



MAPINFO SOLUTIONS FOR PROPERTY & CASUALTY INSURANCE

Make better business decisions using location intelligence



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MapInfo location intelligence provides insurers, reinsurers, Lloyd's Syndicates, MGA's, brokers and agents with the insights they need to make more profitable business decisions.

Location intelligent carriers use geographic information on policies, assets, markets and risks to make faster, more accurate business decisions in areas such as underwriting, actuarial, claims management, sales, marketing and distribution.

HOW IT WORKS

MapInfo location intelligence technology provides business users with the ability to associate or overlay seemingly disparate "layers" of location data, for instance policyholder locations, flood zones, and fire districts, for analysis. Once these layers of location data are associated, they can be used in a variety of ways, including mapping/visualization (ex. does the policy appear to be in a flood zone), spatial querying (ex. show all policies within 100 yards of the Empire State Building) and calculations (ex. what is the distance to the nearest fire hydrant).

MapInfo technology helps to access, aggregate, and align location data from disparate databases so users can glean new insights from the information, power predictive analytics, and answer mission critical business questions.

It is also worthy to note that while display analytics are often a powerful tool for business users, location intelligence solutions do not require "mapping"—many carriers use location analytics to support their everyday business decisions without ever using a map (output for business users may simply be the result of a numeric calculation or a textual report).

THE FOUNDATION: ADDRESS VALIDATION AND GEOCODING

Location data, for instance an insurer's policy information, is a key enterprise asset that is used as the foundation for mission critical business decisions throughout the organization.

MapInfo can help carriers to cleanse and validate address data on a real-time basis as it is entered into their systems. As data is validated, it is also geocoded. Geocoding is the process of assigning x,y (i.e. longitude, latitude) map coordinate locations to a database record by deriving the coordinates from a previously geo-referenced data source (most commonly from zip code, street or parcel data). Once data has been geocoded it can be used for spatial analytics and mapping.

For maximum accuracy in applications such as rating territory assignment, risk aggregation analytics, catastrophe modeling, or individual policy risk assessments (for instance the policy's proximity to flood or brush zones, historic hurricane paths or wind storm sites),

geocoding to at least the street level is recommended, with parcel level geocoding accuracy preferred.

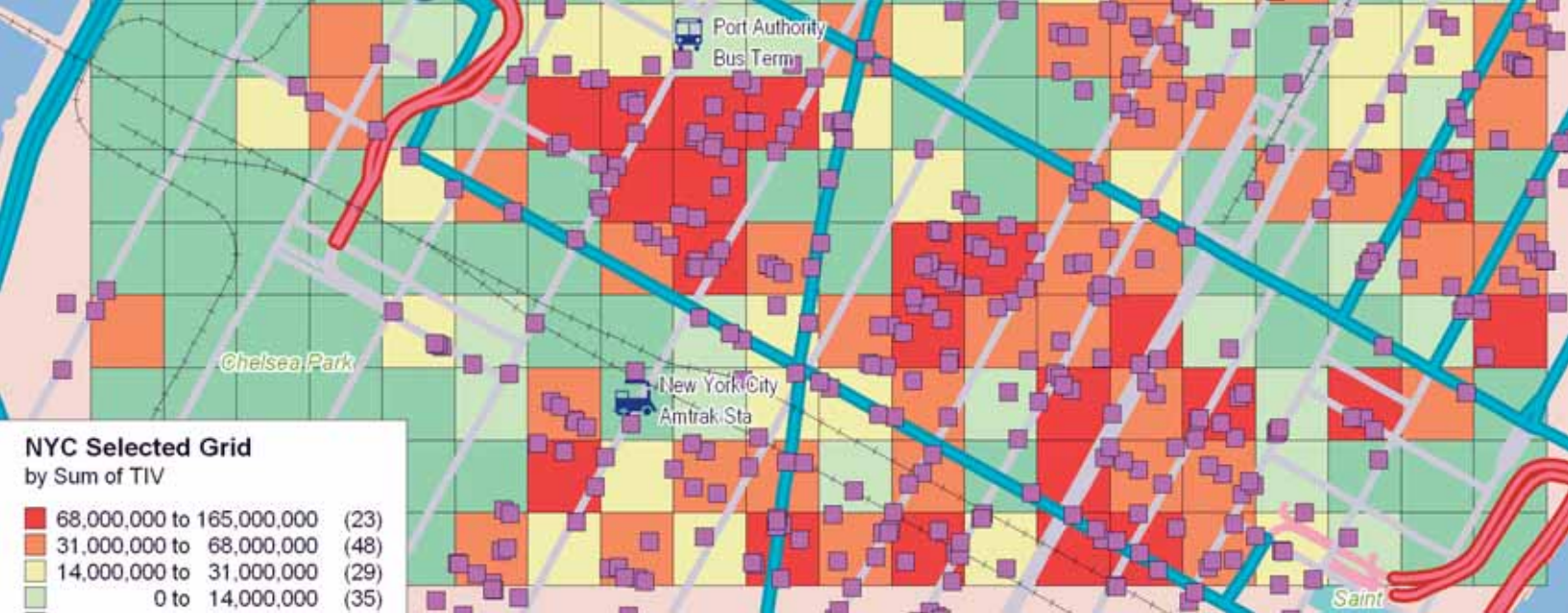
In the wake of the 2004 and 2005 hurricane seasons, it became painfully evident to insurers that they needed to improve their catastrophe risk management practices. Indeed, A.M. Best went so far as to incorporate catastrophe risk management within its rating criteria, publishing guidelines on what it considered sound catastrophe management practices.

