PRIZM NE

Methodology Summary

Transition to PRIZM NE

PRIZM NE replaced the PRIZM system (now referred to as "PRIZM 62") and MicroVision. PRIZM NE will continue to lead the industry in helping marketers reach a deep understanding of their most important customer groups.

Among the current offerings for PRIZM NE:

Household-level coding

Household-level is the new and powerful extension of PRIZM NE—the same segment codes as the geodemographic system that differentiate between households in the same neighborhood. Using the customer's name and address, household-level demographic data is appended and used in an algorithm to determine the household's PRIZM NE code.

Profile databases

What makes segmentation more than a score is the means to assess what your customers are like, where they live and shop, and how best to reach them. Profile databases provide descriptive detail to create a fully three-dimensional view of your best customers. Lifestyle profiles are available for both the Simmons and MRI surveys; automotive detail comes from Polk data; industry-specific behaviors are captured by Claritas' surveys—Market Audit for financial behaviors, Insurance Audit for insurance and Convergence Audit for communications and energy behaviors.

Geodemographic coding

PRIZM NE codes can be appended to nearly every address in the U.S. using Claritas' online geocoder MyBestCustomers.com, our desktop geocoder PrecisionCode™, or a PRIZM NE directory file. Codes continue to be easy to append, with nearly 100% coverage for geographies ranging from ZIP+4 to Block Group to ZIP Code to Census Tract.

Directory license
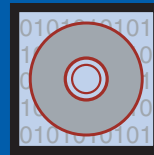
Segmentation best serves marketers when it provides an organizing framework for how the entire company thinks about its customers. To make PRIZM NE as accessible—and cost-effective—as possible, the geodemographic levels can be licensed for unlimited use by means of a directory. A directory flat file can be delivered to your technology users.

Segment distributions

With a coded customer file, you can determine your own customer penetration using the PRIZM NE segment distributions. The distributions provide counts "on the ground," by segment, for standard geographic levels across the entire U.S. Distributions are available for U.S., State, DMA, MSA, County, Tract, ZIP and BG (ZIP+4 is available only as a single assignment). Segment distributions are also useful for ranking markets and estimating demand.

Link partners
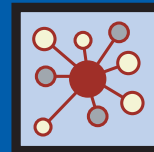
Extending the legacy of PRIZM 62 and MicroVision, Claritas intends to make PRIZM NE available everywhere. Our network of partner companies makes PRIZM NE available on virtually all industry-standard databases, direct marketing service bureaus and primary research vendors. Marketers can utilize the power of PRIZM NE continuously from market research, analysis and targeting, through media planning and evaluation.

MyBestSegments.com

MyBestSegments.com provides the rich demographic and behavioral detail to answer the question "What are my customers like?" This data was previously provided through "Cluster Snapshots" or the "Marketer's Guides". MyBestSegments.com links directly to the ConsumerPoint® datamart—making data for PRIZM NE available online and updates automatic.

PRIZM—The New Evolution (PRIZM® NE) culminates two years of research and development in a groundbreaking methodology that allows marketers to seamlessly shift from five-digit ZIP Code to Census Tract to Block Group to ZIP+4, all the way down to the individual household level—all with the same set of 66 segments. This single set of segments affords marketers the benefits of household-level precision in applications such as direct mail, while at the same time maintaining the broad market linkages, usability and cost-effectiveness of geodemographics for applications such as market sizing and site selection.

New statistical techniques

In 1980 and 1990, Claritas statisticians rebuilt PRIZM by essentially repeating the same steps they performed when Claritas pioneered geodemographic segmentation in 1976. They aggressively analyzed the data, isolated key factors and developed a new clustering system. The development of each new system provided an opportunity to evaluate and implement improvements as they became available, but the underlying segmentation technique was clustering.

With PRIZM NE, Claritas breaks with traditional clustering algorithms to embrace a new technology that yields better segmentation results. PRIZM NE was created by a proprietary method developed by Claritas statisticians called Multivariate Divisive Partitioning (MDP). MDP borrows and extends a tree partitioning method that creates the segments based on demographics that matter most to households' behaviors.

The most common tree partitioning technique, Classification and Regression Trees (often referred to as "CART"), involves a more modeling-oriented process than clustering. Described simply, statisticians begin with a single behavior they wish to predict and start with all participating households in a single segment. Predictor variables, such as income, age or presence of children, are analyzed to find the variable—and the appropriate value of that variable —that divides the single segment into two that have the greatest difference for that behavior. Additional splitting takes place until all effective splits have been made or the size of the segment created falls below a target threshold.

