RETS Update
What you need to know

Updated September 2004

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Forward

The original version of this paper was developed in October 2002 by Kevin McQueen, President, Focus Forward Consulting, Inc. A lot has changed since then and this paper was updated in September, 2004 to reflect what's new.

If you are a first time reader, it is suggested that you begin with the section *"What You Need to Know About RETS"* on page 13.

If you are at least somewhat familiar with RETS and simply want to know what's new, continue reading beginning with the first section titled *"What's New with RETS?"*

Thank you for your interest in RETS. I hope that you find this information useful in your business or organization. Please share it with others and let me know what you think about RETS. Your questions and feedback are always welcomed.

September 2004
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What's New – September 2004

What People Are Saying
The following summary is based on recent outreach to dozens of industry leaders.

How has RETS helped your organization?
MLSs
- RETS results in more choices for our MLS customers by encouraging third party productivity software vendors to enter our market.
- RETS provides access to real-time data which is a premium service offering compared with daily FTP files. Our brokers update every 5 minutes and this helps them stay in sync with the most accurate and timely live data from the MLS for display on their web sites. This is a huge benefit to our brokers, agents and their consumer customers that visit the broker's web sites.
- Our MLS vendor supports RETS' role-based security which makes us and our brokers feel better about security
- RETS got us out of the custom data exporting business. Now we offer RETS only to more than 87 third parties and brokers. Adoption of RETS continues to grow in our marketplace and we are now adding a couple more per week.
- RETS has reduced our support costs measurably.
- Our free RETS client has helped tremendously since it takes the mystery out of RETS by providing a great solution for getting started quickly compared to reading the spec document.
- Third party providers are now taking advantage of the RETS metadata by developing solutions which are "Metadata Aware". This significantly reduces our support costs.
- RETS provides us with much more flexibility with our third party vendors. Before it was much more difficult with custom data exports, setup and making sure that the exports ran overnight.
- RETS enables our Realtors® to get what they need for their IDX sites.
- By using user agent headers included in the RETS spec, we have access to specifically who has access and what specific data they can see. We use tags in our MLS membership database to control this.

Third Party Software Providers
- RETS has allowed us to more readily obtain the data our broker customers require from multiple MLSs without having to write custom interfaces for every market. It does this by providing a more standardized framework and transfer process for MLSs that make data available to their customers and vendors.
- RETS has reduced the average time to market for new MLS implementations.
- RETS has reduced our ongoing maintenance costs by cutting down the number of repairs needed when MLS data changes.

MLS Vendors
- With RETS, our data feeds are much more organized. It has streamlined the integration with all major third party vendors. As technology has evolved, RETS has revolutionized the way we extract raw data for all purposes.

What are the benefits for your customers?

MLSs
- RETS provides our brokers and agents with near real-time updates for their web sites. They love it and their customers love it too.
- Our more sophisticated (technologically speaking) brokerages reported to us that the up-front effort to support RETS was not significant. It is not as easy for those brokerages with limited technology resources.
- RETS enables more choices for our brokers and agents by reducing the barriers to enter our marketplace and function with the MLS.
- Our members now have several mobile products available to them. Before RETS, this was not possible. RETS enables this amazing software and is having a profound impact on the productivity of our Realtors®.
- Brokers with their own in-house applications thrive on RETS since it allows them real-time access to the data they need in a standard and well-documented manner.
- Large brokers and franchisors want RETS in their markets. This has provided many with a much broader reach, resulting in growth, based on their experience with current RETS providers.
- Our top five brokerages are using RETS for their in-house systems. They include back office systems that support their businesses as well as CMA and search programs that run in real-time.

Third Party Software Providers
- The process of going live with data automatically downloaded into their systems has become streamlined. The quality and timeliness of the data has improved using RETS.
- RETS has made it possible to grow our business by making our RETS-compliant product compatible with more MLSs than ever before.
- Our customers experience less downtime caused by ongoing MLS data changes and MLS conversion or switching vendors.

MLS Vendors
- Through our use of RETS, our customers receive better reliability of data, higher quality support and reduced costs for data extracts based on RETS and IDX.

What are the greatest obstacles to increased adoption of RETS?

MLSs
- Lack of Standard Names adoption by server vendors and different interpretations of the RETS specification.
- The additional charges from our vendor.

- Cost to develop our own RETS software and staff the necessary support personnel. Sometimes additional hardware is required which increases our costs, maintenance, etc.
- We find it difficult to create demand for RETS.
- Lack of awareness by our brokers and local third party providers.
- Brokers and third party developers that don't know much about RETS. There is an up-front investment and learning curve to getting started.

MLS Vendors
- The learning curve to master the technology is affordable for nation-wide vendors, but often impractical for brokers.
- Lack of a good, inexpensive RETS client for simple, scheduled data extraction.
- Integration between systems can be difficult based on differently interpretations and implementations of RETS solutions.
- RETS-Compliance needs to be improved to make it more like plug and play.
- Connectivity like this is hard work. The most common root cause of interoperability is usually a case of widely varying capabilities of the parties involved.
- It's not practical for my organization to provide the expected level of support for a product/system that does not have a direct revenue stream attached.

Third Party Software Providers
- MLSs charging fees for RETS data access. We understand that RETS access provides a higher level of service (i.e. real-time access, access to just what we need, etc.) but we do not like to pay additional fees since this reduces our profitability. Our customers end up paying for it.
- Each deployment is still somewhat unique since each RETS server vendor's implementation is a little different. It would help immensely to know who is actually exchanging data with whom.
- The marketing is frequently ahead of the engineering for many MLS vendors and MLSs.
- Deploying in different MLSs that use the same vendor generally involves some extra work.
- Lack of standard names used universally.
- Small size MLS are slow to adopt RETS, possibly due to additional cost and not seeing possibility of a return on their initial investment.
- Not all MLS vendors support RETS in their products.
- Existence of different vendor "flavors" and varied RETS implementation practices.

What would you like to see from RETS leadership?

MLSs
- Even more standardization, improved compliance and interoperability and standard names.
- Make it easier to get started using RETS. Provide a knowledge base for how to transition, become compliant, adopt standard names, etc.
- Educate the Brokers about the benefits of RETS. They are being inundated by vendors with lots of solutions. Brokers need to understand the benefits of choosing RETS-compliant solutions.
- Improved security using RETS.
- More data management tools. Metrics or statistics of who is accessing and what they are accessing would be very helpful.
- Educate the MLS and Broker leadership.
- Continue to spread the good word about RETS, continue the Plugfests and support RETS 2.0 going forward.
- The majority of the industry leadership are completely missing "the beauty of RETS". They need to have a complete understanding of the value proposition and the process for taking advantage of RETS from their perspective. The RETS leadership should focus on the value proposition, making it easier to get started and how to transition to RETS through education and supporting documents.
- Dissect and categorize the different types of third parties and completely understand what they need. Then deliver it.
- Get 1-2 MLS vendors to implement Standard Names, develop marketing piece that introduces additional value. Third parties that can come in to their markets utilizing Standard Names.
- Do whatever it takes to Increase the use of Standard Names
- Increase the use of RETS update transaction. Need more solutions like Threewide where the client and the server understand the same business rules.
- Don't let RETS die.
- Increase number of "metadata aware" RETS client solutions.
- Publish more case studies and reports. Support for the financial case for RETS.
- Organize and evangelize via those that are developing solutions using RETS.