A.M. Best's guidelines include geocoding all properties to ensure data quality, monitoring aggregate loss exposure, consideration of loss scenarios as well as modeled output, and frequent and consistent monitoring of catastrophe exposure. Additionally, A.M. Best recommended that catastrophe management be integrated into the daily underwriting process.



IMAGE SOURCE: PICTOMETRY

In this example, household addresses have been geocoded to the parcel level for maximum precision. Parcel centroids are indicated in blue.

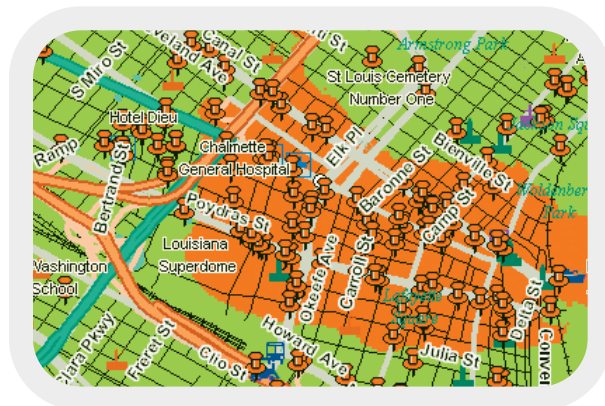


Risk aggregation study for downtown Manhattan: The Total Insured Value (TIV) of the carrier's policies is shown in the context of a risk accumulation grid.

PORTFOLIO RISK AGGREGATION

MapInfo can help insurance carriers to understand (analyze and visualize) total financial exposure to a given event or confluence of events so they can more effectively manage reinsurance treaties and geographic risk exposure on a real-time basis.

- Visualization of 3rd party CAT models
- Real-time management and regulatory compliance reporting
- Seamless integration with existing databases, legacy systems and IT infrastructure



In this analysis, an actuary has aggregated policy exposures in a region to create an exclusionary zone, shown in red, where new policies cannot be written without special review.

Spatial technology provides a superior vantage from which to measure and monitor geographic risk accumulation, and to perform “what if” scenario analyses to consider a multitude of potential loss scenarios. This location intelligence can also be used to visualize the output of 3rd party catastrophe models.

- Portfolio risk aggregation analyses
- Realistic Disaster Scenario and Probable Maximum Loss (PML) “what if” analyses

RATING TERRITORIES

Location intelligence can be used to create more granular and accurate rating territory systems. Increased segmentation of risk provides the carrier with a competitive pricing advantage in the marketplace while maintaining rate adequacy (premiums charged accurately reflect the carrier's true risk exposure).