A significant limitation of the CART technique is that it generates an optimal model for only a single behavior. Because PRIZM NE is a multi-purpose segmentation system, optimization across a broader range of behaviors is necessary. Claritas' modifications to CART that resulted in the MDP technique, for which a patent is now pending, extends this simple CART process to simultaneously optimize across 250 distinct behaviors at once. This advancement allowed Claritas to take full advantage of the nearly 10,000 behaviors and hundreds of demographic predictor variables at different geographic levels, including household, that are available. The MDP process was run hundreds of times, varying the sets of behaviors, the predictor variables sets and a number of other parameters to ensure that the resulting segments represent behaviorally important groupings.

New data sources

In addition to this unique statistical technique, Claritas employed an unprecedented number of data sources and data levels in the development of PRIZM NE. Geodemographic data, the mainstay of previous segmentation systems, included Census 2000 demographics and ZIP+4-level demographics summarized from compiled lists.

For the first time, Claritas also used household-level demographics in the development process. A massive database was assembled that included more than 890,000 household records from sources as diverse as Claritas' proprietary Market Audit® financial survey, R.L. Polk new car buyers, Mediamark Research Inc. and Simmons lifestyle surveys, Medstat's PULSE survey of healthcare behaviors and Claritas client files. Each of these 890,000 records included rich behavioral data, including both penetration ("Has a mutual fund") and volume ("Has $X in a mutual fund"). Further, a substantial subset of the file— about 350,000—even had self-reported demographics to serve as a benchmark for the other sources, including the compiled list data.

Claritas urbanization measures

Another important dimension of PRIZM NE is Claritas' "urbanization" model, which proved to be a critical input to the earlier PRIZM systems. Multiple refinements to the urbanization model for the PRIZM NE release allow it to provide a better contextual framework than had earlier models. The result of these improvements was the identification of five distinct urbanization classes; however, PRIZM NE development showed optimal performance by using the following four classes:
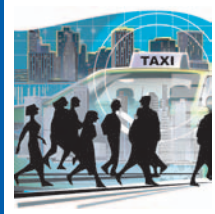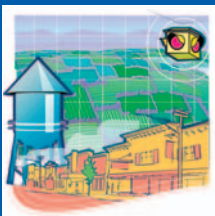
Urban areas (U) have population density scores mostly between 85 and 99. They include both the downtowns of major cities and surrounding neighborhoods. Households within this classification live within the classic high-density neighborhoods found in the heart of America's largest cities. While almost always anchored by the downtown central business district, these areas often extend beyond city limits and into surrounding jurisdictions to encompass most of America's earliest suburban expansions.

Second Cities (C) are less densely populated than urban areas, with population density scores typically between 40 and 85. While similar to the suburban densities, second cities are the population center of their surrounding community. As such, many are concentrated within America's larger towns and smaller cities. This class also includes thousands of satellite cities—higher density suburbs encircling major metropolitan centers, typically with far greater affluence than their small city cousins.
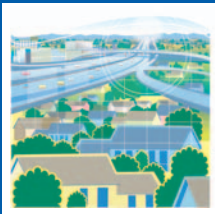
Suburbs (S) have population density scores between 40 and 90, and are clearly dependent on urban areas or second cities. Unlike second cities, they are not the population center of their surrounding community, but rather a continuation of the density decline as you move out from the city center. While some suburbs may be employment centers, their lifestyles and commuting patterns will be more tied to one another, or to the urban or second city core, than within themselves.

Town & Country (T) areas, collapsed into a single urbanization category, have population density scores under 40. This category includes exurbs, towns, farming communities and a wide range of other rural areas. The "town" aspect of this class covers the thousands of small towns and villages scattered amongst the rural heartland, as well as the low-density areas far beyond the outer beltways and suburban rings of America's major metros. Households in these exurban segments live amongst higher densities and are more affluent than their rural neighbors.

To each household record, Claritas appended geographic identifiers at the census Block Group and ZIP+4 levels, compiled list demographics from the Equifax TotalSource file, compiled neighborhood-level characteristics from census block group data and summarized ZIP+4-level demographics and Claritas custom measures. The resulting database was used to design and evaluate systems at the self-reported household, list-based household, ZIP+4 and Block Group levels.

