



RE/MAX: Selling Homes through a Dynamic Web Experience

An IDC Infoimaging Case Study

THE SUBJECT

RE/MAX International, founded in Denver, CO in 1973, has grown to a network of 74,000 independent sales associates in 4,300 offices in 40 countries and eight territories worldwide completing over 1 million transactions annually. The firm provides a full range of residential and commercial real estate services. This case study addresses residential real estate sales processes.

THE GOAL

Enhance the effectiveness of the Internet for both the sell and buy sides of real estate transactions. The Internet has evolved into an effective tool for exposing properties to prospective buyers, but is limited to media not requiring broadband connections to reach the majority of residential customers. Digital still pictures were a big step forward, but don't provide a complete view of properties.

THE SOLUTION

Online virtual tours, e.g. Homestore, Inc.'s HomeTour 360⁹⁷™ developed by iPIX, built by merging still photographs of a room or scene in a way that allows the viewer to scan the room panoramically, or from top to bottom, as if they were at the center of the room provide an improved means for RE/MAX Associates to showcase properties.



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Executive Summary

Situation Analysis

The real estate industry relies on a vast pool of constantly changing data to provide potential buyers with the information they need to find, select and purchase properties. Multiple Listing Services [MLS] were formed to provide real estate sales agents with information about properties listed by other agents in their area. Up until the late '90's, this dynamic database was typically compiled weekly and printed out with black and white photographs of properties by type, location, and price. Prospective buyers would rely on their buyer agents to be aware of what was currently for sale or would be handed the MLS book to browse at their leisure.

Business Drivers

The Internet has become the most important source for consumer home searches, with the Internet overtaking newspapers as the primary media resource for consumer home searches. The Internet offers the ability to combine a variety of media, including digital images, with detailed data on properties in a searchable database available to anyone with Internet access. The advent of affordable digital cameras speeded up the process of posting pictures online.

Technology

Virtual tours are built by assembling still photographs of a room or scene in a way that allows the viewer to scan the room panoramically, or from top to bottom, as if they were at the center of the room. Virtual tours can be posted on a Web site as easily as a conventional still photograph and can be viewed adequately through a dial-up Internet connection. The experience is enhanced considerably with a broadband connection.

Benefit Profile

The key benefit of Virtual Tours is increased exposure of sellers' properties, essentially increasing the liquidity of the market. Buyers benefit from better visual information during property selection, such as an interactive viewing experience that simulates an open house. Both the sell and buy sides of the transaction save time and hassle.

Future

With only 15 percent to 20 percent of RE/MAX listings now featuring virtual tours, the market appears poised for substantial growth. Important gating factors include the need for: 1.) costs to come down, 2.) more VAR programs 3.) broader residential broadband penetration and 4.) more evangelism on the inherent value of virtual tours.

Eastman Kodak commissioned IDC to identify and analyze examples of Infoimaging at work in the marketplace today. This case study, and others in this series, demonstrates how the convergence of imaging science and information technology is driving growth opportunities for vendors and enabling companies using Infoimaging to improve their mission-critical processes and better serve their customers.

Situation Analysis

RE/MAX was founded in Denver, CO in 1973 based on the concept of building a network of real estate agents who pay a management fee and share of monthly office overhead in return for a broad spectrum of programs, tools and services to help them list and sell properties. Their revolutionary model of not assessing affiliates a portion of their commissions has helped RE/MAX grow to more than 74,000 sales associates in 4,300 offices in 40 countries and eight territories worldwide. In 1999, RE/MAX associates set an industry milestone of one million sales transactions within a single year—a feat they have repeated annually since.

Incorporating leading-edge technology into solutions for their associates has always been a top priority for RE/MAX. In 1994 the firm launched its RE/MAX Satellite Network to disseminate training, professional education and promote their corporate culture across their international network. The company established RE/MAX Mainstreet in July 1998, a “members-only” extranet Web site to facilitate communication among associates, provide updated news on the real estate business and access to documents, forms and resource material critical to the sales process. In addition, RE/MAX offers its affiliates custom software solutions to help them manage their listings, sales contacts and back office operations.

Key RE/MAX Business Driver: “Pictures sell homes.”

In 1997, Bruce Benham, now RE/MAX’s Chief Technology Officer, was Vice President of Information Technology when he and his colleagues were approached by Internet Pictures [now iPIX] with a novel technology capable of providing 360° views of a scene, such as the room of a house. Originally developed as a vision system to navigate robots in toxic environments, iPIX was searching for applications for its technology. As every realtor knows, pictures sell homes. Therefore, a means to provide better pictures of their properties was of interest to Benham and his team at RE/MAX.