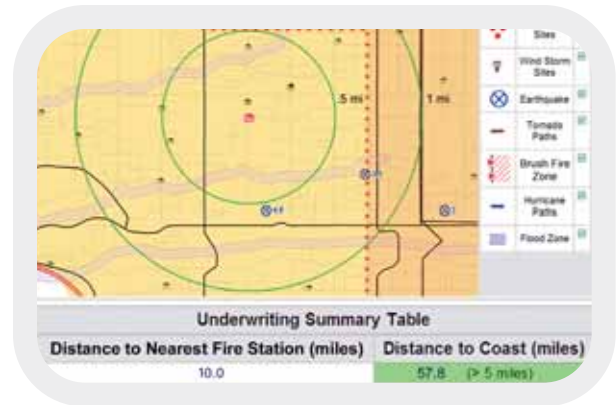
When used with accurate address validation/geocoding systems, digital rating territories result in more accurate assignment of rating territories to policy applicants (most mistakes in policy rating result in undercharging customers) which helps to minimize underwriting leakage—loss in revenue due to incorrect premium or inappropriate risk assignment—and ensure regulatory compliance.

- Increased segmentation of risk for competitive price advantage and niche product development
- Minimization of underwriting leakage through more accurate territory assignment
- Facilitates underwriting automation and web services
- Ability to demonstrate regulatory compliance to state insurance auditors

