



# NAVIGATING YOUR TEST DATA



Multiple test stands in facilities around the globe, hundreds of models, thousands of parts...and a file of test data unique to each and every one. This scene of potential data overload is all too familiar to many high tech companies who rely heavily on test data to optimize their products. Enter Viewpoint Data Management, LLC, a company who has a history deeply rooted in the design and management of test systems for complex organizations. The product is *Aperio*, aptly named -- its meaning in Latin is to uncover or reveal.

*Aperio* is a browser based automated system for extracting, organizing and sharing test results from user databases across an organization. It is designed specifically for the challenges presented by the numerous types of data that engineering groups have to work with. *Aperio* resides on a company's server(s), using Microsoft® IIS running ASP.NET to host the *Aperio* website, which is the user interface. The *Aperio* processing service works within an organization's secure framework. It scans any number of specified network locations for files in any designated format(s), and then tags the files without making any modifications to, or copies of the data. The metadata is then collected in a catalog to be accessed and displayed in customer specified formats.

In addition to operating under a facility's secure environment, *Aperio* also provides internal security by requiring users to log on, and through system administrator directed roles. Roles are assigned to each user and define what data and what pages a user is able to see. Using these permission based roles, selected data can be shared securely outside of the organization to suppliers, customers, or other stakeholders.

*Aperio's* user interface is customized to display "data about data" in any number of configurations. As soon as data is discovered it is available to every authorized user across a network. Data can be opened directly or downloaded without the user needing to know its exact location. To achieve an efficient "desktop like" application through a web interface, *Aperio* uses JavaScript to manipulate and use the XMLHttpRequest Object. The use of this technique (now known as AJAX) allows requests from a page to be sent directly to the backend for various tasks such as retrieving data and processing information, resulting in fewer full page requests and refreshes. The developers of *Aperio* have the foresight however, to use AJAX judiciously in their application to avoid some of the potential drawbacks of overuse on the efficiency of the web server.

The Mulgara database functions as the *Aperio* catalog, allowing the system to index and associate all of the data located by *Aperio*. Mulgara is a Resource Description Format (RDF) Metastore, designed to organize a wide variety of information on data, even if the form of the data changes over time. Mulgara is *Aperio's* cornerstone for providing integrity through transactional support, as well as significant data processing and storage potential through its 64-bit architecture. The *Aperio* application itself takes up very little space on the server. The space requirements for the catalog are dependent on the volume of data tagged by *Aperio*.

In today's environments where test data is generated faster, over extended periods of time, and in greater quantities than can be easily assimilated, the advantages of *Aperio* are numerous. A customized approach to managing data, taking into account variations in data format, location, and preferences across an organization, is what sets *Aperio* apart.