



## Product Brief

# Autonomy Optimost Adaptive Targeting

### Introduction

Segmentation is the key to successfully marketing to the right group of people with the right message at the right time. With the advent of the Internet and increasing globalization, the pace at which new segments emerge and the rate at which customer affinities change has accelerated dramatically. In addition, the vast amount of information that marketers can tap into about customer interests, sentiment, behavior, and demographics is growing by the day.

To keep up, marketers now seek to automate the intensive process of generating highly granular segments, based on a deep understanding of customer interests, common characteristics, and affinities. To monetize these groups and act on this new level of understanding, marketers must also automatically match the right products, content, and messages with each group, and then target them at the moment of highest impact to make a sale, increase awareness, or generate a lead.

Autonomy Optimost Adaptive Targeting is a unique Meaning Based Marketing offering that automatically discovers highly granular segments of customers and matches them with the creative content and messages to which they respond the most to. Adaptive Targeting uses a powerful combination of multivariable testing and meaning-based analytics to automatically detect groups of site visitors who share meaningful characteristics and consume similar content. This information can be used to quickly create targeted campaigns to influence key groups with offers and content that compels them to take action.

Autonomy Optimost Products	Autonomy Optimost Adaptive Targeting Functions
Optimost IDOL	Automatic Profiling Automatic Clustering Clustering Visualization Automatic Categorization Sentiment Analysis

Autonomy Optimost Adaptive Targeting allows marketers to:

- Automatically discover new segments of customers in real time
- Understand how existing customer segments and affinities are changing over time
- Match segments with the granular content and messages they respond to
- Target segments with specific content and messages
- Deliver dramatically higher conversion rates, leads, and online sales

### The Challenge

Discovering what brings site visitors and customers together into a segment has traditionally been one of the “black arts” of marketing. In years past, marketers would look at demographic profile, website tracking, and campaign response data and make inferences and generalizations about customer groups, personas, or segments based on their insights. The persona or segment development process would typically take weeks or months and the groups were expected to remain valid over a relatively long period of time, sometimes months or even years. The segments or personas created were typically broad, e.g. “West Coast and over 50” or “soccer moms.”

With the rising prominence of the Internet and the increasing globalization of business, the pace of change in customer affinities and the volume of information at the marketer’s disposal have grown dramatically. Unable to keep pace with these dramatic changes, marketers are forced to either rely on outdated segmentation techniques that they know are imperfect and too broadly defined in order to keep the segments manageable, or turn to “black box” systems to handle ad and campaign targeting. These black box systems, however, leave the marketer without an understanding of why specific customers are being targeted with a particular product, offer, or message.

To compound the segmentation problems faced by the marketer, the Internet has created new types of content and campaigns at amazing volumes that need to be managed and targeted. For the most part, websites show the same content to all visitors regardless of their segment classification. In recent years, attempts have been made to target people with more specific content based on behavioral metrics, but these systems are constrained to a very limited set of data and fixed content options. In the end, the marketer, the creative design team, and the web team all have ideas on which content to target, but only one or at most a few combinations of content can be displayed. The limits of legacy systems leave untold creative possibilities and better business strategies unused.

## The Solution - Adaptive Targeting

Autonomy Optimost Adaptive Targeting leverages the power of Meaning Based Marketing with multivariable content testing to address today's challenging marketing segmentation and targeting problem in a fully transparent and automated way. Adaptive Targeting, powered by Autonomy's Intelligent Data Operating Layer (IDOL), can be used to learn and understand existing customers as they evolve, discover new segments of online visitors, and quickly respond to each group of customers with targeted online offers and content that increase customer engagement and conversion rates.

Rather than relying on statisticians to perform complex analytics based on static, historical data, or depending on a black box solution, Autonomy Optimost Adaptive Targeting empowers marketers with a solution that automatically identifies new market segments as they emerge in real time, and clearly reveals the segment composition and the content that segment responds to. With this information, the Adaptive Targeting system then automatically targets the best content to each segment.

Adaptive Targeting segmentation automatically clusters site visitors based on any number of common characteristics, behaviors, and the content or concepts to which they are responsive to. The system then automatically recommends the most valuable segments to the marketer. The segments created can have very specific defining characteristics, allowing the marketer to target content at a very granular level. For example, a specific message on a button can be targeted to a group of customers at a particular time of day when they come from a search keyword, keyword group, or referrer URL.

