

# IDOL Retina

IDOL Retina™ is a simple enterprise search solution that provides a full spectrum of retrieval methods, from simple keyword search to advanced conceptual matching, in one easy-to-use solution. The out-of-the-box suite of Autonomy's most commonly used IDOL functions ensures that administrators can configure IDOL Retina with minimal effort, while the user-friendly interface and conversational search experience guarantees high user adoption.

For enterprises that require an information access solution with simple setup and quick deployment, IDOL Retina offers the market's most powerful technology wrapped in a simple interface. The system can be configured and administered by virtue of GUI-based interfaces with drag-and-drop functionality. Through an intuitive web interface, administrators can easily control and monitor all of Autonomy's modules and services, whether they are running locally or remotely.

## Features

### Retrieval

IDOL Retina provides several search methods from which the users can choose to conduct their queries. By default, users can enter natural language queries, ranging from a word to an entire document. IDOL Retina will use conceptual analysis to return the most relevant files.

Natural language queries allow users to find results without having to be familiar with search algorithms or syntax.

### Conceptual queries

Users can enter natural language queries that return references to conceptually similar documents. Conceptual querying includes:

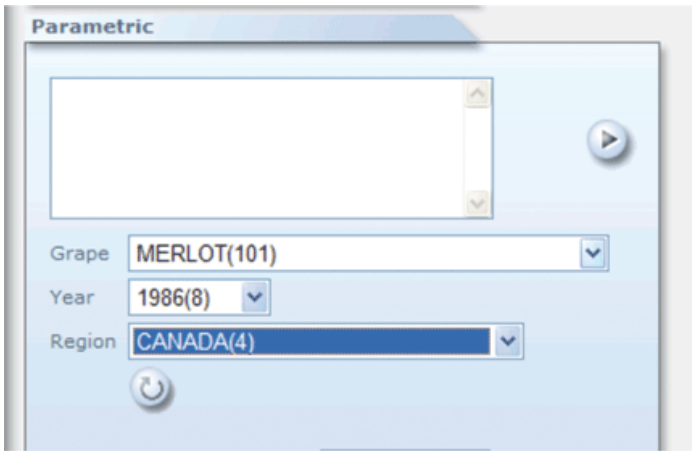
- ‡ Query by example
- ‡ Query refinement by example
- ‡ Keyword search
- ‡ Wildcard search
- ‡ Query language specification
- ‡ Soundex algorithm
- ‡ Result restriction by date, source, conceptual relevance and fields
- ‡ Result sorting by date, conceptual relevance, database or clusters
- ‡ Automatic suggestion of result related content
- ‡ Automatic suggestion of alternative queries
- ‡ Site agents
- ‡ Agent creation from results
- ‡ Fast query speeds

### Boolean search

Users can enter a standard Boolean or bracketed Boolean search using Boolean or Proximity operators. Boolean searching includes:

- ‡ Boolean operators AND, NOT, OR, EOR, XOR
- ‡ Proximity operators NEAR, DNEAR, WNEAR, BEFORE and AFTER
- ‡ Bracketed expressions
- ‡ Query refinement by example
- ‡ Wildcard search
- ‡ Query language specification
- ‡ Result restriction by date, source, conceptual relevance and fields
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Users can combine Boolean and Proximity operators to form simple or complex Boolean expressions.



Parametric searching for items by their characteristics

### Parametric search

Users can search for items by certain field values. When they provide fixed values in parametric fields, the parametric search returns consistent values in the non-fixed parametric fields. For example, users can search for specific wine varieties from a specific region by specifying which fields must match these characteristics, so that only wines that are of the specified variety and from the specified region are returned. Parametric searching includes:

- ‡ Parametric field search
- ‡ Query by example
- ‡ Query refinement by example
- ‡ Wildcard search
- ‡ Result restriction by date, source, conceptual relevance and fields
- ‡ Result sorting by date, conceptual relevance, database or clusters
- ‡ Automatic suggestion of result related content
- ‡ Automatic suggestion of alternative queries
- ‡ Agent creation from results
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### Federation

