

## **Teaching GIS Methodology in Real Estate Schools**

**Abstract** - Real Estate Schools prepare their students to enter the real estate profession, as real estate agents and brokers. Most real estate schools have not incorporated the study of GIS applications into their curriculum. This paper discusses a possible "GIS for Real Estate" module that would become a component of such programs.

### **Existing Real Estate School Curriculum**

The State of California requires individuals interested in obtaining a real estate sales license to complete a Real Estate Principals course followed by the Salesperson Exam. Those with a salesperson license or other suitable education, that wish to become brokers must take a series of courses and exams and have two years experience. Real estate salespeople and brokers are required to complete courses as part of their license renewal.

Real Estate education programs teach government rules and regulations. Many of these programs do not educate real estate salespeople and brokers about starting, marketing their own businesses, or targeting a market.

Many of these programs do not teach about the actual markets where real estate salespeople and brokers conduct their business. The result is a large number of real estate salespeople and brokers that leave the industry not long after they enter it.

Educating real estate salespeople and brokers about GIS and its uses for their profession is likely to allow them to become better at their work, and increase the level of service they provide their clients.

### **Uses and Benefits of GIS to Commercial Real Estate Salespeople and Brokers**

Commercial real estate salespeople and brokers work to locate retail office, and industrial properties for their clients. They look at listings on the Multiple Listing Service (MLS). They look for pocket listings, which are properties available for sale by owner or not available on the MLS for other reasons.

Real estate salespeople and brokers need to determine if the seller's asking price is appropriate, as well as the maximum price that should be paid for a property such that the deal is advantageous to the buyer. To do so they need to analyze the sales prices, the rent prices, and the return on investment (ROI) of similar properties in the same area.

Commercial real estate salespeople and brokers sell properties for their clients. They need to define the appropriate listing price. To do so effectively, they need to know the listing and sale prices of comparable properties.

Commercial real estate salespeople and brokers search and locate investment properties for their individual or group of investors. To do so effectively, they need to present realistic financial models for ROI.

Commercial real estate salespeople and brokers should be able to conduct financial analysis to evaluate the value of candidate properties. This may include analysis of Cap Rates in different areas as well as analysis of dollar per square feet of land / built area.

To find the most appropriate location for a business, real estate salespeople and brokers should analyze other businesses, competitors, and demographics in different areas and match them to the target market of the business. They should also look at the proximity of candidate properties to points of interest which may impact the business.

In reality, many real estate salespeople and brokers do not know how, and do not have the tools to perform such analysis.

Commercial real estate salespeople and brokers should also evaluate the nature of neighboring properties to a candidate property before they introduce the candidate property to the buyer. Being in proximity to certain types of businesses can add value and clients, while being in close proximity to other businesses may reduce the value and number of clients a business could attract.

Once candidate properties are identified, the real estate salespeople and brokers can use GIS to reduce the number of times they drive the buyer to undesired locations. This is likely to improve the relationship with the client.

### **Use and Benefits of GIS to Residential Real Estate Salespeople and Brokers**

Residential real estate salespeople and brokers work to locate houses or apartments for their buyer. Residential real estate salespeople and brokers sell houses or apartments on the MLS for their clients and market these properties.

To successfully perform these tasks, real estate salespeople and brokers need to know how to identify information about schools for those that wish to place their children in schools with certain characteristics. Real estate salespeople and brokers need to know how to identify and provide traffic and highway proximity information for those that need to commute regularly. Real estate salespeople and brokers can further benefit buyers by being informed about local shopping and service options.

Real estate salespeople and brokers should be able to evaluate the nature of neighboring properties to a candidate property they may want to introduce to their buyer.

Evaluating the topography of candidate properties in California (flat vs. sloped terrain) is important.

Knowledge of zoning of properties in certain areas – R1/2/3/4 is important as many buyers intend to further develop or re-develop over time, and would like to know what potential these properties have for expansion.

Once candidate properties are identified, the real estate salesperson or broker can use GIS to reduce the number of times they drive the buyer to undesired locations. This is likely to improve the relationship with the client.

### **GIS to Enhance Real Estate Salesperson or Broker Marketing Efforts**

Many new real estate salespeople do not have a sufficient understanding of the areas they serve. Marketing activities of new and existing real estate salespeople and brokers can benefit from GIS analysis. GIS can help real estate salespeople and brokers define their target market area(s) in terms of demographics.

Based on this knowledge, they can make more efficient decisions about the right approaches to penetrate and maintain market share in these market(s). GIS can be used to subdivide an area into smaller units that require different marketing campaigns. The campaigns can be tailored, based on the demographic information in each of these units.

### **The Proposed Module**

We recommend that real estate schools educate their students about GIS, and use GIS to educate their students about their neighborhoods and how to better market themselves and serve their clients.

An Introductory GIS Analysis for Real Estate Salespeople and Brokers module would consist of the following components:

- Defining GIS
- Benefits of GIS to real estate salespeople and brokers
- Types of GIS analysis available for real estate
  - Financial Analysis with GIS
  - Marketing Analysis with GIS
- Business and mapping data for GIS real-estate analysis
- Locating GIS data for salespeople and brokers
- Hands-on analysis of a sample GIS real estate data set.

### **Final Thoughts**

Real estate schools should consider offering a “GIS Analysis for Real Estate” course. Real estate companies should consider offering their real estate salespeople and brokers such courses once available in real estate schools or hire consultants to develop custom courses on this topic.

States such as California should consider increasing the minimum requirements to receive and maintain a real estate license to include use of GIS to cover the topics discussed in this paper.

## **References**

Department of Real Estate, Government of California, Retrieved April 2007 from:  
<http://secure.dre.ca.gov/publicasp/CEContinue.asp>

Francica J. R. (1990). From real estate to retailing: the next GIS frontier. Focusing on the needs of business. GIS sourcebook; geographic information system technology in 1990. p. 228-230

Fryrear R., Prill E., Worzala E. M. (2001). The use of geographic information systems by corporate real estate executives. *The Journal of Real Estate Research*, 22(1/2), 153-164.

Gerald N. Z. (1999, January). Real estate applications for GIS: A review of existing conditions & future opportunities. *Real Estate Issues*, 23(4), 13-19.

Heng L., Ling Y., Eddie W. L. C. (2005). A GIS-based site selection system for real estate projects. *Construction Innovation*, 5(4), 231-241.

Ireland W. M., O'Connor P. M. (2002, November). Location analysis for commercial properties. *Assessment Journal*, 9(6), 21-26.

Peterson K. (1993). Spatial decision support systems for real estate investment analysis. *International Journal of Geographical Information Systems* 7, no.4 (1993) p. 379-392

Zeng T.Q., Zhou Q. (2001). Optimal spatial decision making using GIS: A prototype of a Real State Geographical Information System (REGIS). *International Journal of Geographical Information Science* 15, no.4, p. 307-321