Adaptive Targeting allows the interactive marketer to test a virtually unlimited set of content variables (including page flow of the site) against a large set of possible

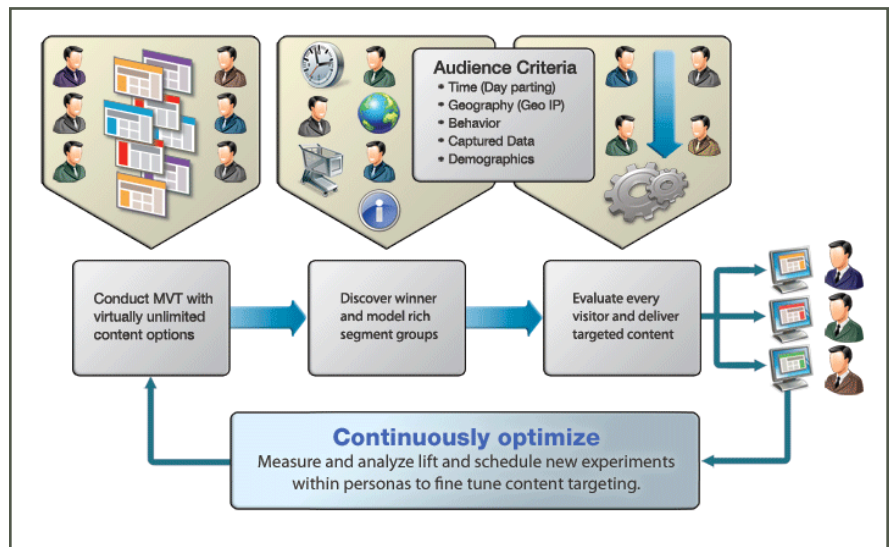


Figure 1: Adaptive Targeting - How It Works

segment drivers to maximize conversion rates. The number of possible combinations can reach into the millions or billions, but the Autonomy Optimost design engine automatically reduces combinations to only those required for analysis. During the multivariable experiment, Adaptive Targeting builds a rich, multifaceted information profile including:

- **Customer Profile** – Examples - age, gender, past purchases, and interaction history
- **Visitor Entered Information** – Examples - trip planning dates, destination city, and onsite search terms
- **Site Arrival Context** – Examples - keyword search terms used in search engines or referrer ID
- **Geographic Location** – Examples - country, state, region, and zip code
- **Sentiment** – Examples - positive or negative comments posted on a particular product

- **Demographic Attributes** – Examples - age, gender, ethnicity, family size, and financial status
- **Time** – Examples - arrival time, arrival day, weekday vs. weekend, and day vs. night
- **Behavior** – Examples - page visits, time on page, and repeat visits to page
- **Content Concepts** – Examples - key concepts in articles or content they have read or downloaded
- **Content** – Examples - creative elements such as an image, message, button, form, color, and header

With this comprehensive set of information, Adaptive Targeting's automated clustering tool forms segments of site visitors based on the attributes that matter and the creative content ideas they responded to. The marketer can easily see the clusters of visitors and their definitions and then deploy the targeted segments and content to their website.

## Adaptive Targeting Case Study

### What

An online media site sells numerous products, including subscriptions to their popular online service. This service can be purchased monthly or yearly, and is available in three different service levels depending on how much content and access the user needs. The media company wants to maximize revenue for subscriptions by increasing prices where possible and by targeting the right offerings to different segments. The Vice President (VP) of Marketing has looked into building segments with the limited information his team has, but has determined that without deeper insights into subscribers and what drives them to take action, the team's efforts would be like "shooting in the dark." In addition, the VP believes there are profitable niche markets that the company could enjoy deeper market penetration into, but he is unsure what those specific segments are, let alone how to reach them.

### How

- Adaptive Targeting experiments with a number of promotional offers, product combinations, and creative combinations on the website, while simultaneously gathering contextual, geographic, behavioral, and other data about site visitors.
- Using advanced clustering technology, Autonomy Optimost discovers significant variance in price sensitivity by geographic region and significant creative preferences by demographics where there are larger groups of older people.
- With clear segment definitions and content specification, Adaptive Targeting begins serving the targeted creative options to various groups.

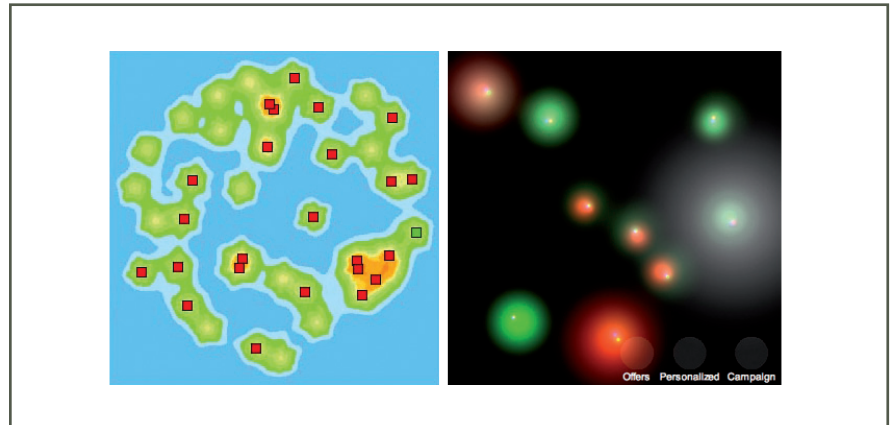


Figure 2: Cluster Analysis

### Results

The automatic segmentation process using Autonomy Optimost Adaptive Targeting revealed interesting information about price sensitivity and detected a new segment of older users, including:

- Prices can be raised 20% without significantly impacting subscription rates.
- Customers in the Western United States are less price-sensitive and can be targeted with more premium offerings.
- A key segment of older customers is using the website services along with print publications. This group has special needs for higher contrast pages, larger font types, and clear directions. The company can provide this information by targeting these types of pages in areas with higher concentrations of older people which will improve their customer experience and cause more people from this loyal group to sign-up, renew, or upgrade their subscription.

### Key Benefits

- Increase conversion rates, leads, and sales
- Quickly discover new, valuable segments of site visitors
- Optimize and adjust marketing strategies and visitor segments
- Target site visitors with the right content at the right time
- Detect changes in site visitor behavior and preferences
- Lower marketing costs by marketing only to interested people

### Adaptive Targeting IDOL Functions

Autonomy's core IDOL server sits above an organization's data and forms a conceptual and contextual understanding of all information in real time. The technology is fully scalable and language-independent, offers an entirely secure search across an unlimited number of documents, supports over 1000 data formats, and can securely access and index content from over 400 content repositories.

## Automatic Profiling

IDOL accurately understands individuals' implicit interests based on browsing, content consumption, and content contribution. By generating a multifaceted conceptual profile of each visitor based on both explicit profiles (visitor-added information) and implicit profiles (from the concepts within and pattern analysis of click-through and submission), IDOL holds a very current understanding of the visitors' interests, with no need for explicit input of any form from the visitor. The implicit profile can be combined with experimental information from Autonomy Optimost to create rich and dynamic experiences for visitors.

IDOL's profiling technology is unique in its use of the actual conceptual content of information it analyzes rather than depending on an abstracted, removed, and thus generally inaccurate metadata layer. This proximity to the information itself allows IDOL to provide profiling and content selection to a depth unavailable with other technologies. For instance, IDOL can derive hard affinity measures through ideas distancing, where vital relationships between seemingly uncorrelated subjects such as a marketing message, time of day, and the other content shown on the page.

## Automatic Clustering

Using Autonomy's conceptual understanding of information, the technology clusters disparate pieces of information according to their conceptual relevance. Its unique keyword clustering capabilities automatically identifies concepts and patterns as they emerge on the web. For instance, an online

pet store might discover that an unusually high number of "long-tail" searches relate to vacationing with pets. The solution could then automatically provide more content and special offers around travel tote bags and kits.

Additionally, IDOL identifies clusters of sites visitors come from, which can be used to customize content delivery. For instance, an extreme sports retailer could see that a high number of visitors are directed from other sites usually associated with baby boomers, such as financial services retirement funds site. As a result, the store automatically launches new offers and campaigns to immediately capitalize on that unexpected, older segment.

## Clustering Visualization

Clusters can be represented visually through several different user interfaces, including the spectrograph and the 2D/3D cluster map. The spectrograph maps the way in which trends, such as community sentiment, change and evolve over time, and illustrates the way conversations branch off into related subjects, allowing the marketer to follow consumer interaction from start to finish. Marketers can better understand the buying patterns and decision making processes of each customer, as well as groups of customers, by studying the visualized trend. The 2D/3D cluster map displays clusters of site visitors and shows the concentration, size, and distance of key groups in an easy to understand format. Marketers can quickly see where valuable segments are forming and easily understand the criteria that make up each group.

## Highlights

- Automatically discover new and granular segments of customers using advanced conceptual analytics
- Visualize customer segments and understand the relationships between groups
- Clearly understand why particular offers or content should be targeted to a particular segment
- Match granular segments with highly targeted content, offers, and messages
- Dramatically increase the effectiveness of marketing ads, offers, and content

## Sentiment Analysis

IDOL's meaning-based analytics enables advanced categorization based upon degrees of sentiment and tonality. By analyzing the structures and meaning of language, IDOL determines the positive and negative characteristics of each piece of information and creates relevant classification systems. With IDOL, Adaptive Targeting can better identify customer segments by understanding each customer's opinions of products at a granular level (for instance, a two-star rating for a camera may still include satisfaction with certain features).

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