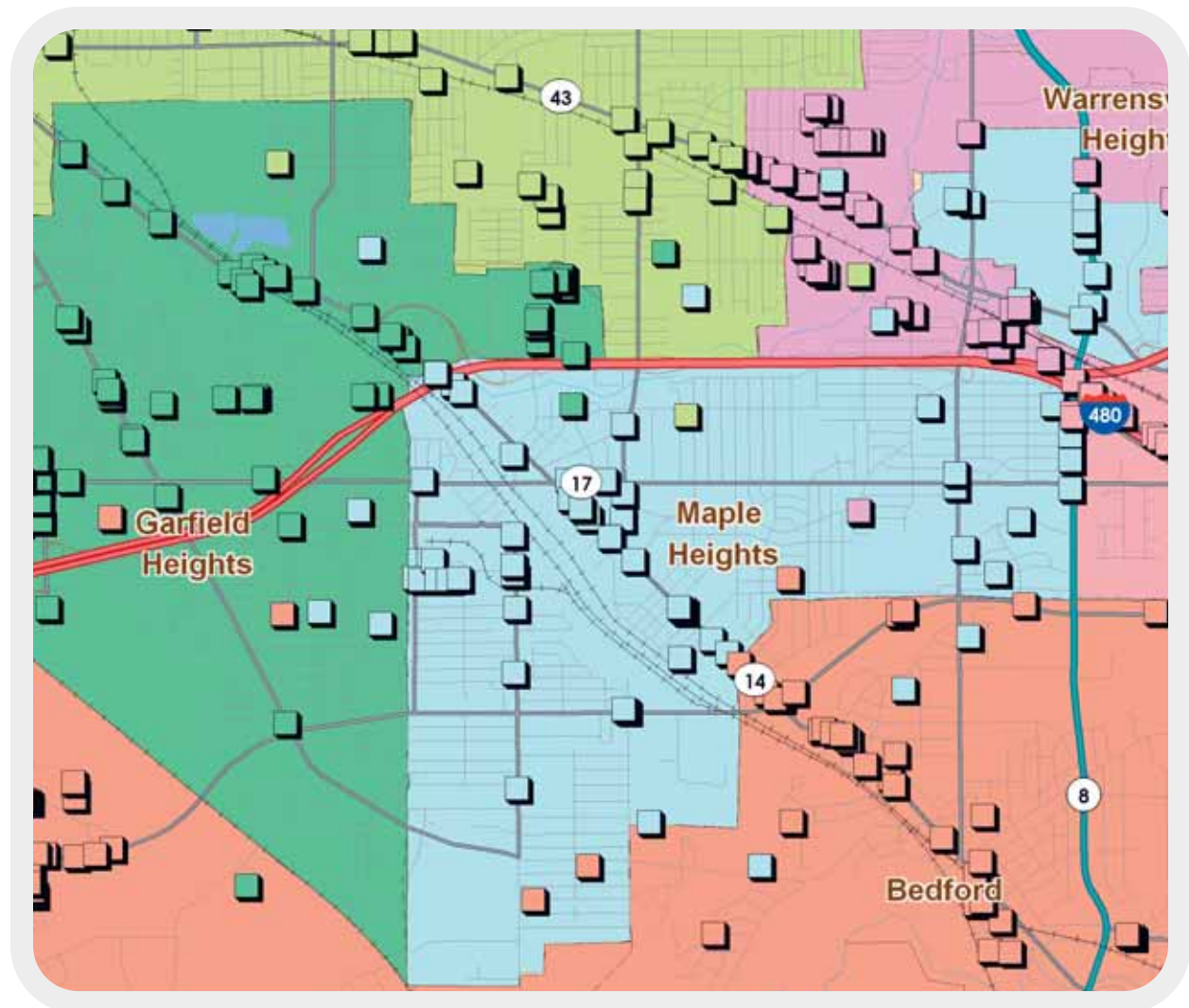
POLICY RISK ASSESSMENT

Location intelligence can be integrated into a carrier's automated underwriting and/or rating applications by feeding the rules engine the appropriate location information.

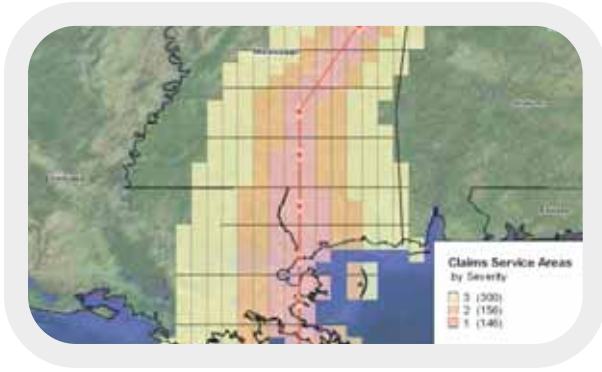
Location intelligence can be used to develop custom location-enabled underwriting workstations. An underwriter can validate a policy address and view it in proximity to other policies or a variety of geographic risk factors, including: earthquake faults and epicenters; flood zones; brush zones; fire districts and hydrant locations; hail storm sites, wind storm sites; tornado sites; historic hurricane paths; EPA Superfund sites; business types; or coastlines.



This location-enabled underwriting workstation shows a policy under consideration, revealing its proximity to key risk factors and mitigators.



This policy and premium audit reveals areas where the policies' assigned rating territories do not match the rating territory they reside within (where the color of the policy square does not match the background territory color). Correcting these inaccuracies at policy renewal time results in increased revenue, minimizes "adverse selection," and brings the carrier into regulatory compliance.



This study shows the projected path of a hurricane, with color coded damage zones depicting likely claims severity based on hurricane wind speed.

CLAIMS MANAGEMENT

In the face of a prospective claims event MapInfo location intelligence technology enables carriers to analyze geographies likely to be affected on a virtually real-time basis. In the case of a hurricane, the storm's track and damaging wind fields can be matched against policy locations so claims managers can assign manpower and individual adjusters can plan their daily agenda to cover losses in proximity to each other.

Location intelligence technology presents a visual representation of current claims, so an insurer can quickly locate the areas with the highest concentration of claims using a color coding system. For instance, areas with the highest number of claims can be represented with a red background, while those with few claims can be represented with blue backgrounds. Through this unified view, a carrier can quickly

RULES ENGINES, STRAIGHT THROUGH PROCESSING AND UNDERWRITING AUTOMATION

Location is a key component in policy underwriting and rating. MapInfo technology can be used to facilitate underwriting by exception systems where policies are geocoded and matched against rating territories or other geographic data and processed automatically, with only those policies that fall outside established underwriting parameters being passed to underwriters for personal review.