Meanwhile, the founders of Homestore, Inc. (a provider of online information and services for the real estate industry) were working closely with The National Association of Realtors to take over their efforts to electronically distribute real estate listings. At the time, Realtors were terrified that their commissions would be gobbled up by online discounters, as was happening to travel agents, stock brokers and bookstore owners. Homestore worked with them to create their own online marketing arm, REALTOR.com®. It collected listings from more than 850 regional listing services and charged agents an average of about \$40 a month to enhance their listings with contact

information, additional photographs and other tools to provide more information to interested consumers. Homestore.com was facing its own competition and so was eagerly looking for new alliances, products and services. In 1998, Homestore.com started working with Bamboo.com to allow their tours to be posted to REALTOR.com. iPIX was created when Internet Pictures merged with Bamboo.com in 2000. RE/MAX evaluated virtual tour offerings from several different vendors. It liked the fact that iPIX brought more to the table than innovative technology. They had developed an infrastructure capable of supporting agents who chose to create virtual tours as part of their marketing mix. iPIX developed tools, using off-the-shelf cameras and customized software to make creating a virtual tour quick and easy. They also had customer service people trained to aid users and thereby not burden RE/MAX staff.

Info Imaging Solution Overview

Image Capture a Critical Element of HomeTour 360⁰™

Homestore's HomeTour 360⁰™ can be delivered using either the iPIX patented immersive imaging technology or a panoramic technology offered by MGI. The iPIX technology uses a Nikon 180° fisheye lens to capture an image of a room or scene. The lens is able to capture a full, hemispherical view with one picture. To produce a full 360° view requires only two pictures. The lens can be used with a compatible digital camera or one of the Nikon models provided through Homestore. In addition, a specially designed iPIX rotator which can be easily adapted to fit most professional tripods is required to capture the images accurately. The Nikon Coolpix 5000 Image Creator Kit (pictured on the following page) includes :

- Nikon Coolpix 5000 Camera
- 5.24 megapixel CCD, high-resolution, wide-angle, 3X Zoom Nikkor lens
- Nikon 180-degree fisheye lens with step-down ring adapter
- Bogen 3001 full-height tripod
- iPIX Rotator

The Real Estate Wizard software, also developed by iPIX for both PC and Macintosh systems, allows the user to seamlessly stitch the two flat images together with no distortions. The software is ActiveX and Java compatible allowing for easy Web implementation. The HomeTour 360⁰™ kit is designed for use by laypeople, but is capable of satisfying the demands of skilled professionals. [To view iPIX real estate solutions, go to <http://www.ipix.com/showcase/realestate.shtml>].



Nikon Coolpix 5000 Image Creator Kit

Source: iPix, 2002

A General Overview of RE/MAX's Solution

IDC classifies RE/MAX's solution as an example of Infoimaging by virtue of its use of imaging technology to improve the communication, presentation or interpretation of information. Under the Infoimaging framework, components used to develop such a solution fall under three categories:

- **Devices**, which are used to capture, process, or output images (e.g., scanners, digital cameras, printers, and hand-held devices);
- **Infrastructure** (including IT and networking resources) which is used to store, process and deliver image-based information.
- **Services/Media** (including the software, film and services) which are used to access, analyze and print images.

The Device component of the RE/MAX solution is defined as the Nikon Coolpix 5000 Image Creator Kit, which is the hardware element of The iPIX® Image Creator System. Another critical component of the System is iPix's immersive imaging software, which is used to process digital images and constitutes one of the two Services/Media components of the RE/MAX solution (the other is Java-based software running on the Homestore Web site). Hardware running Homestore's Web site represents the primary Infrastructure component of the solution.

Key Infoimaging Components of the RE/MAX Solution

Devices	Infrastructure	Services/Media
Digital Camera(s)	Homestore's Web infrastructure	Java-based software running on the Homestore Web site iPix's Immersive Imaging Technology

Source: IDC, RE/MAX, 2002

A standard virtual tour from Homestore includes four separate views which can include the main living area, kitchen, master bedroom and an outside view. Large properties often have six to eight views to fully capture what they have to offer. The views and how they are captured are up to the sales agent and/or their photographer. Once captured, the pictures are stitched together with the Real Estate Wizard software and are uploaded to Homestore. Homestore's systems then configure the image for a HomeTour 360⁰™ virtual tour which is then placed on REALTOR.com and also can be distributed via the Homestore Distribution Network to other Web sites, including REMAX.com, other real estate portals, MLS Web sites and on the realtor's own site. The images are stored on Homestore's servers and deployed to a specific Web site on demand.

