



THINKMAP PROVIDES DYNAMIC, DATA-DRIVEN, VISUALIZATION TECHNOLOGY.  
NEED TO VISUALIZE COMPLEX DATA?



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## WELCOME TO THINKMAP

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Thinkmap is a software platform for developing customized visualization interfaces to complex data. The software provides a system for making data more intuitive, accessible, manageable and meaningful.

Thinkmap is unique in its flexibility, scalability, and compatibility.

Thinkmaps are highly customizable (no two Thinkmaps are alike) and are deployed by companies in a variety of rich applications: knowledge management, operations and workflow, network management, e-commerce, research & development, and intelligence.

Via the Thinkmap Software Development Kit, developers can quickly create their own visualizations tailored to their data and integrated with their applications. Thinkmap runs on a myriad of platforms and can be deployed in a variety of ways.

Explore. Discover. Understand.

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Thinkmap puts content into context, and is a good example of an emerging trend of making it easier for people to find and use knowledge.

- Larry Prusak  
Distinguished scholar in residence, Babson College

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## THINKMAP SDK

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### MAKE SENSE OF YOUR COMPANYS INFORMATION

The Thinkmap Software Development Kit (SDK) enables organizations to incorporate data-driven visualization technology into their enterprise Web applications. Thinkmap applications allow users to make sense of complex information in ways that traditional interfaces are incapable of.

The SDK includes a set of out-of-the-box configurations for solving common visualization problems, and new display techniques can be built rapidly using the Thinkmap API, a toolset that provides the building blocks for customizing a Thinkmap application. Pre-configured Thinkmap templates include: Spider, Hierarchy, Clustering, and Chronology.

Additionally, a password-protected Thinkmap Developer Web Site is made available to our customers.

### SDK COMPONENT

The SDK includes conceptual documentation and Javadocs for the Thinkmap Core; datasource adapters for relational databases, XML, and flat files; a library of traditional user interface elements that can be used as components in a Thinkmap application; and a complete set of examples to help developers get up-and-running quickly. Licensors of the Enterprise Edition get full source code.

Thinkmap's modular architecture allows developers to configure applications to address a wide range of retrieval and discovery issues. Each element of a Thinkmap display – from the length and thickness of a line to the color, size, shape, and movement of a node – is configurable using the SDK, so that interfaces can be designed to perform specific tasks. The elements can also be mapped to numeric values in the data, so that combinations of qualitative and quantitative information can be expressed through a single interface.

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## BENEFITS

Thinkmap is designed to improve the ability of users to browse through complex information. It allows for interactive, dynamic filtering and the display of structured information without overwhelming the user or undermining the depth of the information resource.

### ENABLE STRUCTURED BROWSING EXPERIENCES

Search engines work well for users who know exactly what they are looking for. But for users with only a vague sense of what they are after, a different type of retrieval tool is needed. Thinkmap interfaces support users who are unsure of what they want to find, or of what is available.

### EXPOSE YOUR DATA STRUCTURE'S RICHNESS

Thinkmap interfaces are useful for communicating a data set's structure. Thinkmap displays can present a data object in its full relational context, so that users can appreciate not only that two objects are related, but exactly how. Properties of the interface can be mapped to quantitative properties of the data, enabling, for example, the ability to visually represent how closely two objects are related.

### QUERY DATA DYNAMICALLY

Thinkmap is fully dynamic, and is capable of showing changes in underlying data in near real-time. Thinkmap interfaces can be used to submit queries; retrieve and display result sets; and present users with options for continuing to query the underlying data.

### VISUALLY NAVIGATE CONTENT

Any entity within a Thinkmap interface can link to content – text, multimedia, documents, or Web pages – that provides more detail about the entity. In other words, a Thinkmap interface can be designed to display micro and macro views of a data set, side-by-side. This

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feature also makes Thinkmap a valuable tool for letting users intuitively browse through large amounts of interrelated content, increasing the chances that they will find something they did not know they were looking for.

#### **EASE OF IMPLEMENTATION**

The Thinkmap Software Development Kit (SDK) is a well-structured collection of code libraries, examples, and documentation that makes it simple for developers to quickly create their own Thinkmap applications. The examples can be used as guides or as out-of-the-box templates for new Thinkmap applications. Our customers typically have their first Thinkmap built well within a week.

#### **DEPLOYMENT FLEXIBILITY**

Thinkmap is designed to be extendable and to allow developers to implement customized solutions. We provide customers with plug-and-play connectors to JDBC databases, XML, and flat files, along with an API for integrating Thinkmap with non-standardized data sources and proprietary software.

