

Automating Complex Legal Advice with Corticon BRMS

California Association of Realtors: A Corticon success story



**CALIFORNIA
ASSOCIATION
OF REALTORS[®]**

About the CALIFORNIA ASSOCIATION OF REALTORS[®]

The CALIFORNIA ASSOCIATION OF REALTORS[®] (C.A.R.) is a California-based association with nearly 175,000 member agents and brokers in more than 115 California local member associations. For more than 100 years, C.A.R. has been dedicated to the advancement of professionalism in real estate. Through a variety of member services, C.A.R. helps real estate professionals, collectively referred to as REALTORS[®], increase quality of service and mitigate risks.

Challenge

One of the most complex parts of a REALTOR[®]'s job is determining what forms to use for what transaction. There are approximately 150 C.A.R. approved real estate forms (e.g. contact, offer, agreement, disclosure, etc.). And, these forms are used across a variety of real estate transactions (e.g. purchase of residential property, lease of apartment, etc.).

The number of possible combinations of forms is mind-boggling. And, the failure to complete a single mandated form can subject the REALTOR[®] to liability and/ or sanctions, including fines, loss of license, and damaged reputation. The worst part is that the requirements change all the time, due to changing regulations and best practices.

One of the most important services delivered by C.A.R. is advising their membership about the correct set of forms to use for any given real estate transaction. This guidance has been provided by a legal staff via a member hotline which fields approximately 60,000 unique calls per year.

"The rules governing which forms to use change frequently in response to changes in the law, best practices and changes in the text of the forms themselves," said C.A.R. President William E. Brown. "Some forms apply state-wide, while others are specific to regions, geographies or local associations. Brokers also have their own specific forms and rules, some of which override the local or statewide forms."

C.A.R. recognized that providing forms advice was an ongoing challenge, and one that continues to grow more complicated with time. To help to address these challenges, C.A.R. looked RE FormsNet (REFN), the creator of ZipForm[®], the Exclusive and Official Forms Software of the NATIONAL ASSOCIATION OF REALTORS[®] (NAR). REFN, a joint venture of NAR and C.A.R., has been in the electronic forms business for 15 years, and knew that there had to be an easier way.

REFN's leaders envisioned a Web-based advisory service that would leverage technology to guide members through the most common consultations. They believed that it was possible to embody relevant knowledge from C.A.R.'s legal staff into a software application, and to deliver that knowledge over the Web to members when and where needed.

At the same time, REFN's IT staff realized the magnitude of the challenge. They knew that due to both the complexity and the rate of change of legal knowledge, traditional software development techniques would fail. "It's not so much building the system. With enough people and time it could be done," said Joshua Sharfman, CTO. "But, maintaining the system would be problematic."

Key Requirements

REFN hoped to find a solution in the domain of rule-based systems. prior research indicated that Business Rules Management Systems (BRMS) are designed to encode complex rules and regulations, and to allow easier maintenance of such logic.

When looking for a BRMS, REFN had a few key requirements in mind:

- User-friendly – to empower business analysts to directly manage the rules without programming
- Flexible – to enable rapid and frequent change of the rules without breaking the system
- Modular – to cleanly separate rules modeling from implementation
- Fast and Scalable – to accommodate significant use today, while supporting future growth

Selection

REFN evaluated three leading BRMS vendors, including Corticon. "Upon seeing the products in action, it was immediately clear that Corticon presented the closest match to our requirements," said Sharfman. With no formal training, Sharfman downloaded the Corticon software and built a prototype of his system to demonstrate to management that Corticon BRMS could the company's requirements.

"We were impressed with the ease of use of Corticon BRMS. We especially liked the analysis tools to create a complete, comprehensive model, which helped to identify ALL possible cases. Given the complexity of our rules, it's difficult for the knowledge experts to do this on their own."

REFN selected Corticon's BRMS, which included the Corticon Business Rules Modeling Studio to create, validate and test the business rules, the Corticon Business Rules Server to execute the rules in a SOA environment, and the Corticon Enterprise Data Connector to directly connect the rules engine to a relational database, eliminating the need for integration code.

REFN found several unique capabilities in the Corticon solution:

- Simple and Comprehensive Rule Modeling – Corticon's solution was unique in enabling even the most complex rules to be described as business-friendly models.
- Automated Quality Assurance – Corticon's unique analysis tools helped to ensure the rules were right, in a way that was understandable to our business people
- Auto-generation of Web Services – Corticon's simple deployment model accelerated development and helped to provide a distinct separation of responsibility between rule modelers (business) and integration and deployment (IT).
- Direct Database Access – Corticon's data access enabled rapid prototyping, accelerated development and superior performance for data-intensive processing.