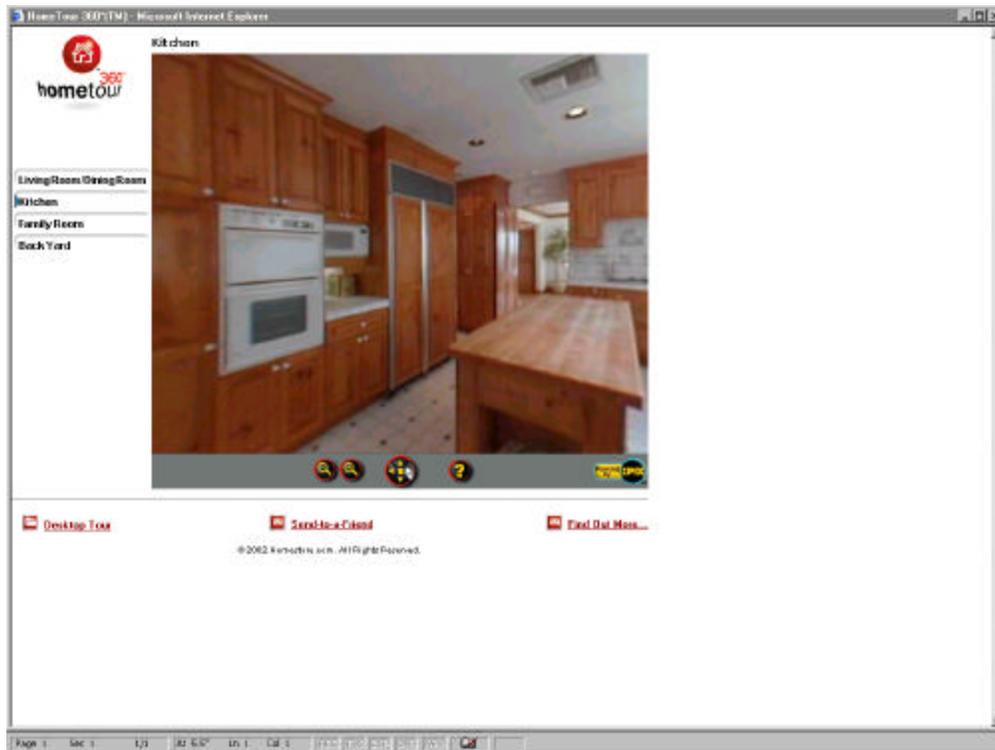
"Pictures sell homes.
And it makes my job—
and the job of the
buyer—a lot easier."

— Sandy Beeler, RE/MAX
Associate, Knoxville, TN

Visitors to the site click on the HomeTour 360⁰™ icon and images are inserted directly into their browser using ActiveX or Java components which provide viewers with real-time feedback that allow them to control the scenes they are viewing. Not all real estate agents want to take time from their sales activities to construct virtual tours of their properties. Independent photographers have stepped in to fill the demand, and beginning in 2002, Homestore initiated a VAR program to resell its HomeTour 360⁰™ virtual tours through these independents. Now realtors don't have to concern themselves with the technology, just capitalize on its benefits.

The HomeTour 360⁰™ Infoimaging Solution at Work

Sandy Beeler, an experienced RE/MAX Associate based in Knoxville, TN, points to effectiveness of imaging in the real estate selling process as her key reason for using it. "Pictures sell homes," says Beeler. "And it makes my job—and the job of the buyer—a lot easier." A big part of Beeler's business comes from cross-country relocations. She



A Sample Kitchen View on the HomeTour 360 Site

Source: Homestore.com, 2002

has found that prospective buyers often won't even consider a home unless they can see a virtual tour first.

Beeler described two recent transactions where buyers were coming to Knoxville from out of state. One couple spotted the house they wanted online and called to tell her not to sell it until they got there. They came, they saw the house first hand and they bought it. In another cross-country relocation, the husband found a house he was sure would please his family, but he was on the ground in Knoxville and his wife was home in Michigan. He pointed her to the virtual tour because he was concerned that the house would sell before she could take the time to travel to see it in person. She viewed the tour, gave her approval and Beeler rang up another sale.