Thinkmap can be deployed as a 3-tier Web-based client-server application, an n-tier application, or a standalone .exe application. Thinkmap's "thin" client can provide powerful real-time visualization in a standard Web browser, and the technology can integrate into existing applications as a component.

Thinkmap is standards-based, and works well within most application server environments. The technology has been deployed as a front-end to a variety of enterprise systems, including document management systems, customer relationship management systems, digital asset management systems, and automatic classification engines.

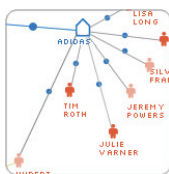
## ARCHITECTURE

We have designed Thinkmap to be easily extendable, fast, and able to integrate with a wide variety of legacy systems. Thinkmap is composed of a number of loosely coupled components that can be quickly reconfigured to fulfill many different visualization tasks. These components are lightweight, flexible, and standards-based.

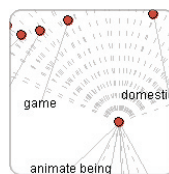
### THINKMAP COMPONENTS

#### CORE API

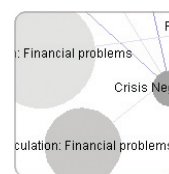
The unique features of Thinkmap start with a sophisticated core. The core enables the dynamic, asynchronous flow of data that is Thinkmap's hallmark. Careful abstractions expose this power, but hide the complexity. The functionality is delivered as a set of plugins, listeners, filters, and maps, which can be built upon to implement a variety of features. The Core API is used to create and configure the following visualizations:



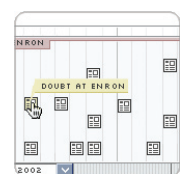
SPIDER



HIERARCHY



CLUSTER



CHRONOLOGY

#### DATASOURCE API

The data access layer of Thinkmap is known as the Datasource API. It separates the user interface layer from any particular back-end. Any Thinkmap datasource can be streamed over a network, and Thinkmap can access multiple sources at once, without changes to the application code. The Datasource API is standards-based and flexible, and allows developers to create custom adapters to a variety of back-end systems. In addition, we provide customers with plug-and-play connectors to relational databases and XML.

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### **GEL LIGHTWEIGHT APPLICATION FRAMEWORK**

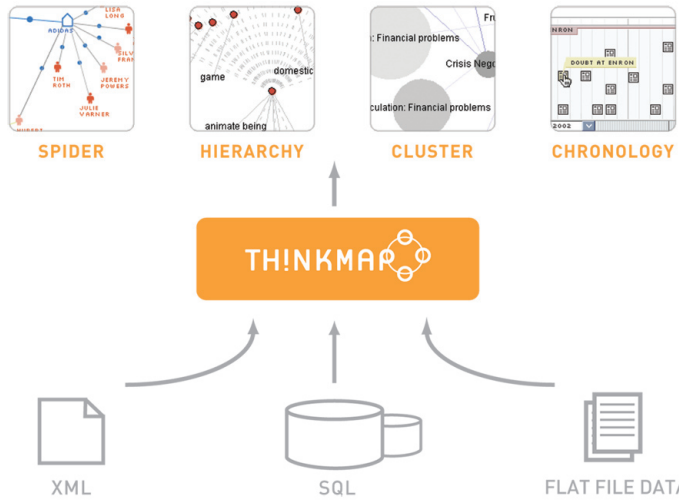
Enables rapid development of Java client-side GUI components that work alongside Thinkmap. The components included in GEL include: sliders, scrollbars, lists, buttons, pop-up menus, and tool tips.

### **CONDENSITY**

Enables the publication of Thinkmap Java applets. Condensity strips away components that are not being used, achieving optimal size and efficiency in deployed code.

### **J2EE CONTAINER DEPLOYMENT**

Thinkmap Applications that are accessed over the Internet can easily be deployed as J2EE Web Application Archive ("WAR") files. This means that Thinkmap can be deployed on any standard J2EE Servlet container.



Thinkmap Architecture

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## COMPANY

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Thinkmap, Inc. develops and markets software that uses visualization to facilitate communication, learning, and discovery. We specialize in user interfaces and visualization mechanisms that allow end-users to more effectively browse and understand complex information.

Thinkmap, Inc. was founded in 1997 as Plumb Design Inc. In 2004, we changed our name to Thinkmap to better capitalize on growing demand for our visualization solutions based on the Thinkmap platform.