Location intelligence can also be a component of rules engine systems such as Fair Isaac's Blaze Advisor® rules engine, where information such as a policy's proximity to geographic risk factors can be included in the scoring or processing of the policy.

recognize high-priority claim areas and allocate the resources necessary to handle the claims in the most efficient manner.

Using MapInfo location intelligence and GPS technology, carriers can also adjust claims in areas with no landmarks. After catastrophes such as earthquakes, hurricanes, or tsunamis, some areas may be completely devastated. By attaching latitude and longitude coordinates to locations, an agent is able to use a handheld GPS device to accurately locate their claimant's property.

MapInfo location intelligence technology is also web enabled, helping carriers to deploy customer self-service applications for claims filing via the web, which further decreases the burden on claims networks and helps to provide timely customer service in the wake of claims events.

WEB SERVICES & SOA

MapInfo technology is ACORD XML and open standards compliant, so it integrates seamlessly with existing business infrastructure, legacy systems, and IT environment—making it ideally suited for deploying web services.

Location capabilities such as address validation/geocoding, routing, "find-the-nearest", mapping, drive times, spatial querying, distance calculations, and location finding can be integrated into existing business processes or incorporated into new applications.



Location intelligence solutions, such as this Risk Analysis Portlet for IBM WebSphere®, can be deployed using web services.

IT departments can centralize location intelligence technology, while decentralizing its benefits and capabilities to business users throughout the organization (eliminating the common problems of "islands of GIS" –varied location software applications deployed in business silos throughout the organization).

SALES, MARKETING AND DISTRIBUTION

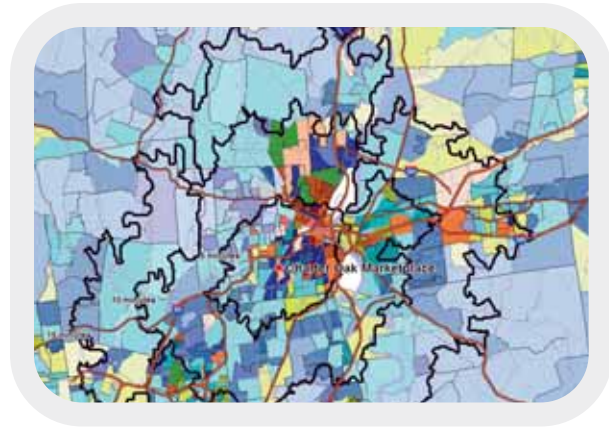
Location intelligence helps carriers to optimize their sales process by more effectively routing sales calls by geography.

Location intelligence also plays a key role in helping to identify areas of market potential and aligning sales, marketing and agent networks to capture that market potential.

Using demographics and lifestyle information to profile best customers and predict product purchasing behaviors can help agents to more effectively up-sell and cross-sell existing customers and to identify the highest lifetime value new customers.

Carriers can also use demographic and lifestyle information to develop niche products tailored toward a particular segment's needs, and to craft more effective marketing campaigns.

- Customer Segmentation
- Opportunity Assessment
- Target Marketing
- Niche Product Design
- Market Penetration
- Producer Effectiveness
- Householding and Cross-Selling



A carrier evaluates a potential retail location, looking at the lifestyle clusters covered by 5, 10, and 15 minute drive times from the location.

INTEGRATION OF LOCATION INTELLIGENCE AND BUSINESS INTELLIGENCE

MapInfo location intelligence capabilities are ideally suited for integration into enterprise Business Intelligence applications, such as those of MicroStrategy or Business Objects.

Location intelligence provides business users with a new way to analyze and visualize their data, powering more effective and profitable business decisions across the organization.



This drive-time analysis shows two agents, a 5 minute drive-time polygon, and their written Auto (red triangle), Home (blue diamond) and Auto/Home (green circle) policies.



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