MLS Vendors
- Release of a good, inexpensive commercial client for simple data extraction used by brokers and other non-technical users. Someone needs to offer and support this for RETS to really take off.
- Less room for different interpretations of the specification.
- A more robust compliance test suite would be extremely helpful.
- The best thing the RETS leadership can do is sponsor more education. Not technical education, but education to the MLSs and brokers to help them understand the real cost of utilizing RETS. If organizations really want to take advantage of the power of RETS then they should be willing to fund it. If the revenue is generated, the full advantage of RETS will be realized.

Third Party Providers

- Online matrix or table on www.rets.org showing which MLSs are actually exchanging data with which clients.
- More adoption of Standard Names. Make it mandatory for RETS server vendors.
- Update transaction - Upload of data to the MLSs for at least some basic fields.
- Greater acceptance and adoption of RETS standard names (field names) would reduce implementation and maintenance costs even further.
- Increase adoption of RETS by even more MLSs and vendors.
- Continue server and client certification and make RETS-compliance more meaningful. RETS is a good objective, but more rigorous enforcement of the standards is needed, perhaps through improved compliance testing.
- Build a stronger business case for RETS adoption and present it over and over again.
- Improve security through more robust implementations, roles-based security and more.

2004 RETS Survey Summary Report

The first ever national RETS survey was conducted in June of 2004. This annual activity will provide useful information about the needs of the marketplace, trends and adoption of RETS. More than 250 people participated in the 2004 survey and the results were quite interesting. You can access the complete survey report including the Executive Summary at www.rets.org/resources/retssurvey2004.pdf Another survey is planned for 2005 to determine trends and measure progress.

Who's using RETS?

RETS has come along way since its inception in 1999. Consistent with most other standard's efforts, adoption is one way of measuring progress. As of August 2004, there are approximately 220 MLSs which have access to a RETS-Compliant server solution. Most of the major MLS vendors including FBS, FNIS, Interealty, MarketLinx, Offutt and Rapattoni offer RETS-Compliant solutions to their customers. These vendors serve approximately 665 of the 900 MLSs in the United States today. With so many markets capable of providing access to data via RETS-Compliant servers, there has also been an increase in the number of third party software providers and brokerages that are incorporating RETS into their solutions. This growth trend is expected to continue. Presently, there are literally dozens of non-RETS enabled products and services which are likely to embrace the RETS standard based on the reduction in costs and barriers to entry the markets and resulting in many new and innovative solutions for the MLSs and their customers.

RETS Compliance

The RETS Compliance and logo program was introduced in November 2003 to improve interoperability between RETS clients and servers. This initiative was launched in direct support of the business requirements for more compatible RETS solutions. Put simply, RETS-Compliant solutions are more likely to "talk" and interoperate with other RETS-Compliant solutions when connected. Each RETS-Compliant solution has been certified by passing a series of consistent compliance tests which are designed to "exercise" the application and report on its compliance with the specification. Ongoing updates and re-certifications are required to maintain the RETS-Compliance certification. In addition to RETS servers and clients, RETS sites i.e. MLSs can also become certified as being RETS-Compliant.

For more information about RETS Compliance including a current list of RETS-Compliant vendors and solutions, how to become RETS-Compliant and much more is available at www.rets.org/compliance

If you are interested in becoming RETS-Compliant or having your site audited to better understand exactly what you have, contact Kevin McQueen at Kevin@kevinmcqueen.com or Steve Verba at sverba@avantia-inc.com

Standard Names

The RETS specification provides a dictionary to describe the data that is available from a particular server or MLS. To inform an authorized user (RETS client) about the data that is available, an MLS will publish the dictionary, through the use of "metadata". The benefit of this approach is that it informs the authorized users about the list of searchable data fields available for their use without the need for numerous phone calls or e-mails, these reducing the amount of support for the MLS. There can be multiple sets of metadata available from a single MLS which allows the MLS to better manage its data distribution based on business rules and policies.

Standard Names represents a consistent list of data field names as defined by industry leaders and described in the specification. One of the main goals of standard names is to provide a more consistent method for defining the data across multiple markets to the reduce or eliminate the need to develop custom software for each MLS market. In order for standard names to be effective, the MLS or its vendor must map the local or custom data fields to the list of standard names as described in RETS specification and indicate that they fully support standard names. That way, when an authorized RETS client makes a request, for the listing price for example, they know that regardless of what the MLS or the vendor call this field internally, if they support standard names, the client can retrieve the field using a standard name like listing.price.

Prior to 2004, the list of standard names was considered by some to be incomplete and not robust enough to support industry-wide applications. Further, it was recognized that support for standard names by the server vendors was insufficient. To the first concern, the RETS Data Dictionary Work Group expanded list of Standard Names representing

nearly 1,000 by last count. The next logical step is to work with the MLS vendors and MLSs to determine the necessary resources required to map the Standard Names as well as the benefits to them and their customers for doing so. This is not expected to be an easy or quick initiative, but RETS is heading in the right direction beginning with the significant expansion to the list of standard names as completed in mid-2004.

Supported Versions - 1.0 and 1.5

Like most software and software standards, the RETS specification continues to change and improve based on the experience of the development community, the changing needs and requirements of customers that acquire RETS-compliant software and changes in technology. As a result, the RETS community continues to update and improve the specification to take advantage of ongoing opportunities.

RETS 1.0 and 1.5 are the most current and supported versions of the specification. Version 1.7 is currently under development and should be available during Q4 2004. Continuous and ongoing fine tuning is likely to occur in future versions of 1.x. It is expected that the rate of change will slow over the years to come as this release becomes increasingly mature.

The verification of RETS-Compliance is accomplished through the Compliance Program which will receive ongoing enhancements to improve interoperability between RETS servers and clients. As the Compliance Program is improved, it will be necessary for vendors and third party providers to re-certify their software to certify that it remains fully RETS-Compliant. This process is expected to continue into the future.

RETS 2.0

RETS 2.0 will represent the next generation of the RETS specification and it is being designed to take advantage of the latest proven technologies including Web Services, SOAP, WS-Security, increased use of XML and more. The design, development and prototype reference implementation will be discussed further at the RETS meeting scheduled for December 2004.

Updated MLS Checklist and RETS Draft Contract Language

For those who are considering alternative MLS systems, vendors and contracts, you might benefit from reviewing the section in this reported titled "RETS MLS Checklist". It includes helpful hints about RETS as you move through the selection process.

How to learn more and get involved

There are a number of ways that you can learn more about RETS and get involved in the active RETS Community. The web site, www.rets.org is continuously being updated with fresh RETS news and information for decision makers (technical and non-technical)

and software developers. The non-developer content is for Association and MLS Executives, Brokers and other decision makers that are involved with MLS or accessing or distributing real estate data. Check out www.rets.org to learn more.