Thinkmap has developed a history of solving complex information problems in a variety of different enterprise and consumer environments. Thinkmap's customers now include leaders in industry and government like 3M, General Dynamics, Motorola, NASA Ames Research Center, Pfizer, and Sony Music.

Thinkmap's education products, namely the award-winning Visual Thesaurus, are available through educational resellers and direct from the Visual Thesaurus site.

[www.visualthesaurus.com](http://www.visualthesaurus.com)

Thinkmap is backed by GFT Technologies and Motorola Ventures.

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## SERVICES

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Thinkmap is a highly configurable platform for building enterprise applications that help organizations make sense of their information assets. Our Professional Services team consists of experienced Technologists and Information Designers that can offer a variety of Consulting, Training, and Development Services.

### CONSULTING

Our experienced team of Technologists and Information Designers can help you determine the best way to customize Thinkmap and integrate the technology into your enterprise environment. We can help you reduce the time to production for your Thinkmap application, and offer our advise in structuring your data to take full advantage of Thinkmap's dynamic visualization capabilities.

### DEVELOPMENT SERVICES

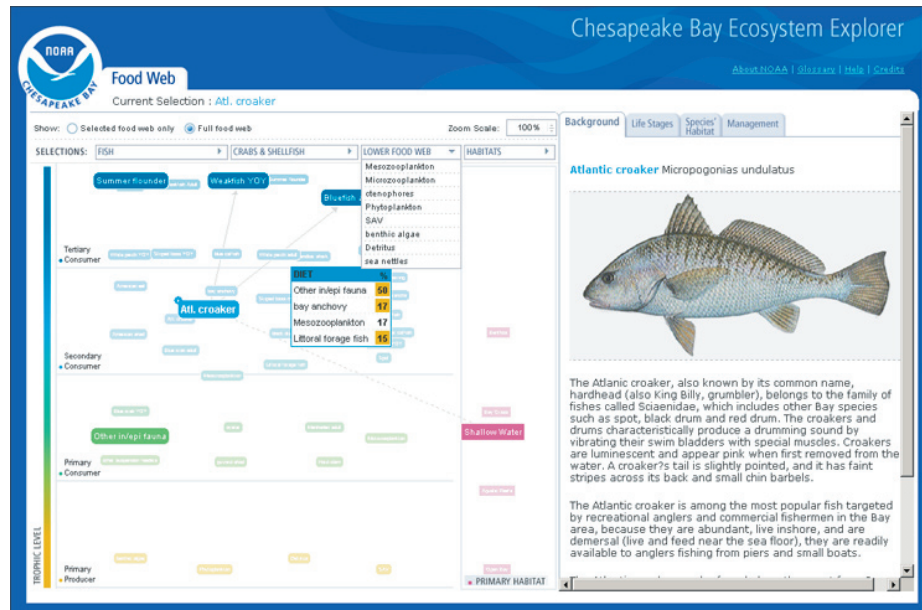
Our Technologists and Information Designers are available to work closely with you to design, build, and deploy your Thinkmap application. We can assist you at any stage in the development cycle — from rapid prototyping to deployment.

### TRAINING

We offer in-person training covering Thinkmap development and deployment. Training sessions can be held at our customers' site, or in our offices in downtown Manhattan.

To learn more about our Professional Services, please contact us at [sales@thinkmap.com](mailto:sales@thinkmap.com) or call 212-285-8600.

## CASE STUDY / NOAA



### THE CLIENT

NOAA, the National Oceanic and Atmospheric Administration, is dedicated to understanding and predicting changes in the Earth's environment and conserving and managing coastal and marine resources to meet the United States' economic, social, and environmental needs.

One of NOAA's largest initiatives over the past 20 years has been to manage and improve the quality of the Chesapeake Bay estuary ecosystem. In recent years, NOAA has made it a priority to present its research to the public in order to enhance the general knowledge of environmental issues. NOAA worked with the Thinkmap team to adapt the Thinkmap technology to serve this mission.

### THE CHALLENGE

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In 20 years, NOAA has made hundreds of thousands of observations of animal behavior, and produced thousands of pages of research in its work monitoring and restoring the Chesapeake Bay. This research has been of vital importance to scientists and policy makers, but an overall challenge has been to present this research in a way that non-scientists, educators, and high-school students can understand and appreciate. NOAA approached Thinkmap to help develop an interactive application to explain the interdependencies of the Bay ecosystem to educators, students and their parents.

### THE SOLUTION

Thinkmap enables users of the Ecosystem Explorer to discover and understand the complex web of relationships within the Chesapeake Bay ecosystem.

