name change in just two years," he pointed out. "Consolidations and mergers are such a headache, you don't know where an association or MLS came from or went, and it can get really confusing," he explained.

MLSs split up too, Kellogg reminds us, noting that in California, Glendale and Pasadena divested back into individual MLSs. "There's a continuous motion in this industry and why we need a logical language to deal with it," he said.

Using the RESO OUID, ShowingTime has addressed each of these business challenges. By using that single source - a "logical language" - the RESO OUID has become "a really big deal for us," Kellogg said.

The future? Kellogg points to two things being discussed in RESO circles. The first is Brokerage and Technology provider IDs. This allows for the identification of brokerage and tech provider rollups and recognizes new efforts, such as Upstream, where brokerages will be their own source of data.

The second is Agent ID, which Kellogg argues is the "next big frontier." This offers the ability to track total agent transaction production and showing activity across all MLSs, for example, as agents frequently belong to more than one MLS.

Finally, while the RESO OUID is "hard to assign a specific dollar value to," Kellogg said that for his work at ShowingTime, "it's definitely a large headache off of my shoulders."



Homes.com

A top real estate search destination, Homes. com is visited by more than 10 million consumers each month. Homes.com leverages search visibility to connect its in-market audience with real estate professionals in their local areas of interest.

Homes.com helps real estate agents and other real estate industry partners succeed online by offering real estate marketing and media services such as brand advertising, property listing exposure, search engine marketing and instant response lead generation.

This past fall, Homes.com released its API for agents and brokers, allowing them to efficiently manage leads and contacts across the many platforms they use. Heading up its technology efforts is Shaun York, Executive Director of Technology.

How Homes.com Uses the RESO OUID and its API

When you are providing consumers and real estate agents one of the largest real estate destinations on the Web, knowing where your data originates is vital. Homes.com has to think about both customers at all times: the real estate agents and brokers it serves and the buyers and sellers who are their clients. The quality of one's data is paramount.

Its data management activities are massive: the technology giant processes over 800 listing sources currently, with its total listing volume at 8 million, and approximately 3 million of which are published to the Homes.com website.

Hosting nationwide property data from more than 600 MLSs throughout the U.S. and Canada

is remarkably complex. Keeping track of every listing and every source of data is a significant undertaking.

At Homes.com, York and his team have had to provide a custom data set to partners to identify each listing sources by using its own proprietary internal unique ID.

"We could not rely on nonstandard business name to associate listing sources to customer requirements," York explained.

The RESO OUID changed all that, he said.

"With the RESO OUID this is no longer necessary as all businesses in the industry can use this open and standardized data set to communicate listing partner sources," York explained.

Homes.com for more than a year now has used the RESO OUID in many ways to improve its data tracking capabilities, including:

- To coordinate reporting with industry partners and data providers.
- To aggregate multiple data feeds from the same provider under a unique business name.
- As the definitive source for the data provider unique identifier and business name.

York thinks the RESO OUID future is bright and stresses Moore's point of the value of having a single source of truth.

"I do believe the importance of the RESO OUID is growing as more businesses adopt (the RESO OUID) into their communication practices. Again, without this standard we leave the real estate community open to a misunderstanding regarding listing sourcing and ownership," he added.



Consulting Firm Focus

T3 Sixty

T3 Sixty is a leading management consultancy and research company dedicated to the residential real estate brokerage industry. Launched as RealSure in 1998 and later Swanepoel T3 Group, T3 Sixty has helped hundreds of companies grow their businesses. It is well-known for both its Swanepoel Trends Reports and its events, including its C-level, invitation-only T3 Summit.

T3 Sixty fields a deep bench of knowledgeable and experienced professionals, with a combined 100+ years of experience as top-level executives. Clients include some of the largest real estate franchises in the world, large brokerage companies, high-growth teams, Realtor associations on national, state and local levels, the largest MLS organizations, and technology vendors covering every service level in the industry.

How T3 Sixty Uses the RESO OUID and its API

Jack Miller, President and CTO of T3 Sixty, is an industry veteran and no stranger to MLS data challenges. Since 2005, Miller has acted as the CTO and consultant for a variety of organizations in real estate and has dealt directly with MLS integrations and management of broker systems that utilize MLS data.