- RETS news, upcoming events & education opportunities
- Find out who's RETS-Compliant?
- How to become compliant
- FAQs
- RETS meeting, agendas, minutes and direction

NAR currently sponsors three RETS meetings each year, generally held in April, August and December. Attendance has continually grown over the past couple of years and there were about 80 participants at the August 2004 meeting. Participants include decision makers including software developers, IT managers, MLS support and IT staff, industry consultants, leadership from other industry standard's initiatives such as OSCRE and others. You can review past agendas and minutes to determine if attendance at the next RETS meeting is appropriate for you or someone that you know. Contact Kevin McQueen with Focus Forward Consulting at Kevin@kevinmcqueen.com or (248) 374-1045 if you have specific needs or questions.

There is a "Plugfest" event at most of the RETS meetings. The Plugfest offers developers an opportunity to interact with their peers and counterparts in an informal environment where improved interoperability between RETS clients and servers and increased knowledge and learning are paramount.

You are encouraged to sign-up for the rets-announce e-mail or other mailing lists. Note that rets-announce is only used about 12 times per year to post announcements of general interest. You are always able to unsubscribe at any time from any of the following e-mail lists.

RETS List	Description
rets-announce	Announcements regarding the Real Estate Transaction Standard (announce-only, very low volume)
RETS-compliance	The RETS compliance working group
rets-data-dictionary	The RETS data dictionary working group
rets-ddb	Distributed data base ad-hoc workgroup
rets-dev	Exchange for RETS developers
rets-hotsheet	An ad-hoc workgroup working on hotsheet issues
rets-l	Discussion for users of products implementing the Real Estate Transaction Standard
RETS-marketing	RETS marketing, awareness, education and communications

rets-media-management	An ad-hoc workgroup creating media management transactions
RETS-metadata	The RETS metadata working group
RETS-transport	The RETS transport working group
RETS-update	The RETS update transaction working group
rets2-l	The working group tasked with designing and specifying RETS 2.0

What's Next For RETS?

- Ongoing fine-tuning of the 1.X specification and reference implementations
- RETS 2.0
- Continuous updates and enhancements to the Compliance Program for improved interoperability between RETS servers and clients
- Increased adoption by third party software providers resulting in more choices for high-quality and cost-effective solutions for Realtors®
- Annual RETS survey in 2005
- RETS meetings and Plugfest in December, April and August each year
- Stepped up focus on RETS awareness, education and communications
- Increased adoption of RETS-Compliant software and solutions

What You Need To Know About RETS

The Real Estate Transaction Standard (RETS) is a well-documented open standard for exchanging real estate transaction information. It began in 1999 as a collaborative effort between NAR and a number of industry technology leaders who saw the potential for making it easier to access MLS information, move it from one place to another, and much more. RETS has come a long way since then, and many vendors and data users (those that request access to data) including MLSs, brokers, web site developers, third party solution providers, agents and aggregators have successfully implemented solutions resulting in cleaner and faster deployments, reduced operating expenses and improved scope and quality of services. As you read on, this report will identify specific benefits, successes and opportunities for you and others who are involved in MLS and other aspects of the real estate transaction.

RETS is real and it is here to stay! It is a work in progress with many new ideas being shared and discussed nearly every week by the RETS Working Group, made up of vendors and other technology leaders in our industry. However, you should know that the information that follows is NOT technical in nature, and very little computer jargon will be used. We hope you enjoy learning from our research and experiences.

Direct your questions or suggestions about RETS to Kevin McQueen, President Focus Forward Consulting, Inc. at Kevin@kevinmcqueen.com or (248) 374-1045.

The Basics - Clients and servers

This report will attempt to avoid technical jargon wherever possible. However, it's much easier to understand RETS and its value if you understand a couple of things. RETS itself is not a program. It is the technology standard used by software developers or programmers to create applications and services which take advantage of the standard. RETS applications generally work in pairs using software, known as a "RETS server" and "RETS client". The RETS client typically queries the RETS server for specific information. The server commonly resides on the MLS system. The RETS client software resides on a computer that initiates the request and receive data from the RETS server.
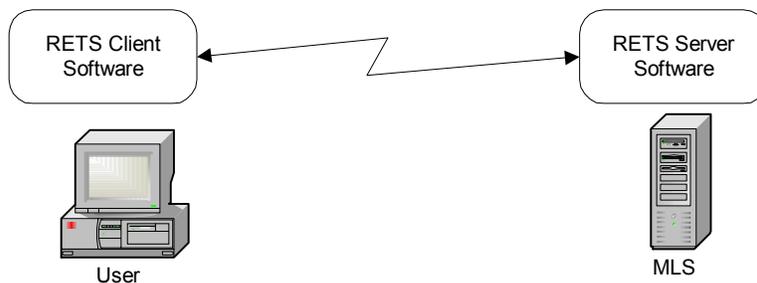
When a computer needs data from the MLS, the RETS client initiates the appropriate request to the RETS server, usually over the Internet. The RETS server responds with data formatted consistent with the RETS specification.

If an MLS system has a RETS server, it was probably developed and supported by the MLS vendor, although some MLS organizations have developed their own RETS servers or have acquired them from other suppliers. Examples:

- Most of the major MLS vendors have developed and deployed RETS solutions including FBS, FNIS, Interealty, MarketLinx, Offutt and Rapattoni.
- Independent MLS solutions including Denver Metrolist and MRIS.

Many different companies and individuals have written RETS clients. Examples:

- Some of the MLS vendors offer RETS clients for use by the MLS and its brokers.
- Third party developers have written RETS client software and incorporated it into their software including eNeighborhoods, Homestore, McChristian, Showing Time, Supra, Tarasoft, Top Producer, WyldFyre and Zipforms. This software can communicate with MLSs that have RETS servers more easily compared to non-RETS implementations.
- Some brokerages have written or acquired their own RETS client and RETS server software to meet their particular needs. One of the benefits of RETS is that it generally supports near real-time access to the data vs. FTP files which are usually only updated once a day.

One of the ways the RETS effort differs from other standards efforts is its emphasis on being "open". Not only is the RETS standard well documented and open and available for the entire community to use and evolve, but there are "open source" versions of RETS software freely available as well. This open source software is available at no cost to the public to encourage use of the standard and to help software developers determine whether their RETS server software functions according to the expectations set by the RETS standard. Avantia Inc. and CRT (NAR's Center for Realtor® Technology) have built "reference implementations" which are available to the industry at no cost. For more information, you can access this report, ongoing updates and open source reference information at www.rets.org

Benefits to MLS Organizations and Staff

RETS offers a more efficient way to deliver MLS data and services to your customers compared to proprietary or customized alternatives. You can offer a faster turn-around on customer requests for data and offer new ways to deliver your products and services to meet your customers' changing needs. When a data user such as a broker, web site developer, third party solution provider, agent or aggregator contacts the MLS requesting data for various purposes, many MLS organizations provide a data access information kit that describes how to access MLS data and the data itself. When the data users have questions, they typically call the MLS, requiring considerable MLS staff time. Without RETS, the MLS may have to initiate a time and labor consuming process where

the vendor has to set-up customized data feeds. RETS streamlines this process by providing a more consistent, well-documented and standard approach from one MLS and vendor to the next. Once data users have a basic understanding of how RETS works, they are able to gain access to the desired information (as authorized by each MLS) much more quickly and with less MLS staff support required. For example, SUPRA is now able to implement their conversions in much less time when an MLS provides access to a RETS Server.