IDOL Retina can federate to any query-based system and intelligently interleave returning results. This capability is not limited to supporting established engines such as Google, and has the comprehensive capability to be expanded easily to support all client requirements for federation. The federation framework has been designed to be modular and scalable, and consequently federation workers can be rapidly developed. IDOL Retina adds intelligence to the traditional federation approach and compensates for its limitations in several ways:

- ‡ Search criteria can be pre-processed and results post-processed in nearly any way imaginable
- ‡ Intelligently selects the specialist most likely to return a query result, avoiding the need to bombard multiple systems with the same query
- ‡ Automatically merges results from different search engines into one coherent set

### Conversation

After users perform their queries, IDOL Retina engages the users in different conversation paths to help them disambiguate their result sets. By clustering the results according to concepts and parameters, accessing the users' contextual and profile information to personalize

the results, and mining community insight to continue the dialogue, search is now a two-way interchange. The results are presented with summaries, hyperlinks to similar files, query suggestions and site agents, generated automatically and in real-time.

### Real-Time Predictive Query (RPQ)

RPQ anticipates what the user would want to know and dynamically generates and recommends the results list as the user is entering the query. These results dynamically change as the user enters more text into the query. RPQ combines popular query terms with knowledge about the user and the context in which they are performing the search (e.g. what were their recent searches? What content did they consume immediately before the search?) to suggest queries.

### Automatic Summarization

Summaries of results are created automatically in real-time so that users can easily discern the relevancy of the files to their intent. IDOL Retina provides summarization in three forms, and the length can vary from a few words to several sentences

- ‡ The conceptual summary displays a few sentences from the document that contain the most salient concepts (these sentences can be from different parts of the result document)
- ‡ The contextual summary relates to the context of the original query—allowing the most applicable, dynamic summary to be provided in the results of a given query
- ‡ The simple summary comprises a few sentences of the result documents containing the query terms, if applicable



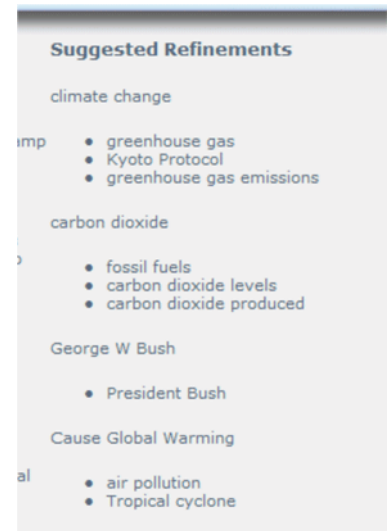
IDOL Retina provides automatic hyperlinking and automatically generated summaries

### Automatic Hyperlinking

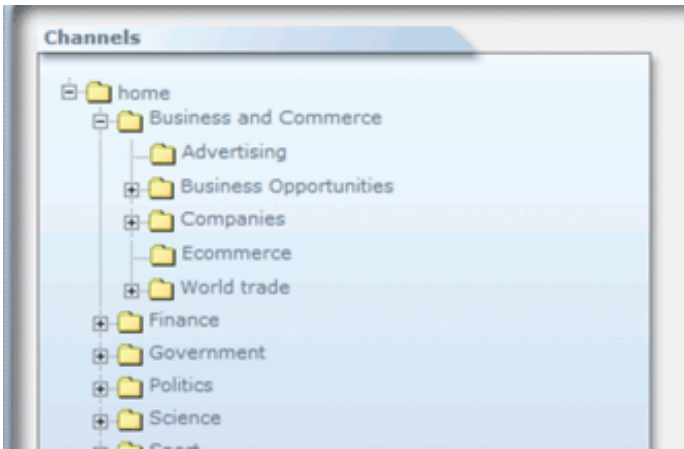
IDOL Retina automatically finds related pieces of information, regardless of their format. The concepts in a document can be linked automatically to those in another file. They can also be linked to related concepts within video or voice mail. Hyperlinks are generated in real-time at the moment a document is viewed, removing the need for any manual intervention and ensuring they are constantly up-to-date.