The Chesapeake Bay estuary ecosystem consists of many different plants and animals that are interdependent. Using the Ecosystem Explorer, a student can select any organism that lives in the bay, and determine what other organisms are dependent on it through an easy-to-understand, intuitive display. By choosing different organisms, a student learns how and why each of the many organisms is dependent on each other. Through the use of Thinkmap, what had been reams of charts has become an engaging interface that facilitates communication, learning, and discovery.

Among the main functions of Ecosystem Explorer:

- Selected species are shown in a dynamic food web visualization, showing the directional interdependencies of who eats whom
- Users can view either a single food chain centered upon a particular organism or switch to a full food web view, providing added context for the current species selection
- All species within the food web reside within certain trophic levels, as well as habitats. This information is represented with images of the organisms and with spatial connections among them.

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- Along with the food web display, the interface also includes a detail window that provides additional information and imagery about the user's current selection.

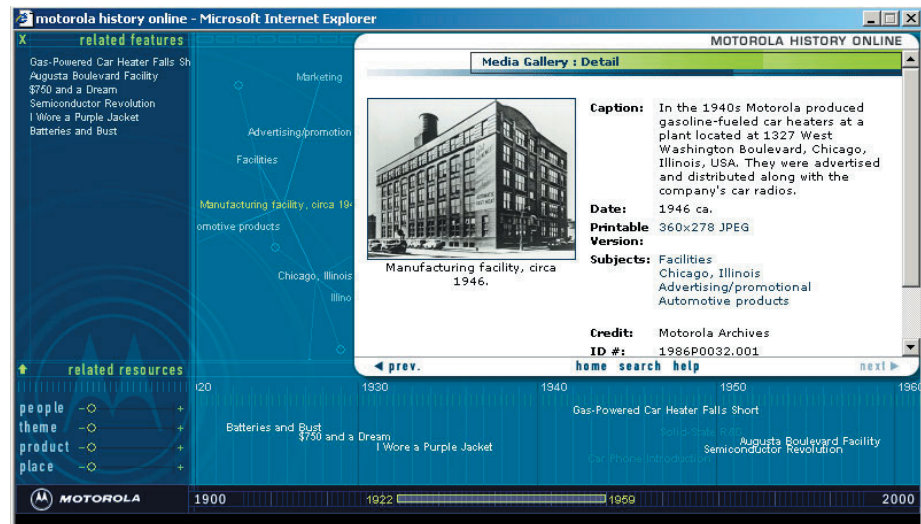
The information display is scientifically accurate and the interface is intuitive and easy-to-grasp for schoolchildren, educators and parents.

Thinkmap visualizations are helping NOAA communicate the environmental issues of the Chesapeake Bay ecosystem, and more generally the science of environmental ecology, in a way that provokes thought, encourages exploration, and leads to understanding.

Thinkmap encourages our employees to discover key aspects of Motorola's heritage while sparking creative thinking that could inspire new innovations.

- Sue Topp  
Manager  
Motorola Archives

## CASE STUDY / MOTOROLA HISTORY



### THE CLIENT

For over 75 years, Motorola has been an innovator in electronics and communications, and today is a global leader in wireless, automotive, and broadband communications. Motorola Museum and Archives maintains a rich collection of historical and business information that records the company's technology, history, and culture.

### THE CHALLENGE

Motorola Museum and Archives sought to develop an online, self-guided learning center by which Motorola employees across the globe could explore the company's rich history through a digitized archive of textual, visual, and audio artifacts.

### THE SOLUTION

Thinkmap collaborated with Motorola Museum and Archives to create an application that immerses the user in a number of historical and technological perspectives. This context-rich environment increases users' exposure to the diverse content and encourages each

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visitor to explore and learn more than a traditional interface would. Faceted browsing enables users to explore the content through its various shared attributes. And because there are a variety of ways to learn—timeline, spider map, educational interactive animations, text boxes—the application accommodates a wide range of learning styles.

Created with Thinkmap data animation software, the Motorola History Online application expresses the core values of Motorola through a history of its technology and business development. A Thinkmap timeline helps users clearly see the evolution of Motorola's products, and a Thinkmap spider map uses kinetic, connected words and phrases to visualize the links between the themes, people, products, and places that have played a part in Motorola's growth. The end result encourages users to find resources and learn from the site beyond their original objectives, introducing an element of serendipity that expands the breadth of exploration and empowers the user to employ the lessons from the past in current business dealings.