Implementation

Within one week of starting the project, REFN was up and running with the Corticon products. They started by interviewing C.A.R.'s legal staff, capturing their rules and vocabulary directly into the Corticon Studio, and then deploying the rules as Web Services using the Corticon Server. Last, they integrated the rule services into a Web-based UI for data collection.

Development included three staff, plus a manager (one UI developer, one Database developer, and one Rule Modeler). The full project took approximately five months, including a beta test of nearly 200 users. When completed, it was rolled out to nearly 200,000 users.

Solution

In April 2008, REFN successfully completed and rolled out their new Forms Advisor™ solution. "The Forms Advisor™ solution leverages Corticon's Business Rules Management System to define, automate and manage the rules for real estate forms selection," Brown said. "This enables brokers, sales associates, and transaction coordinators to go to a Web site, answer a few simple questions, and determine which forms to use, providing a higher level of service to their clients and avoiding expensive and time-consuming litigation."

In working with C.A.R. during the first three months, the system managed 30,000 sessions across 20,000 users, with over 1 million forms recommended. This has dramatically lowered the

need for legal staff to answer these same questions, and helps to provide 100 percent consistent advice. Forms Advisor™ helps new REALTORS® to quickly learn the trade and for experienced REALTORS® to stay current.

“Most importantly, the application is helping REALTORS® mitigate risk. If a REALTOR® does not use a required disclosure form, they’ve opened themselves to liability. If they use the wrong form, they are not protected. These are hard costs, and don’t consider the soft costs of a damaged reputation,” says Brown. “The Forms Advisor™ project is viewed as the nexus to risk resolution.”

The Corticon Experience

“The Corticon BRMS exceeded our expectations,” said Sharfman. “Compared to traditional development approaches, we realized at least a 10-fold improvement in productivity. For example, with Corticon, we can safely add rules for a new form in a few hours, even if it requires the addition of new variables. This same task would take considerably longer using even the best programming techniques.”

“And, we are able to offload the rules management role to our business analysts—something we strived for and Corticon delivered,” said Sharfman.

Corticon’s versioning features have really come in handy. “With Corticon, new rules can be created and deployed today, but not go into effect until some future date, such as when a new statute takes effect. And, you can audit the system for what rules were in effect at a prior date. This can be invaluable for a REALTOR® to use in the event of litigation.”

The enterprise-strength performance and reliability of the Corticon BRMS also impressed Sharfman. “We stopped load testing at 20 transactions per second, including database access – two orders of magnitude higher than we might reasonably experience,” said Sharfman. “And, due to very efficient memory usage, minimal hardware is required. Most importantly, thanks to Corticon, the system is virtually bug-free. To date, it appears that we’ve had zero rules defects and zero production defects.”

Corticon’s data integration features also provide significant productivity gains. “First, it helps us to easily prototype the application using real data,” says Sharfman. “Additionally, data integration simplifies maintenance. We’re now able to manage a frequently changing set of forms, articles and training materials in our database, and have Corticon dynamically connect to the right content at run-time.”

REFN has also had a very positive experience leveraging Corticon’s Professional Services team.

“We were quickly self-sufficient with the products,” added Sharfman. “What we needed most was to work with an organization that could critique our design patterns, implementation and performance. Partnering with Corticon on mission critical objectives transcended the technology.”

Future Growth

Not far off the horizon is the extension of this application that also assists with local- and broker-specific forms, and one that supports other states. This is a simple matter of incorporating the appropriate business rules in the application that has been developed and deployed. In addition, REFN is looking to leverage Corticon to assist REALTORS® in other areas of regulatory compliance and financial reporting.

In California, Forms Advisor™ is to serve as the anchor for other computer-based risk mitigation tools which include:

- WINForms®— electronic forms
- Forms Advisor™ — which forms do I need and which are mandatory / which are recommended
- Forms Tutor™ — educational info on how to fill out the form
- Legal Q&As — legal info from the car.org Web site

“The ease of implementation demonstrated that Corticon successfully provided the agility and flexibility to scale within our organization,” says Sharfman.

About RE FormsNet

RE FormsNet (REFN), the creator of ZipForm® is the Exclusive and Official Forms Software of the NATIONAL ASSOCIATION OF REALTORS®. REFN also offers RELAY®, the Web-based transaction management system/Internet tool.

REFN is a subsidiary of Real Estate Business Services, Inc. (REBS) and is a joint venture between REBS and the NATIONAL ASSOCIATION OF REALTORS® (NAR).

Real Estate Business Services Inc. (REBS) is a subsidiary of the CALIFORNIA ASSOCIATION OF REALTORS®.

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