### Automatic Query Guidance

Requiring no manual training, IDOL Retina automatically clusters the results into conceptually related "buckets" so that users can easily find the most relevant information. The groupings are created dynamically based on the query and the time of query.



A search for global warming will help users hone in on a more specific topic



IDOL Retina channels enable easy access to data via fully customizable categories

## Advanced Analytics

### Automatic Categorization

Data is automatically categorized using concepts found within unstructured text and presented to users in channels. This ensures that all data is classified in the correct context with the utmost accuracy.

Users with appropriate administrative permission can create and administer the category channels that users access.

- ‡ Create subcategories
- ‡ Train categories using text and documents
- ‡ Build Boolean expressions to train categories
- ‡ Restrict category results
- ‡ View category results
- ‡ Retrain categories
- ‡ Edit categories
- ‡ Delete categories

### Automatic Clustering

Organizations can analyze large sets of documents and even user profiles and automatically identify inherent themes or information clusters. IDOL Retina leverages the most advanced heuristics, such as quantum clustering, to form these conceptual groupings. Some applications of this feature include: "What's Hot" clusters that automatically detect burning topics in an organization's information assets and "breaking news" clusters that alert users in real-time to new areas of information or individual interest.

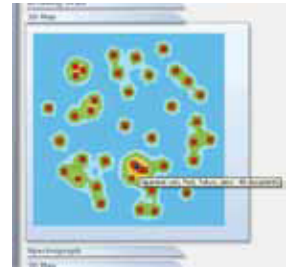


IDOL Retina automatically clusters the hottest news of the day into conceptually related groups

## Visualization

### 2D and 3D Cluster Maps

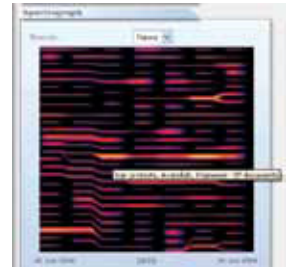
The 2D and 3D Cluster Maps are used to identify conceptual similarities and differences between clusters. Based on JSP, the landscapes are generated from the inter-relationships between clusters and the documents contained in those clusters.



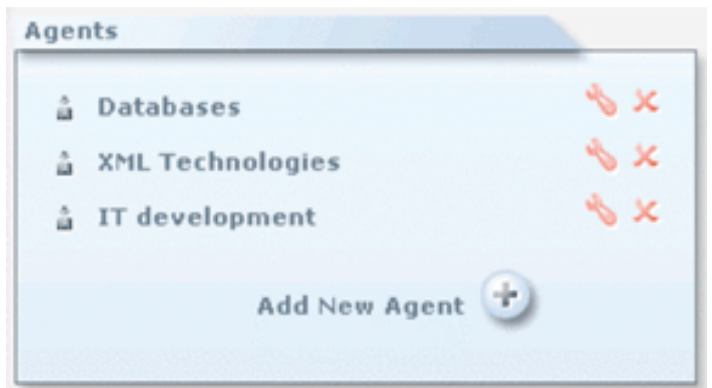
2D Cluster Map

### Spectrograph

This user interface displays the relationships between clusters in successive periods and sets of data. Clusters are presented as a JSP-based spectrograph, whereby the x-axis represents information over a given time period, while the y-axis represents the range of concepts defined within the knowledge base.



Spectrograph



Personal agents allow users to quickly find information that is relevant to them

## Personalization

### Agents

IDOL Retina allows users to set up Agents to monitor information 24x7 on specific topics from a range of data sources. An Agent represents a user's persistent interests and can be defined or trained either explicitly with a natural language description or Boolean expression. Most powerfully, an agent can be trained or re-trained by example, simply by being shown a document, video, or verbal conversation that matches a user's interests. The Agent will then learn the concepts within the example and define itself accordingly. Once an Agent has been created it will monitor in real-time the changing information within the index, instantly alerting the user to anything new that matches the training.

