

A Heavenly View of the Customer with Technology

By Mike Flinton

There is a new twist to the three most important words in business ... Location!
Location! Location!

While tying together some threads of life -- that until recently had no connection -- technology has woven some very strange relationships. Take for instance the scene of a tired motorist, late at night on a lonely highway. Lost, but confident of the instructions the car dealer provided, she pushes a few buttons above the car's radio and gets an instant electronic roadmap, driving directions, and estimated arrival time at her destination, all displayed on a small TV-like screen in the car's dashboard.

A few minutes more into her trip, she passes what appears to be an abandoned car, with headlights still on, pulled off to one side of the road. Reluctant to stop and investigate but wanting to help, she presses a second button, and hears a confident and reassuring voice say, "Good evening, Mrs. Smith! How may I help you?" Speaking through her hands-free microphone, she passes information to the round-the-clock assistance center a thousand miles away and reports the roadside scene. Using a Department of Defense system known as Global Positioning System (GPS), the help desk pinpoints Mrs. Smith's location and provides details to local police, while Mrs. Smith drives on ... safe, on time, and with her good deed done for the day.

Beaming up Location-Based Services

Sound like Star Trek and science fiction? Far from it! But it could be a 60-second commercial for a phenomenal growth industry known as Location-Based Services (LBS), and it's custom made for the CRM environment. Most common among such services is *OnStar*TM (www.onstar.com/flash.html). Once found only in Cadillac and other luxury automobiles, by 2003 *OnStar*TM promises to be available in foreign and domestic models ranging from Acura to Saturn. It is customer relations management at its best -- and at a price. With three levels of Location-Based Services available, customers have access to directions, stolen vehicle tracking, remote diagnostics, roadside assistance, and even an online concierge, which offers everything from entertainment guides to personal advice on where to stay.

The concepts are simple, but the technology and applications are strictly "outside the box" thinking -- cutting edge and visionary. The broad name given to the technology behind LBS success is Geographic Information System (GIS). It is comprised of five elements whose right combination promises to add dimensions to customer relationships management that have only begun to be explored.

GIS is a combination of computer hardware, software, data, a systematic way of processing that data, and most importantly, people. To newcomers, perhaps most mysterious is the process itself. It's no longer a case of a picture being worth a thousand words, but more like a trillion words (or more)! And that's just the beginning. Like the

automobile example above, a GIS has the potential to be customer interactive, inexpensive, and updated on demand. Troy (NY)-based MapInfo Inc. and Redlands (CA)-based Environmental Systems Research Institute (ESRI) have become industry leaders, and they are eager to play host to the GIS–CRM wedding. One of ESRI President Jack Dangermond’s favorite mantras is “The application of GIS is limited only by the imagination of those who use it!”

Powered by Global Imagination

The commercial possibilities have warranted the attention of one of America’s premier science and technology agencies -- the National Aeronautics and Space Administration (NASA), which has developed a fascinating "Top Ten" list of industries most likely to benefit from the use of GIS. This grouping is sometimes referred to as the Spatial Information Technology industry. The Top Ten are a combination of public and private institutions that touch each of us – every day. Ranked by the most promising, they include Insurance, Surveying & Mapping, Construction & Engineering, Environmental Systems, Real Estate, Transportation, Public Safety, Precision Farming, Broadcast Meteorology and Forest & Range Management. A list that even the broadest of minds would have a hard time connecting, but all having degrees of CRM needs.

It’s important to understand that within the realm of CRM, not all GIS products and services are designed or intended to be fed directly to the consumer. For instance, at retail establishments, acquired customer address, zip code or phone number information at check out helps that business build the database of shoppers who will eventually comprise its Geographic Information System. Armed with such seemingly benign information, a business can begin to relate where its customers come from, to information such as average sale, time of day, distance traveled, and frequency of visits. All are vital information in developing marketing and CRM tools and programs. Likewise, some industries such as cable television companies or electricity suppliers need to quickly pinpoint breaks in their systems to determine customers who have interrupted service.

The Sky's the Limit

Two years ago, the Spatial Information Technology industry in the U.S. was an estimated three to five billion-dollar business. Estimates at that time speculated that it would climb to \$20 to \$30 billion by 2005. Mid-way to 2005 it appears such estimates are conservative by any measure. And while no potential earning figures are available for a global GIS market, by some estimates, countries such as United Kingdom, Canada, and Australia are ahead of the United States' commercial industry and reaping similar financial rewards.

To further explore the possibilities of this industry, NASA has taken a global technology and made it local. By developing a business relationship between this arm of the federal government and one local community college in upstate New York in 1999, NASA found a willing partner and home for this exploration endeavor under its National Workforce Development Education and Training Initiative. While it’s true that GIS and Spatial

Information Technology programs are springing up at universities across the nation, community colleges are an ideal incubator for training new workers and fostering collaborations between small businesses anxious to learn more about using GIS for CRM.

GIS applications are, indeed endless. Take, for instance, the eighth industry on NASA's Top Ten list -- Precision Farming. For as little as \$100 (or less) for a GPS handheld receiver about the size and shape of a cellular phone, even the smallest of farmers can develop detailed maps of the fields they tend and collect year-to-year data displaying information on which crops prospered, how much water and fertilizer was required, and what their yield was by acre. Admittedly, GIS educators at the community college say the small farmer is a hard customer to attract. Too many small- and even medium-sized farmers believe you have to be a 10,000-acre mid-western agri-business to use this kind of gadgetry. Proponents say nothing could be further from the truth. With a GPS receiver on your tractor and a home computer, you're in the Precision Farming business!

America's realtors have been quick to pick up the GIS ball and run with it. Real estate agents can easily link a property's vital statistics -- such as price, acreage or square footage -- to free aerial photographs from GIS clearinghouse sources, providing homebuyers a bird's eye view of the agent's offerings. Likewise, local governments can assist taxpayers, developers, and emergency services providers by using GIS to examine properties, develop environmental impact studies, or create emergency healthcare networks for local residents. The nationwide and state-managed GIS clearinghouse network can be credited to the Clinton administration, which mandated such technology in 1996. A worldwide list of more than 200 hundred clearinghouses including each state in the U.S. and nations ranging from Argentina to Venezuela is maintained by the U.S. Federal Geographic Data (<http://clearinghouse4.fgdc.gov/registry/>).

Tying the Location Knot

Approximately 80% of the information that a business relies upon is geographically related and location-based. Knowing where raw materials, suppliers, employees and customers come from is all vital information. As individuals, where we live, work, shop, send our kids to school, eat and relax all take place at specific locations ... locations that often compete for our attention, time and money. Ironically, the more complex our world becomes, the more we will need to know the most effective and efficient ways to manage it and ourselves. In the very near future, we will come to understand that the brief courtship of CRM and GIS quickly moved to a marriage made in heaven. But instead of it being love that makes the world go around, for this couple it will be location, location, location!

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