With RETS, you should experience fewer complaints from your customers about things breaking when the MLS implements ongoing changes. Ongoing MLS database changes are a reality in most MLS organizations. They are necessary from time to time to improve or enhance the MLS system. Far too often, a change is implemented and the phones start ringing at the MLS indicating that various downloads or data feeds no longer work the way they used to. With RETS, the "metadata" (information that describes the MLS data in great detail) is available to the data user along with the actual MLS data itself. The metadata can be used by the data user to understand what has changed so they can take corrective action thus reducing the support demands on the MLS staff and the vendor. Most RETS servers include a version number for the metadata. When the data structure changes, so does the version number. This alerts the data user that a change has occurred. Each version number will usually be associated with specific changes, making it easier for the data user or third party solution providers to resolve the situation on their own. This should result in fewer customer complaints and support calls to the MLS.

Using RETS results in smoother system conversions. Converting to a new MLS system or vendor is a complex and challenging project. There are many things that affect how smoothly it goes, including the transition for the data users and third party solution providers. It is common for the data to change during this process, especially if the MLS is changing system vendors. The MLS is typically responsible for notifying and supporting all of the active data users and third party solution providers during the transition to the new system. Those who understand and utilize RETS are more self-sufficient than non-RETS users. For example, if data users are knowledgeable about RETS, they know that the RETS metadata will provide them with most of the valuable information necessary to adapting their systems to the new MLS. This results in reduced phone calls to MLS staff from data users and their customers, less downtime for the MLS customers, and smoother conversions. In the recent system conversion in Atlanta, the First Multiple Listing Service staff spent considerably more time communicating with their non-RETS data users, managing the project, and supporting the non-RETS data users than it did with those that took advantage of RETS.

The MLS can use RETS too. MLSs can take advantage of RETS just like their data users or third party solution providers. MLSs extract data from their MLS systems to meet in-house, broker needs using a RETS client. The MLS reaps many of the same benefits as its data users, including improved change management with fewer surprises and additional flexibility in how and when to extract data to meet its customer's needs in a more timely and consistent manner. With RETS, it should no longer be necessary to contact the MLS vendor every time you want to modify your data extracts or the

frequency of them. The implementation process to support new partnerships where data sharing is involved should be more straightforward using RETS.

Advantages for Brokers

Brokers can enjoy benefits from RETS only if the MLSs in which they participate offer RETS servers. In those cases, here are some of the benefits for the broker and their customers.

"I just want to get my data, when I need it!" This is a common request from the brokerage community. Using RETS, brokers, their information technology or "IT" staff and outside consultants (collectively known as data users) can access their data more reliably when they need it. The old method of FTP files and data feeds typically only provides data updates once per day. Through RETS, brokers and other data users can retrieve the specific MLS data that they need, when they need it in near real-time (up to the minute) in most situations. Of course, the MLS has control over who is authorized and brokers and affiliates must comply with MLS rules about how they use the data. This results in new opportunities for the broker and other data users who need real-time access to the MLS data to support their business models. Another benefit of RETS is that photos, tours and other media can be retrieved on-demand for numerous business applications, such as advertising, in-house broker systems, web-sites and more.

For those brokers who access multiple MLSs in their markets, RETS provides a much more consistent and cost-effective method for accessing the data. Before RETS, there was no industry standard for accessing data from various different systems. As a result, real estate firms had to develop a customized interface for every MLS in which they participated. Many brokers have made significant investments in systems that manage and manipulate MLS data; for those brokers, managing the ongoing changes in MLS systems and their upgrades is very costly without RETS. Brokers and their developers can now use RETS as the standard for moving data between the various systems. This results in reduced expenses in the long-run for everyone involved, faster turn-around when addressing system data changes, and fewer surprises and outages.

Brokers should find the next MLS system conversion much easier if they embrace RETS. MLS system conversions are challenging, frustrating and expensive for everyone involved, including the real estate firm, their staff, suppliers and consultants. Many broker web sites, internal systems, agent sites and advertising solutions are disrupted over several months during the transition to the new MLS system. This results in lost business, opportunities and profits. Once a real estate firm embraces RETS, it will be able to leverage its initial investment and learning curve in RETS to make the next MLS change or conversion much easier and less costly.

Advantages for MLS System Vendors

Higher level of service to customers. RETS provides near real-time access to specific data when the customer or data user wants to it. This is a huge advantage compared to

static FTP files, the primary alternative to RETS. The data user can select exactly what they need, when they need it versus having to download the entire database via FTP site and then parse through large files to get just what they need.

RETS results in a long-term reduction in operating expenses and increased profitability. There are a number of ways that MLS system vendors have benefited from RETS. Prior to RETS, vendors had to custom / proprietary tools and utilities to support conversion to and from other systems. Since the introduction of RETS, many vendors have found advantages to working with the standard, resulting in more consistent and organized transfers of data as part of the data conversion process. Rapattoni and others found that RETS helped them to streamline their conversions, new system implementations and the related costs. This is one of the contributors to their ability to grow their business and market share so quickly. Even vendor implementations of RETS that are not yet complete are already providing value during system and data conversion activities.

RETS is easier to support and maintain for the long run. The same holds true for the ongoing support and maintenance of an MLS system. In the past, vendors developed customized software utilities to meet the ongoing needs of MLSs, aggregators, brokers, third party solution providers and other data users. The vendors that provide MLSs and their data users with RETS-Compliant utilities should expect reduced operating costs in the long run compared with setting-up and maintaining customized software utilities and data feeds.

It has been suggested that the vendor's cost of supporting Realtor.com and other aggregators will be reduced when both sides are able to utilize RETS to transfer the MLS data. As the MLSs change their database (profile sheets), the aggregators, using RETS clients will be aware of the changes resulting in reduced support, downtime and other surprises that are common to this process.

Additional business and customer opportunities. Existing vendors and new entrants will find ways to develop RETS clients which can be used by data users who have very little technical skill and training. Presently, there is a gap between the skills of the average, non-technical data user and the easy to use RETS client solutions. Not everyone who would like to use available RETS clients is capable of operating them. The vendors and third parties that help fill this gap will win additional new business and expand their market reach.

Write it once and use it many times. Vendors benefit when they write software that can be re-used many times for various purposes. Rapattoni Corporation, Metropolitan Regional Information Systems (MRIS) and others are designing their systems and software around RETS in order to maximize their investments. RETS facilitates use with multiple products, increases the quality of delivered solutions, and reduces operating expenses. Smart software developers strive to centralize all of their data rules in one place. This will further reduce set-up time and associated costs, provide for quicker turn-

around for future MLS change requests, result in higher quality software, and require less time for testing. Ultimately, better products and increased profitability will result and nearly all of the data uploaded into the database or extracted from it will pass through one common package of software which incorporates most or all of the data or business rules. This enables vendors to bring new products to market faster and more profitably.