Homestore Connects Consumers with REALTORS Online

Homestore's mission is to maintain its position as the leading supplier of online media and technology solutions to the home and real estate industries. In January 2001, Homestore acquired the exclusive rights to distribute iPIX technology for the residential real estate market in the US. Homestore saw the opportunity to merge MLS information with the immersive imaging technology developed by iPIX to create an of-the-shelf service for real estate agents that would clearly differentiate its offerings from offline media such as newspapers, brochures and standard MLS listings. Despite its vested interest in the

iPIX technology, Homestore supports other companies' virtual tour products by allowing them to post their tours to REALTOR.com and the Homestore Distribution Network.

RE/MAX agreed with Homestore's approach and continued to promote the use of iPIX technology, now branded HomeTour 360™, by its sales agents. As a "preferred" supplier to RE/MAX, Homestore offers sales agents a pre-negotiated price for virtual tours. RE/MAX remains behind the scenes acting only to educate its agents on the benefits of employing the technology as part of their marketing mix. The fact that Homestore supports competitive solutions fits in well with the RE/MAX decentralized approach.

Infoimaging Benefit Profile

Beeler's experience with virtual tours has been extremely positive. She estimates that her sales cycle time has been reduced by about 45 days (from 90-120 days to 68 days) due in large part to virtual tours. She no longer does open houses – the bane of home sellers. She now has the equivalent online 24/7. In addition, many prospective buyers can't make open houses due to schedule or travel constraints. Virtual tours help expand exposure of properties simply because of their availability.

The Internet, coupled with the MLS database, digital pictures and an effective search engine make the home search process orders of magnitude more productive.

The sell side of the real estate market is not the only to benefit. Buyers are big beneficiaries too. Buying a home is often one of the more stressful events people endure. Buyers have to search for the "right" property for them from what is typically an overwhelming number of options. There are numerous parameters to be considered: number, size and types of rooms; appliances and facilities installed; the grounds; location and availability of schools, stores, churches, etc. The list is lengthy and then, perhaps the most important factors are the intangibles – the look and feel of the house. Buyers need to determine if they can make it "their" home.

The process is compounded when a long-distance move is required. Buyers need to search alternative neighborhoods not just for houses, they need to find a location where the commute to work is acceptable and one that matches their lifestyle (city, country, suburb). Most relocation buyers visit the area where they are moving on a "house hunting" trip. It's not unusual for them to feel like "operatives" air lifted in on a mission with a set goal, critical time and resource (money) constraints and facing an unknown set of circumstances.

The Internet, coupled with the MLS database, digital pictures and an effective search engine make the search process orders of magnitude more productive. This information coupled with local and regional information, maps, etc. help buyers get a clear picture of the

alternatives before they set out on their “mission.” The addition of online mortgage information and application processing helps speed things up and removes the uncertainty of what buyers can afford. Virtual tours raise the productivity bar several more notches by providing a better picture with which to view the property. If pictures sell homes, it stands to reason that better pictures sell homes better.

IDC Analysis: Future Drivers of Immersive Imaging Technology Adoption

Immersive imaging technologies have already established a significant foothold in the real estate and the travel/hospitality industry as a means of providing virtual tours. IDC expects the adoption of immersive imaging technologies to continue to grow as providers of immersive technology products develop customized applications targeted to specific vertical markets or horizontal applications. Among the many potential uses of immersive imaging technology is 360-degree “visual documentation,” which could be employed for mapping, public safety applications, security systems, observation and surveillance, training, and visual records. For example, an immersive image of a nuclear power plant could provide critical logistical information in case of an emergency, enabling first responders to remotely and safely examine the plant from floor to ceiling and around all four walls. Other applications of immersive imaging technology likely to drive adoption include:

- **Dealer-based auto sales**, in which new or used car dealers display their inventory via 360-degree virtual tours inside and outside the vehicle.
- **e-Commerce**, in which online customers can view products in a more interactive setting, thereby increasing site traffic and retention of online shoppers.
- **Crime scene and forensic records**, in which immersive imaging is used to create a more comprehensive visual record of a crime scene, efficiently establishing the spatial relationships of objects within an environment.
- **Training and education**, in which prospective students can tour multiple universities online via Web-based virtual tours. By the same token, universities, the military and businesses can use immersive technology to disseminate information to their students and employees in efficient, productive, and compelling ways.