

## NLM Lister Hill Center

# Aquilent is helping the Lister Hill Center at the National Library of Medicine (NLM) improve collection, use, and dissemination of biomedical information.

### the objective\_

The Lister Hill Center at the National Library of Medicine (NLM) helps improve access to high-quality biomedical information for individuals around the world. It conducts and supports research and development in the dissemination of high-quality imagery, medical language processing, high-speed access to biomedical information, intelligent database systems development, multimedia visualization, knowledge management, data mining, and machine-assisted indexing.

The NLM's overall goal was to improve collection, use, and dissemination of biomedical information to target user groups such as researchers, medical practitioners and industry experts as well as the general public. Serving a wide user set presents a variety of challenges, including information presentation, indexing and categorization, terminology, and export and transmission.

### the solution\_

For more than two decades, Aquilent has provided NLM with software support services for complicated biomedical information needs. NLM's technology research and development initiatives seek to improve search-and-retrieval functionality, terminology translations, collection and electronic storage, content categorization, and presentation. Current Aquilent-supported projects at NLM that support their biomedical information goals include:

- > Boundary Marking Tool (BMT) and Multimedia Database Tool (MDT) are digital means to store, analyze, and use a collection of cervix images and clinical data. BMT stores marks and annotations as a rich set of textual and image data for subsequent search and retrieval, while MDT provides the capability to query multimedia biomedical databases.
- > Genetics Home Reference (GHR) is a website designed for the general public to learn about specific genetic disorders and the genes responsible. It provides consumer-friendly information about the effects of genetic variations on human health.
- > The Lost Person Finder (LPF) enables family, friends and neighbors to locate missing persons during a disaster event. Individuals search the LPF database and retrieve the information on desktop and

handheld computers. In addition, the system displays pictures and other information on missing persons on large monitors placed at key public locations.

- > The Personal Health Record (PHR) project is a website where people can record health information and obtain links to related NLM resources. The target audience is adults taking care of elderly parents or young children. The PHR application is built on the Form for All Reasons (FFAR) framework for medical data entry systems.
- > RxNorm Navigator (RxNav) is a browser for RxNorm, the NLM repository of standard names for clinical drugs. RxNav displays links from branded and generic clinical drugs to their active ingredients, drug components, and related brand names.
- > System for the Preservation of Electronic Resources (SPER) is an R&D project created to effectively preserve NLM's digital resources over the long term. The resource materials include scanned and born-digital biomedical journals, articles, and other important works. SPER focuses on assembling and storing sufficient resource-specific metadata and protecting a resource against technical obsolescence.
- > The Teaching Tool (TT) allows the display of images alongside text that prompts the user for input related to the images. The typical use for the TT is to administer a self-training exam in an image-based medical discipline. The TT is expected to be used by the American Society for Colonoscopy and Cervical Pathology (ASCCP) for administering professional exams.
- > The Virtual Microscope (VM) provides web access to digitized histology images for expert review and evaluation. Since these images tend to be very large, the VM incorporates technology to access and display only the part of the image that corresponds to the user's current pan and zoom level. The VM has been used in studies of histology images of the uterine cervix and the lungs.

## the payoff\_

NLM's web information portals provide access to a wealth of biomedical information for medical researchers, practitioners, industry, and the general public. Aquilent's solutions facilitate NLM's processes for collection, use, storage, and dissemination of important biomedical information.

## HIGHLIGHTS

- > Improved collection, use and dissemination of biomedical information.
- > Preservation of important resource materials.
- > Easier access to information for medical researchers, practitioners, industry, and the general public.
- > Ongoing software support services.

The screenshot shows the 'Lost Person Finder' website. At the top, it says 'Lost Person Finder' and 'For Bethesda, MD Area Hospitals'. Below that, there's a 'Missing and Found Person Registry' section. It includes a search bar and a 'Report a Person' button. The page also has a sidebar with navigation menus for 'OPTIONS', 'SECTIONS', 'MISSING PERSON REGISTRY', and 'USER'.

The screenshot shows the 'Genetics Home Reference' website. It has a search bar at the top right and a navigation menu. The main content area is divided into several sections: 'What's New', 'Genetic Disorders A to Z', 'Genes', 'Chromosomes', 'Handbook', 'Glossary', and 'Resources'. Each section has a brief description and a link to more information.