Advantages for third party solution providers

Third party solution providers derive benefits from RETS only if their software can interact with MLS systems that have RETS servers on them. In these cases, the third parties derive a number of benefits:

RETS results in significantly reduced time and cost for new implementations – faster to new markets. Third party solution providers like Top Producer, WyldFyre Technologies, ShowingTime, Tarasoft Corporation and Zipforms have been successful at setting-up new customer accounts in considerably less time and at reduced costs at MLSs with RETS servers. Tarasoft, the developer of *Titan* software, is a good example of this. Before RETS, it took Tarasoft about 30 days to set-up its software to work with a new MLS due to the lack of a common data standard. Tarasoft began implementing its set-ups taking advantage of the RETS servers provided by MarketLinx Solutions and Rapattoni Corporation and has reduced the average start-up time from 30 days to two. This results in a significant reduction in expenses and time to market.

New third party solution providers should find it easier to launch new products in markets where RETS-Compliant servers are available since RETS makes it easier to access and transfer data. As the number of RETS-enabled MLSs continues to increase, some new providers, products and services will become available to MLSs, brokers, agents and other data users. Competition among third parties should spur increasingly better products at reasonable market prices for brokers and agents.

Less downtime and fewer surprises and phone calls. Third party solution providers will want to take advantage of the version controls that are available through RETS. Here is how this works: The MLS vendor is planning to make a series of changes to the MLS system, some on its own initiative and some to implement changes requested by the MLS. Since the changes affect the MLS data, the vendor or the MLS will notify all of the third parties in advance about the scheduled change. They will include information about what is going to change, when it will occur, a new version control number and the updated metadata (information that describes the MLS data available through RETS in great detail). Each third party will schedule the appropriate changes to its software or systems, notify its customers as necessary and begin testing. This approach should result in fewer surprises. In addition, the RETS specification calls for the third party solution providers to invoke an automatic version check every time they access a RETS server. If the version has changed, the third party provider would be aware that a change has occurred. The metadata would help them to understand the nature of the changes this approach creates a safety net in case some third party was not notified of planned

changes. This should provoke few calls from third parties to the MLS and MLS vendor before the customers start calling.

Advantages for Consumers

Assuming that the industry is going to continue to share MLS information with consumers, everyone will benefit from an increased adoption of RETS. Consumers benefit from accurate and frequently updated information. RETS enables the providers to address these opportunities. Imagine the day when a single listing is uploaded to multiple MLSs using software that includes a RETS client. Realtor.com and other aggregators use RETS to extract the approved data from the MLS in near real-time. From the time the broker's office administrator hits the send button to add or change the listing, the consumer could view it on Realtor.com in as little as 10 minutes. Based on the current state of RETS, this is now possible.

The benefits documented above should lead to the following conclusions:

RETS is real and it is here to stay.
RETS will benefit MLS organizations and their staff, brokerages, MLS vendors, third party solution providers, other data users and consumers in many ways.
Reduced operating expenses are good for business. RETS makes it possible to reduce costs and access or transfer data more consistently, more accurately and more quickly.

RETS – it's not just about technology

Since RETS was born in 1999, most of the discussion and effort has been about the technology, with details and specifications being shared among the software designers and developers. This technical activity has been appropriate to get RETS off the ground and to keep it moving forward. Now it is time to raise the awareness about the value and benefits of RETS through increased communications and education with the industry leadership including Associations, MLSs, real estate firms, and others. This report is written for the non-technical leadership, to give you a better understanding of the business case for RETS. It focuses on the current state of RETS implementations, success stories, and how to prepare your organization for a future which includes RETS. This is because RETS is being increasingly used by MLS organizations, brokers and their real estate firms, third party solution providers, vendors and many others. The following explains who is using RETS and how they are benefiting from RETS. It is current as of September 2004.

MLS System vendors. Some MLS system vendors are further along than others in their adoption of an interactive RETS solution. FBS, FNIS, Interealty, MarketLinx, Offutt and Rapattoni are considered by many to be leaders based on their RETS functionality and successful MLS implementations of RETS.. Nearly all of the Interealty, MarketLinx and Rapattoni MLS systems include a RETS server, which supports most of the functionality described in the specification. MarketLinx introduced a RETS listing update capability in the Atlanta market at First Multiple Listing Service (FMLS). The RETS update feature allows listings to be entered into the MLS in mass. Brokers benefit in at least two ways: First, if a firm belongs to more than one MLS, it can load a listing into a system once and direct it via RETS interfaces to multiple MLSs with RETS servers. Second, RETS facilitates more consistent input and exchange of data between MLSs and broker in-house transaction management and back-office software.

Rapattoni made a significant commitment to its development of RETS. RETS is now installed in all of it's 80+ MLS sites using common code. Like other MLS vendors, Rapattoni began using RETS to facilitate its data transfer and conversion activities, and RETS enabled Rapattoni to handle more new business faster and reduce its expenses at the same time. Next, Rapattoni took advantage of the common code written for RETS by including it in other aspects of their software and all output of listing data runs through their RETS interface. This results in faster and cleaner system conversions, standard upgrades for all of their customers at approximately the same time, more flexibility and a smoother transition to a stable MLS environment for the MLS and its customers.

Third party solution providers. WyldFyre Technologies, has been involved with RETS since the very start. As a leading third party provider of software to brokers and agents, WyldFyre has been involved with nearly every RETS implementation discovered during research conducted by Focus Forward Consulting. This is because *Wyldfyre Listings* is in so many markets. RETS enables WyldFyre and other third party providers to start-up in a new MLS market more quickly, with less disruption to the end users and lower expenses compared with non-RETS MLS systems. The RETS interface is much

more consistent than the proprietary exports or file transfers used by all vendors before RETS.

SUPRA Products, a division of GE Interlogix, Inc., uses RETS to download listing and roster data on a daily basis for use in its *eKEY* systems. SUPRA and its customers benefit by using RETS in a number of ways. The query for MLS data is nearly the same at each MLS that hosts a RETS server and the resulting data is provided in a standard format. It is easier to access consistent, timely and accurate information. RETS is more flexible compared with other data access methods. With RETS, it is no longer necessary for MLSs to submit requests to their vendors and then wait for the work to be completed and tested prior to third parties receiving good data. It would appear that vendors providing RETS servers have been very diligent about notifying SUPRA in advance about upcoming changes, allowing it time to prepare. This enhances the accuracy and value of their products and services. SUPRA is currently using RETS interfaces with Rapattoni and Marketlinx systems, and with DC regional MLS, Metropolitan Regional Information Systems, Inc. (MRIS).

Tarasoft Corporation has been very successful at bringing its product to MLS markets that utilize RETS. Before RETS, Tarasoft needed approximately 30 days to start-up in a new MLS market. Where RETS is available, it has reduced the start-up time to about two days resulting in reduced expenses and a much quicker turnaround which benefits Tarasoft's and the MLS's customers. Tarasoft is now able to use standard scripts to move from one vendor or MLS to the next. This was not possible without RETS. Thanks to RETS, Tarasoft's software is available to MLSs, brokers and agents more quickly, more accurately and more reliably compared with the non-RETS MLSs. Tarasoft specifically targets MLSs that have RETS servers as new markets for its software; the reduced time and cost of getting to market makes these MLSs much more attractive partners for the software developer. Tarasoft refers to this approach of moving from one RETS-enabled MLS to the next as the "follow the yellow brick road" method of building its business. As a result, Tarasoft has been able to grow its business at a much faster pace and with increased profitability using RETS.