Since the early stage testing of the RESO OUID API, T3 Sixty has been using it to help maintain its database of about 2,000 organizations.

"We use the RESO OUID as the foundational 'source of truth.'," Miller said, because of its accuracy and the fact that it is kept "up to date."

Before the RESO OUID, T3 Sixty, like many organizations, did not have a single reliable source for the number of MLSs and the precise number of Associations. Duplication was inevitable.

T3 Sixty previously would collect its data from multiple sources: RESO, RPR, as well as the individual Realtor Associations and MLS themselves directly. In addition to the challenges of cross-referencing different MLS with numerous associations, Miller noted, "Each organization has different ways of counting and measuring."



To maintain an extensive database and keep it up-to-date requires a substantial commitment of time. The rapid industry consolidation that T3 Sixty has witnessed has resulted in more than 140 individual MLSs firms being removed from the database.

The RESO OUID and API make these updates continuously, reducing the amount of time and resources that T3 Sixty would usually dedicate to the maintenance of its database, a key component of its business development.

T3 Sixty advanced a visual innovation of the RESO OUID: a U.S. Map featuring the "Number of MLSs, Associations, and Realtors® by State." It immediately answers, very precisely, the question: How many MLS are in your state? (See the map image below.)

Miller said T3 Sixty sees the importance of the RESO OUID growing.

"Technology and other solution providers will continue to receive benefits and significant time and money savings by having access to (RESO's) open and shared industry asset," he said.



[Source: T3 Sixty

WAV Group

WAV Group offers an unmatched depth of experience in technology, strategic planning, research, business development, public relations, marketing and product development in the real estate industry. WAV Group partners have collectively launched over 25 businesses and have led several hundred business process evaluations and system installations in North America, Europe, and Asia. Its research division generates more consumer and business-to-business research in the real estate industry than any other consulting firm.

Clients include some of the largest MLSs in North America, the most respected brokerage and real estate franchise organizations in the US and Internationally, innovative technology companies and top trade associations. All of the WAV Group partners have been CEOs, executive team members or founders of Fortune 100 and venture-funded corporations.

How WAV Group and RE Technology Uses the RESO OUID and its API

David Gumpper heads up WAV Group's Technology Consulting Division and serves as its Chief Technology Officer. Gumpper comes from one of the most technologically progressive regional brokerages in the U.S. - Michael Saunders & Company - where he spent nearly 15 years as its CTO.

When the brokerage revamped its Website in 2015 with Gumpper at the helm, the externally designed (1000watt) - but in-house built site - generated 45 percent more unique visitors, 38 percent more page views and lead count and conversion rates jumped. A panel of 70 brokerage chief marketing and chief technology officers voted it the nation's best real estate brokerage website. Gumpper knows the challenges brokerages face from the inside out, and it's why he heads up the RESO Broker Advisory Group.

Nine months ago, when Gumpper started querying the RESO OUID API, he immediately saw the business potential. Not only for WAV Group but also its sister company, RE Technology, the largest online source for technology education and information. More than 100 MLS delivers RE Technology to its members.

With RE Technology, Gumpper is using the RESO OUID to associate MLSs and Associations to define a regional management tool. Mapping Associations with MLSs has assisted RE Technology in reporting on usage by MLSs and Associations. It also has supported RE Technology with on-boarding new MLSs and Associations to its platform. Gumpper also said the RESO OUID has helped RE Technology address scenarios when additional insight is needed, such as the clarity provided by showing which Association is linked to which MLS.

With WAV Group, Gumpper is using the RESO OUID's ability to have a direct relationship between Association and MLS to help the firm gain better insight into which Brokers, Associations, and MLSs fit into a regional coverage map for a national company. WAV Group has created a new visual tool that places a Broker into an Association and then automatically maps them to the MLSs. Gumpper added the tool even allows him to develop Regional Maps for the company.

"The business value this delivers is significant," Gumpper said. "You should see someone's eyes when they see the map for the first time. This is simply data, rolled up, that did not exist in a single place before. When you can visualize it, that makes it even more powerful," he added.

