

Amirsys integrates the Google Search Appliance with its STATdx decision-support portal to enable faster, better medical diagnoses



At a Glance

What they wanted to do

- Improve search result relevance
- Eliminate need for search system programming and tuning
- Improve search query response time
- Gain easy visibility into search activity and patterns

What they did

- Worked with Search Technologies to integrate the Google Search Appliance (GSA) into the STATdx decision-support portal for healthcare professionals

What they accomplished

- Improved relevance of search results without requiring developer support
- Reduced search query response times from 5 to 7 seconds down to mere milliseconds
- Allowed for fast zero-results reporting and investigation

Company

Since 2001, the physicians, software engineers, content specialists, editors, graphic artists and other team members of Salt Lake City-based Amirsys, Inc. have dedicated themselves to a single goal: Improving the quality, timeliness and accessibility of medical information. Amirsys has pioneered many innovative “firsts,” including putting medical imaging content on a hand-held device, developing an online diagnostic decision-support system for imaging, and creating a comprehensive online medical authoring system.

Amirsys products are used by physicians to improve patient care and by residents to learn the skills needed to provide high-quality patient care. Amirsys products assist more than 40,000 physicians, surgeons, residents and fellows in about 50 countries as they learn, diagnose, and heal.

Amirsys’ STATdx diagnostic clinical decision-support portal, used at the imaging point-of-care, is designed to support busy radiologists, pathologists, imaging technicians and other healthcare professionals by increasing imaging analysis speed, accuracy, and diagnostic confidence for complex cases. STATdx streamlines workflow by reducing the time required to research and complete a difficult imaging analysis, and provides access to on-demand reference tools wherever and whenever needed—in the hospital, in the imaging center, or remotely.

Challenge

Time is a critical factor for STATdx users and affects both the cost and quality of patient care. For busy radiologists, time spent performing diagnoses is tracked and billed on a minute-by-minute basis. The time required to produce and verify an accurate diagnosis can be a critical factor in delivering care to the patient. This makes faster, more relevant search and retrieval a key element of STATdx.

Amirsys was expending a high degree of effort to support its portal’s search capability. Even with a full-time employee dedicated to the job, the relevance of portal search results continued to be unsatisfactory, in part because the existing system lacked the ability to “learn” based on user interactions. Features such as spell correction, a “did you mean” function to recommend different terms, and search-term translation could only be accomplished with custom programming and constant tuning. In addition, reporting on search activity was time-consuming and required programming effort to extract information from search logs and to format results. Amirsys needed a better search solution, and needed it fast.

Solution

After comparing several service providers, Amirsys engaged Search Technologies Corporation to advise them on implementing the Google Search Appliance (GSA). Amirsys chose Search Technologies for this initiative because of its understanding of search implementation, its years of experience, its reputation for delivering results, and its size.



Search Technologies is dedicated to search, and has provided more than 40,000 consultant-days of search implementation services to 150 clients over the past four years. Many of our 70+ technical experts have more than a decade of experience with search software; our executive team has, on average, more than 16 years of search industry experience. This expertise mitigates risk for our customers.

About the Google Search Appliance

The Google Search Appliance (GSA) is an integrated hardware and software search solution that extends Google's award-winning search technology to websites of all kinds, including corporate sites and intranets. Organizations can use the Google Search Appliance to make data on servers, content management systems, databases, and business applications instantly and securely available from a single, familiar UI search box. More than 35,000 companies worldwide use Google Enterprise search solutions. For more information, visit www.google.com/gsa.

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Search Technologies partnered with Amirsys' search team to identify the unique search needs and recommended an optimal approach to integrating the GSA with the STATdx decision-support portal within the project timeline and budget. "Working with Search Technologies has been a pleasure. Search Technologies worked with us to obtain a thorough understanding of our search needs before deploying the solution that best met our customers' needs," says Roth LaFleur, product manager for Amirsys.

The Amirsys development team integrated the new search system into their product. Search is now a central feature of the updated system, accessible from every part of the STATdx user interface. New search capabilities such as automatic query completion now greatly enhance the decision-support portal's usability.

Results

Ease-of-use, speed, and results accuracy are all hallmarks of the new search system. When a user starts typing a query in STATdx, the system begins to suggest search terms and phrases that can be quickly selected to complete the query. Search results also can be browsed and narrowed by content type and anatomic category. Search results also can be narrowed by file type and by category using the Amirsys taxonomy. The GSA executes all of these queries in the background to enable quicker user interaction and navigation.

One immediate impact of the new search platform has been the improved relevance of search results without requiring a developer to further tune the system. Search queries on specialized medical terms that were once problematic also are no longer an issue.

Before implementing the GSA, average response time for search queries was five to seven seconds, with some very general searches taking up to 15 seconds to complete. After integration of the GSA into STATdx, query response time has been reduced to milliseconds, saving valuable time for Amirsys clients and the healthcare professionals and patients who rely on fast and accurate diagnoses.

In addition, reporting on search activity and trends is now accessible to Amirsys management and support staff directly, without requiring assistance from a search developer. For example, managers can quickly see if any queries return zero results and then investigate the cause.

STATdx uses Google Translation Services to enable search of STATdx content in any of 49 languages. Users can choose their preferred search language, type a search in that language, and then view results in English.

For Amirsys, integration of the GSA into STATdx has provided a competitive advantage and reduced costs by eliminating the need for special programming and tuning. And Amirsys is empowering the radiologists and other healthcare providers who use the STATdx system by increasing their imaging analysis speed, accuracy and diagnostic confidence for complex cases—and helping them to elevate the quality of patient care.