Multiple Listing Services. In 1999, The Traverse Area Association of REALTORS® (TAAR) located in Traverse City, Michigan was an early adopter of RETS. Initially, TAAR members wanted to search the MLS using a simple interface and a web browser. TAAR developed its own parallel database of the primary MLS system known as the "shadow database". With the assistance of Fidelity National Information Solutions (then known as VISTAInfo), and its ".9 release" of RETS, TAAR was able to extract data from its Maestro/RExplorer databases on a frequent basis to populate its shadow database. Not only did TAAR develop a simple browser-based search for its members as was initially contemplated, but it has leveraged RETS and its shadow database to provide the members with additional products and services including IDX, VOWs and public views.

Another early adopter of RETS, the Northern Ohio Regional Multiple Listing Service (NORMLS) used RETS during its most recent MLS system conversion to facilitate the ongoing transfer of MLS data between systems. Fidelity National Information Solutions

(then known as VISTAInfo) was the operator of NORMLS' existing Compass system. NORMLS was moving to a Marketlinx TEMPO system. There was a period of months during which both system were running side-by-side or "in parallel". Using a RETS client provided by MarketLinx to request the data from Compass, the MLS information was updated every fifteen minutes, in near real-time, into the new TEMPO system during the parallel period. This is a common use for RETS between vendors that have developed RETS server and client software. Although much of the activity is behind the scenes, RETS provides vendors with a more consistent transport mechanism to help control their costs relating to system conversions. The MLS and its customers benefit from faster implementations, cleaner and more reliable data and more timely updates. This helps to build confidence in the new MLS system among the MLS participants and users and get them through the conversion.

RETS Integrators. As noted earlier, there are now multiple options available to you including commercial software and open source RETS server and client software in addition to developing your own custom versions. A number of independent vendors exist to assist in selecting, integrating and implementing RETS solutions for MLSs, brokers, 3rd party solution providers and others. Some examples include OPTC, Avantia, Focus Forward Consulting and Zonar.

The technology is still very important. The ongoing technology leadership and advancement of RETS continues through what is known as the RETS Working Group. Consisting of developers and management of dozens of companies involved with MLS data, products and services, the Working Group members meet twice a year to discuss the challenges and opportunities that they face as they develop software and build products and services around RETS. Bruce Toback of OPT, Inc. (btoback@optc.com) is the technical chairperson of the Working Group who facilitates much of the ongoing discussion about RETS, under the sponsorship of NAR. Significant progress is made between the meetings by many interested and passionate software developers who carry on a constructive dialog about RETS by e-mail. A new community has been created and it's rather interesting to watch it prosper as it advances the RETS cause for all of us.

Since RETS is a work in progress, the Working Group continues to push ahead with new ideas. The current version of the RETS specification is 1.7. The capabilities and design for RETS 2.0 is underway in 2004. RETS 2.0 will focus on solving business problems through the use of technologies including web services, improved security and other industry needs and opportunities. Support and active discussion on RETS 1.x is expected to parallel the RETS 2.0 development efforts for many calendar quarters to come.

Capabilities and RETS-Compliance. Currently, there is no easy way to compare the functionality from one RETS solution to another. No two RETS solutions are the same and there are significant differences in the capabilities between various RETS servers provided by MLS vendors. This report includes a high-level compliance checklist that can be used to determine the capabilities of various RETS servers. This is a practical way for MLS leadership, vendors, real estate firms, third party solution providers and others to compare various offerings and to make more informed business decisions when comparing systems based on their RETS capabilities.

The Future of RETS

The future of RETS looks very promising. Now that FBS, FNIS, Interealty, MarketLinx, Offutt and Rapattoni and other system vendors are offering RETS-Compliant solutions, RETS has become a standard component of most new MLS system contracts and installations. While it lacks the pizzazz of subjects like transaction management or affordable wireless communications, RETS will leave its mark in history as an important enabler of new opportunities and solutions in the real estate industry.

Solution providers like ShowingTime, SUPRA, Tarasoft, Top Producer, WyldFyre and Zipforms have discovered that it is much easier manage a system conversion or bring their software to a new market when the MLS provides access to a RETS Server. Additional third party solution providers will incorporate RETS into their latest products and services in order to retain their existing market share and reduce their start-up costs and ongoing maintenance costs associated with keeping-up with data changes made to MLS systems that they work with. New entrants should also be expected due to the lower start-up costs brought about in part by RETS.

The RETS update transaction makes it possible to upload listings into multiple systems. Brokers and agents want to load a listing just once and have it automatically distributed or uploaded to their in-house systems and the appropriate MLSs in which they participate. This capability has been unavailable for many reasons, including the fact that there was no data standard like RETS. Compatibility has been a problem due to the differences in most MLS systems, forms and data. The RETS standard makes it possible for third party software to upload listings to multiple systems. MarketLinx solutions recently introduced an upload listing feature in its RETS server. For example, its RETS server allows Swift Dual-Entry software to upload listings into the TEMPO system at First Multiple Listing Service (FMLS) in Atlanta. This trend is likely to grow due in part to the significant market demand for such an application and the huge ongoing costs associated with adding and maintaining the same listings in multiple MLSs. Photos and other media can also be shared utilizing a standard RETS upload.

Here's an interesting opportunity for the future. What if Homestore, and for that matter, all other aggregators of MLS data, and the 900 MLSs were able to take advantage of RETS? The data could be updated in a more consistent and timely manner since the aggregators would be responsible for "pulling" the information that they need, when they need it, to provide a more timely and accurate picture of the REALTOR® listing database to the consumers to benefit the agents. This would also benefit the MLS vendors who provide countless hours of ongoing free support on behalf of their customers to maintain data feeds for Homestore and other aggregators. The data feeds could be further automated and streamlined and the frequency of updates could be increased from weekly and daily to hourly, where desired.

Homestore has developed a RETS-Compliant solution which goes a long way toward making this opportunity a reality. With more than 220 MLSs currently having access to a RETS-Compliant server, this represents more than 50% of the active listing inventory and a huge opportunity. However, in order to take advantage of the opportunity, the

RETS servers must support an aspect of the specification known as "Standard Names". Standard Names defines a consistent data dictionary for mapping local data to a national standard from MLS to MLS. By using Standard Names, list.price means the same thing in every market.

Once the adoption of Standard Names is increased, Homestore and others will be able to take advantage of additional benefits of using RETS. As a result, the consumer will receive more accurate and timely information and the number of complaints voiced to the MLSs, brokers and/or agents will decrease. Again we stress, operating costs would go down for everyone involved in the distribution and publication of MLS data.

Finally, RETS has emerged at a time when other similar standards are emerging for other elements of the real estate transaction. The Mortgage Bankers Association's standards effort known as MISMO, can be used with RETS to better facilitate information flowing to various stages of the real estate transaction. A prototype has already been created using RETS and MISMO standards to move MLS data into commercial forms using ZipForms and into MISMO based mortgage loan applications and title search order requests.