### Profiling

Autonomy accurately understands individuals' interests based on their browsing, content consumption and content contribution. Generating a multifaceted conceptual profile of each user based on both explicit (agents) and implicit profiles (click-through and submission), IDOL Retina forms a very current understanding of users' interests and personalizes the relevancy model to deliver intent-based search results.

## Expertise Locator

The profiling technology facilitates the recognition of highly focused experts (sorted by location, department, availability) within the community and reduces the duplication of effort through teamwork.

## Administrator Interface

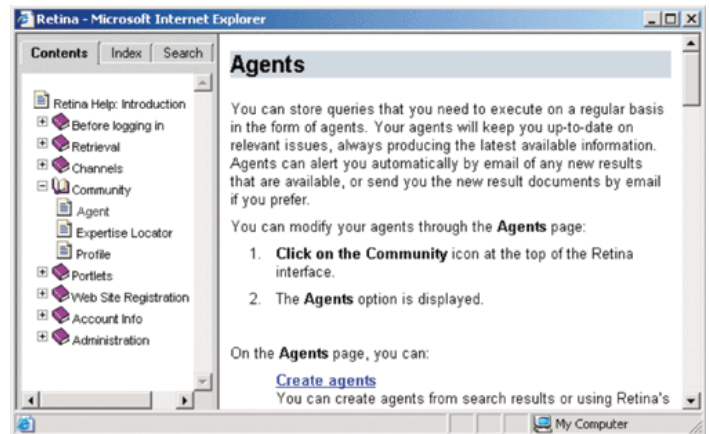
The comprehensive administrative interface provides administrators with a single platform from which they can modify the IDOL Retina's retrieval features, determine the content and style of the IDOL Retina user interface, administer IDOL Retina functionality and maintain IDOL Retina components.

Using IDOL Retina's administration interface, the administrator can:

- ‡ Enable / disable functionality
- ‡ Configure field display
- ‡ Hyperlink fields
- ‡ Enable / disable field searchability
- ‡ Configure component connections
- ‡ Enable / disable retrieval features
- ‡ Customize IDOL Retina's display style
- ‡ Customize query handling
- ‡ Create Query Logic rules for queries
- ‡ View query statistics for all user, roles or individuals
- ‡ Configure the Autonomy HTTP Connector
- ‡ Integrate Autonomy or third-party portlets into IDOL Retina
- ‡ Change IDOL Retina's appearance
- ‡ Customize the login mode
- ‡ Create and modify user roles
- ‡ Assign users to roles



IDOL Retina administration enables control with minimal effort



IDOL Retina's help system provides detailed guides to the features available to users and administrators

## Help System

IDOL Retina users and administrators can access the IDOL Retina help system directly from each IDOL Retina page, automatically opening the help system at the relevant help page. IDOL Retina administrators can choose to hide or show the help system.

- ‡ Step-by-step guides to IDOL Retina functionality.
- ‡ Full details on administration options.

## Mapped Security

Autonomy's mapped security model provides an integrated security solution to protect data. The authentication checks in the front-end and entitlement checking and authentication at the back-end combine to ensure that query results only comprise of documents that the user is allowed to see, from repositories that the user is allowed to access.

The biggest single constraint on scalability within enterprise applications is the ability to manage entitlement checks in a scalable manner. IDOL Retina stores security information in its native form directly in the kernel of the engine itself, with automatic updates to keep the security data current. This sharply contrasts with other security models that store security information in the original repositories, requiring communication between the search engine and the underlying repository for every potential result at the time of query.

The IDOL Retina front end application can be configured to use the security details for users and data in order to ensure that users are only given access to documents that they are allowed to see.

- ‡ User Identification and Authentication through login, with optional integration with LDAP, SSL LDAP and NT authentication (IS compatible only).
- ‡ User Entitlement
- ‡ Secure Communications
- ‡ Secure Access
- ‡ External Secure Site Access