While self-reported data outperformed all other sources, the limited availability of such data makes it unsuitable for broad-use segmentation. The next-best performing data source is list-based household data, which is available for nearly 200 million households. While geodemographic data—the basis for previous segmentation systems—is valuable for many applications, it does not reach the level of list-based household data.

After fully assessing the performance of list data and comparing it to self-reported data, Claritas chose to use the list data for PRIZM NE development after making a number of enhancements:
• Rebalancing the list data to national norms
• Enhancing the household-level demographic models in select cases
• Estimating missing values
• Making adjustments for differences in data ranges or "breaks"

Measuring behavior with demographic predictors

Using urbanization and list-based demographics as predictor variables for the nearly 10,000 behaviors available, MDP produced a candidate model for each set of behaviors and predictor variables. Each candidate model's performance was assessed on its own merit, as well as in comparison to various benchmark systems. If the overall performance was sufficient in this initial evaluation, the candidate model was saved and its performance further analyzed in terms of more specific criteria. In general, only one of every five or six models created was considered good enough to save. Claritas statisticians saved more than 80 models for additional evaluation and submitted the best to a cross-functional segmentation evaluation team for final performance assessment and model selection.

To evaluate the candidate models, approximately 6,300 of the 10,000 behavioral profiles were selected as a representative "test bed" of behaviors. For each of the 80 models under final consideration, a set of performance statistics was calculated for each of the 6,300 profiles. The performance of each candidate system was then compared to a number of benchmark systems, including:
• PRIZM 62 at both Block Group and ZIP+4 levels
• MicroVision® 50 at the ZIP+4 level
• MicroVision 95 at the ZIP+4 level
• LifeP$YCLE®, Claritas' household-level insurance/financial system
• ConneXions™, Claritas' household-level telecommunications system

Each candidate model was examined for:
• Overall model performance
• Performance within more than 150 specific behavior categories, including:
    —Cable, Satellite, Telephone and Technology
    —Real Estate, Restaurants, Retail and Travel
    —Media Usage
    —Automotive
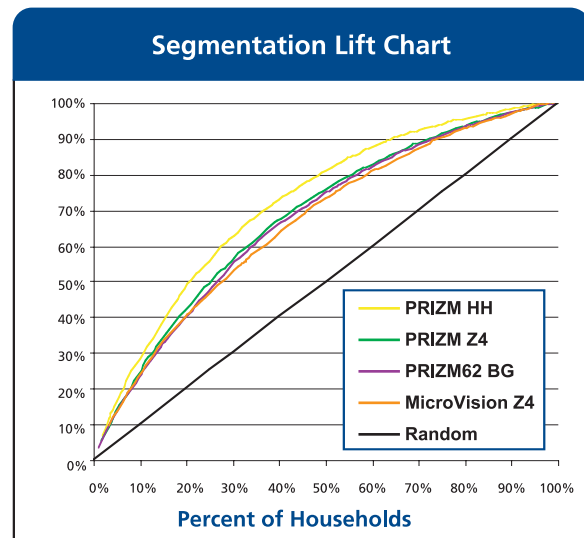• Performance on the individual profiles within the behavior categories

The final PRIZM NE model, selected for its consistently outstanding performance compared to Claritas' benchmark systems, incorporates the following predictors:
- Claritas urbanization measure
- Household characteristics, such as affluence, age and family composition
- Neighborhood characteristics, such as housing stock and home ownership

The 66 segments are numbered according to socioeconomic rank (which takes into account characteristics such as income, education, occupation and home value) and are grouped in two different ways:
- **Social Groups:** 14 groups based on urbanization and socioeconomic rank
- **LifeStage Groups:** 11 groups based on age and presence of children at home, as well as socioeconomic rank

Segmentation Lift Chart

Legend:
- PRIZM HH
- PRIZM Z4
- PRIZM62 BG
- MicroVision Z4
- Random

Percent of Households

This graph demonstrates the improved performance of PRIZM NE over other Claritas segmentation systems, as well as the power of household-level data as compared to geodemographic data. The black "random" line represents marketing without any targeting—contacting 40% of all households results in reaching 40% of all likely customers for the product. The ZIP+4 implementation of PRIZM NE, represented by the green line, provides a small lift over the older geodemographic systems, reaching roughly 65% of customers by contacting the best 40% of households. PRIZM HH (yellow line) shows marked lift over all of the geodemographic systems, reaching more than 70% of customers by contacting the best 40% of households.

Discover the power of segmentation with PRIZM NE.
Call **(800) 234-5973** today for more details or visit **www.claritas.com.**