RETS MLS Checklist

Use the following RETS checklist and narrative when you:
- Develop an RFP for renewing contracts or researching alternative MLS systems
- Consider adding RETS to your existing system
- Contract with third party solution providers
- Plan for your next system conversion

As you know, there are many factors for consideration when selecting an MLS system or vendor and RETS is just one of them. This checklist will help you to prepare for a future that includes RETS. You can learn a lot more about the value and benefits of RETS at www.rets.org As indicated earlier in the report, you might also want to consider using the services of a RETS Integrator.

☐ Sample MLS contract language on RETS

The style of the attached sample contract language is not important. Focus on the content and use it as your guide.

☐ RETS Compliance Checklist

Use the attached RETS Compliance Checklist to compare the features and capabilities of each of the RETS-Compliant solutions that you are considering. This compliance checklist will provide a good side-by-side comparison. It explores many details about RETS and may require the assistance of technical staff or an advisor who is familiar with RETS in order to determine the specific value to you and your organization. Pay close attention to the Update Transaction if listing uploads are important to you.

☐ RETS installation and reference Form

Ask the vendors and third party solution providers to provide with you reference information about their completed RETS installations.

☐ Potential of MLS system performance degradation

It is important to discuss how your prospective MLS vendor will address the potential of system performance degradation in situations where data users place heavy demands upon the MLS system through massive searches or frequent requests for MLS data. This applies to all systems, not just those that incorporate RETS. There are many ways that your vendor might address a performance problem relating to data extracts, including limiting the number of listings or photos that can be retrieve at one time, imposing time of day restrictions, or requiring the data users to take advantage of more efficient queries against the database. The Houston Association of REALTORS® has implemented a separate dedicated server for use with RETS, IDX and more. By using a separate replicated database, and dedicated servers and Internet bandwidth, HAR should be

able to prevent RETS data users from impacting the primary users of the MLS system.

☐ Determine who is responsible for communications

Consistent Project Management is an important consideration and contributing factor for the most successful system conversions. Frequent and effective communications are crucial throughout the conversion – especially as they relate to data users, data feeds, listing aggregators (realtor.com, homes.com, etc.) third party solution providers and vendors. It is important to determine who is responsible for the communications among your MLS vendor, third parties and other data users during the conversion. Here is a recommended approach.

- Take inventory of all of the known third party software in use by your customers. There are typically more than you might be aware of so you should consider surveying your customers.
- Add known data users to the list including current data feeds, newspaper alliances, Realtor.com and aggregator web sites.
- Broadcast a general message to your brokers and agents at least two times in your efforts to identify as many of the data users as possible at least 3 months prior to the scheduled shutdown of your current system.
- Provide the complete list to your MLS vendor and ask for their guidance on how best to address each one. It may be appropriate to group the data users into categories such as RETS-Compliant users, non-RETS users, limited technical skills (non-developers i.e. brokers), etc.
- The MLS or its consultant should communicate directly with all of the data users.
- Sponsor a meeting with the data users to discuss the schedule and their options for accessing data. Include a technical representative from your vendor, a technical MLS staff member or an outside consultant with knowledge about RETS at the meeting to listen to the data user's needs and concerns.
- Manage this key aspect of the project schedule closely throughout the transition to minimize or avoid disruption to your data users and their customers (who are mostly also your customers).
- As it relates to RETS, empower your data users with an easy to use RETS client from your MLS vendor or other RETS Integrator.

☐ During implementation, freeze the metadata in planned phases.

One of the most frequent challenges faced by third party solution providers that use RETS is that the metadata (information that describes the actual data available through RETS in detail) provided by the system vendor may change several times during the two or three months leading up to the actual shutdown of the old MLS system. There are many reasons for this, one of them being that some data conversion issues are typically identified late in the conversion schedule, which require changes to the database, all of the data extracts or downloads and the RETS metadata. When these issues and their solutions are identified, the MLS

and vendor are both motivated to make the changes as quickly as possible for the benefit of their customers. It is important to note, however, that the proposed changes may affect the data extracts, data feeds, RETS users and other data users. Data users are typically developing their solutions or may even be in a production state during the parallel period. They should be notified in advance about the scheduled change. With RETS, some of the vendors have the capability to "freeze the metadata" and delay the changes affecting the metadata for a short period (2-4 weeks) in order to provide the data users with time to prepare and test their interfaces. However, this does not have to hold-up the vendor from implementing the changes in the MLS database for use by the MLS and their customers. It is recommended that you discuss this capability at the time of contracting for a smoother cutover for your data users and their customers.

If you have questions or suggestions about the RETS MLS Checklist, contract Kevin McQueen with Focus Forward Consulting at Kevin@kevinmcqueen.com or (248) 374-1045.

Sample MLS Contract Language - RETS

NOTE: This sample contract language should not be used "as-is." If you intend to use any part of this language, you should consult your attorney regarding its effect on your rights and obligations. *Neither NAR nor Focus Forward Consulting, Inc. purports to offer legal advice to MLSs or any other party.*

DEFINITIONS
"Customer" means the MLS.

"RETS" means the Real Estate Transaction Standard promulgated by the National Association of Realtors®.

"**RETS Server**" means software compliant with RETS that responds to requests from other computers for data from the System.

"**RETS Client**" means software compliant with RETS that issues requests for data to and receives data from a RETS Server. A RETS client may be a stand-alone application or integrated in another software application; it may be software developed by Vendor, Customer, or a third party.

"**System**" means the MLS system provided by Vendor.

"**Vendor**" means the company providing an MLS system to the MLS.

"RETS-Compliant" means a RETS solution which has been certified as being fully compliant with the specification. RETS-Compliant solutions, vendors and sites are listed at www.rets.org

RETS VERSION: *Chose one option*
 Option 1 The version of RETS-Compliant applicable to this agreement is version 1.6 or higher, available at www.rets.org (or attached as Exhibit X).
Option 2 The version of RETS-Compliant applicable to this agreement is that version that has most recently been promulgated by the National Association of Realtors®.

SUPPORTED TRANSACTION TYPES*: Chose one option*
Option 1 To be compliant with RETS for purposes of this agreement, software must support all of the following transactions types: Login, GetObject, GetMetaData, Search, Update & Logout; and at least one of the following output formats: Compact, Compact-Decoded or Standard-XML.
Option 2 To be compliant with RETS for purposes of this agreement, software must support all of the transaction types and formats set out in Exhibit X – RETS Compliance Checklist.
Option 3 To be compliant with RETS for purposes of this agreement, software must be certified as RETS-Compliant as confirmed by being listed at www.rets.org.

UPDATE TRANSACTION

Editor's Note: The RETS Update Transaction (ability to upload listings in mass to an MLS system) is not offered by some of the MLS vendors. Therefore, it is recommended that you determine your needs and requirements and discuss the RETS Update Transaction specifically with your prospective vendor(s).

OPERATIVE PROVISIONS

RETS Server and RETS Client. Vendor shall integrate a RETS Server into the System.