Gumpper is effusive on the benefits he has gained versus what had to be done pre-RESO OUID.

"There's a huge value in having a common language in identifying MLS and Association organizations and their relationships because it accelerates the integration of data between platforms. Without RESO OUID, there would be a need to build mapping logic from one system to another for every time there is a need to share data between them. That's a real cost saving," Gumpper said.

He also noted the importance of both the quality and timeliness of information that the RESO OUID now offers.

"In the past, changes that occurred from a consolidation or merger of MLSs and Associations would require manual updates - if you received them at all. Having the RESO OUID, because it is centralized, enables accurate information being

relayed throughout the industry. That also means it can be updated very quickly," he added.

The third benefit, that both WAV Group and RE Technology realized, comes from the fact that the RESO OUID is "Open Access."

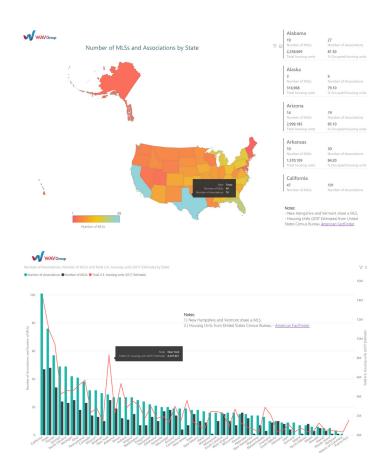
"The RESO OUID doesn't require any authentication mechanisms to read the information," Gumpper explained, adding, "This makes it easy for business analysts or anyone with a little bit of knowledge to access it or automate a process to have the latest organizational information in the real estate industry."

David Gumpper has shared his work with the RESO OUID publicly. Gumpper open-sourced his Microsoft Power BI Custom Data Connector code and the Power BI file in GitHub. It can be located under "Power BI Data Connector for the RESO OUID."

Gumpper shares the WAV Group interactive Maps and Charts online here:

http://bit.ly/WAV-Group-RESO-OUID-Map

[Sample Map + Charts - Graphics]:



Gumpper notes that the Microsoft Power BI Desktop client can be used to access the RESO OUID to create data visualizations and insights with the use of any other data source that is public domain, within the brokerage, association, MLS, or technology company.

"With a click of a button, your data visualizations and reporting are automatically updated," he said.

For Gumpper, the RESO OUID will have an even better future if two things are addressed:

- If NAR can resolve the NRDS ID challenges to create a national database of a unique identifier for every REALTOR brokerage.
- If RESO OUID had processes and marketing to capture non-REALTOR real estate brokerages and firms who focus solely on commercial real estate, property management, or rental properties.



Gumpper argues that the agent/broker ID issue is incredibly valuable for businesses.

"Creating a Broker-RESO OUID relationship with NRDS would provide a single source which can tie a multitude of seamless integrations with technology companies, brokerages, associations, and MLSs," he said.

Conclusion

Big Things Can Come in Small Packages

The RESO OUID with its API is a classic example of the Real Estate Standards Organization in action delivering on its mission. To some, the creation of an Organizational Unique Identifier might seem to be small. In the grand scheme of the real estate industry and its overarching technology needs, it is.

But it is with these small but vital changes that move the real estate industry forward towards greater efficiency. This White Paper demonstrates that within a single year, some of the most recognized brands – and forward-leading businesses – have adopted and implemented novel uses of the RESO OUID. And many more innovative uses by a variety of other industry firms are coming. These enthusiasts will join the firms profiled here, actively using the RESO OUID API to improve their business – and the lives of their employees, clients, and consumers – every day.

About RESO

The mission of the Real Estate Standards Organization (RESO) is to create and promote the adoption and utilization of standards that drive efficiency throughout the real estate industry. RESO was incorporated in November 2011 as an independent, not-for-profit trade organization that was previously a section of the National Association of REALTORS®. RESO has more than 850 active members including the NAR, Multiple Listing Services and real estate associations representing 1.3 million members, real estate brokerages with nearly 1 million agents, and industry technology providers serving hundreds of thousands of real estate professionals. For more information, visit www.reso.org. Contact RESO via email at info@reso.org.