1. The RETS Server shall reside on *Chose one option:*

   Option 1 the System.
   Option 2 on hardware provided and maintained by Customer.
   Option 3 on hardware specified in Exhibit X, which hardware shall be deemed a part of the System and subject to Vendor's obligations of maintenance and support.

2. All performance requirements applicable to the System set forth in Section xxx shall be applicable to the RETS-Compliant Server.

3. *Chose one option.*
   Option 1 Vendor shall develop and maintain a RETS-Compliant Client and provide Customer _____ user licenses to the RETS-Compliant Client for use by individuals and companies designated by Customer, subject to the license agreement attached as Exhibit x.
   Option 2 Vendor shall have no obligation to provide RETS-Compliant Client software.

4. Vendor shall deliver to Customer basic user documentation of the RETS-Compliant Server and RETS-Compliant Client software, if any, that Vendor provides under this agreement.

5. *[Specify extent of Vendor support for RETS Server and RETS Client, if any.]*

RETS Compliance Checklist

Transaction Supported	Description	Requirements Met	Options Supported	Format(s) Support
General Message Format	RETS messages consist of *requests* from a client to a server, answered by *responses* from the server and returned to the client	Response Header: ☐ Date using RFC 1123 ☐ Cache control set to ☐ Content type RFC i.e. 2616 ☐ Rets-version RETS/digit.digit	☐ Content-length ☐ Transfer-Encoding ☐ RETS-Request-ID ☐ Server	
☐ **Login**	The Login Transaction verified all login information provided by the user. The server's response to the Login transaction contains the information necessary for a client to issue other requests.	Response arguments: ☐ Broker-tag ☐ Member-name-tag ☐ Digest ☐ Min-metadata-ver-tag ☐ User-info-tag ☐ Capability-url-list	Authentication ☐ Basic ☐ Digest ☐ HTTPS ☐ None Response Arguments: ☐ Balance-tag ☐ Timeout-tag ☐ Pwd-expire-tag ☐ Office-list-tag	
☐ **Action**	This is meant to support notifications like bulletins or emails. It consists of a URL on which the client MUST perform a GET immediately after login.			
☐ **GetObject**	The GetObject transaction is used to retrieve certain types of structured information. It is most often used to retrieve multimedia files (images) and other key-related information.	Types supported: ☐ Location ☐ Text/xml ☐ Image/jpeg Response Header Fields: ☐ Content-type ☐ Content-ID ☐ Object-ID ☐ MIME-version	Optional types: ☐ Image/gif ☐ Image/tiff ☐ Text/html ☐ Video/mpeg ☐ Audi/basic ☐ Video/quicktime Response Header Fields: ☐ Location ☐ Description	

☐ **Logout**	The Logout transaction terminates a session		☐ ConnectTime ☐ Billing ☐ SignOffMessage	
☐ **Search**	The Search transaction requests that the server search one or more searchable databases and return the list of qualifying records. This is the most common way to use RETS.	Request arguments: ☐ SearchType ☐ Class ☐ Query ☐ QueryType	Search Types ☐ ActiveAgent ☐ Agent ☐ Office ☐ History ☐ Property ☐ Prospect ☐ SignOffMessage ☐ Tax ☐ Tour Request Arguments: ☐ Count ☐ Format ☐ Limit ☐ Offset ☐ Select ☐ Restricted Indicator ☐ Standard Names	☐ Compact ☐ Compact-Decoded ☐ Standard-XML
☐ **Get Transaction**	In RETS, various system activities are know as transactions		Transactions supporting Get – only action must support Get ☐ Action ☐ Login ☐ Logout ☐ Search ☐ GetMetadata ☐ GetObject ☐ Change Password	
☐ **Change Password**	The Change Password transaction provides a means for the user to change their own password	Required Arguments: ☐ PWD		

☐ **Update**	The Update transaction is used to modify data on the server. This could be used to send new records to an MLS.	Request Arguments: ☐ Resource-name ☐ Calss-name ☐ Validate-flag ☐ Update-type ☐ Record ☐ Field-delimiter	Validation types: ☐ Update ☐ Multi-Select Lookup ☐ Range ☐ Update ☐ External	☐ Compact ☐ Compact-Decoded ☐ Standard-XML
☐ **GetMetadata**	The GetMetadata transaction is used to retrive information about data, i.e. structured information about the nature of the data that RETS can provide. This enables users to understand more about the data that RETS can provide.	Response Header Fields: ☐ Content-type ☐ Content-ID ☐ MIME-version	Request Arguments: ☐ Format Types Defined: ☐ System ☐ Resource ☐ Class ☐ Object ☐ SearchHelp ☐ EditMask ☐ Lookup ☐ Validation-Lookup ☐ Validation-External ☐ Validation-Expression ☐ Table ☐ Update ☐ LookupType ☐ Validation-LookupType ☐ Validation-ExternalType ☐ Update Type Response Header Fields: ☐ Description	☐ Compact ☐ Compact-Decoded ☐ Standard-XML

RETS Installation References Form

Vendor or third party provider:_____

Your name and contact info: _____

Provide the following information based upon your completed RETS-Compliant Installations.

Association or MLS	Primary Contact	Phone or e-mail

Can you freeze the RETS metadata for two to four weeks during the conversion implementation in order to allow third party providers, brokers and other data users to modify and test their interfaces?

Is your RETS server and/or client certified as RETS-Compliant?

Do you support all of the Standard Names as defined in the spec?

Does your RETS-Compliant client (if applicable) check the metadata version when logging in to a RETS-Compliant server?   If so, does your software automatically make the necessary adjustments to avoid intervention by the end users?

What other features or capabilities exists in the RETS-Compliant solution that differentiates your solution?

References

I would like to thank Brian Larson and Steve Verba of Avantia for their contributions and assistance with this report as well as all of the dedicated people that shared their time and experiences with me about RETS.

September 2004
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Contributions From:
Dayton Area Board of (www.dabr.com)
Denver Metrolist (www.metrolist.com)
First Multiple Listing Service (www.FMLS.com)
Fidelity National Information Solutions (www.FNIS.com)
Houston Association of (www.har.com)
Interealty, a subsidiary of Geac Computer Corporation, Ltd. (www.interealty.com)
MarketLinx Solutions (www.marketlinx.com)
Metropolitan Regional Information Systems (www.mris.com)
National Association of REALTORS® (www.realtors.org)
Northern Ohio Regional Multiple Listing Service (www.normls.com)
Office Product Technology Inc. (www.optc.com)
Rapattoni Corporation (www.rapattoni.com)
RETS Working Group (www.rets-wg.org)
Regional Multiple Listing Service of Minnesota, Inc (RMLS) (www.northstarmls.com)
ShowingTime (www.showingtime.com)
SUPRA Products, a division of GE Interlogix, Inc. (www.supra-products.com)
Traverse Area Association of REALTORS® (www.taar.com)
Tarasoft Corporation's (www.tarasoft.com)
WyldFyre Technologies, a division of Homestore, Inc. (www.wyldfyre.com)
Zonar (www.zonar.com)

Plus more than 250 organizations that participated in the 2004 RETS Survey.

Open Source Reference Implementations available at:

RETS web site – www.rets.org
Avantia - http://rets.avantia-inc.com