

Leveraging Geography for Energy Applications

Unlock Documents

Geoscientists and petroleum engineers at leading energy companies need a solution to access documents that are languishing in repositories located throughout the world. Proprietary document management systems and desktop computers provide basic cataloging of documents, but users are still unaware of content - especially from a geographic standpoint. Mergers and acquisitions increase the quantity of documents and exacerbate the problem. MetaCarta GTS helps users find documents and identify content.

Gain and Maintain a Competitive Edge

To stay competitive, E&P companies must find cost-effective ways to harness vast amounts of intellectual capital. Internal databases and publicly accessible archives from AAPG and Petroleum Abstracts present vast document resources. Locating and understanding these documents efficiently accelerates informed decision-making. MetaCarta GTS enables E&P companies to quickly understand what information documents contain and where they refer to geographically. This immediately boosts the value of research in support of critical business decisions.

Fusion of Documents, Maps, and Keyword Search

MetaCarta GTS uses a patent-pending Natural Language Processing (NLP) approach to read and identify explicit and implied geographic references within a document. The solution extracts geographic features and fuses the keywords and geography into a common index. This index is instantly searchable via MetaCarta GTS's Web-based interface. Also, ESRI ArcMap users can search for documents using a MetaCarta GTS extension within the ArcMap interface.

Seamless Integration

ESRI ArcMap users can search for documents using a free MetaCarta GTS extension within the ArcMap interface. MetaCarta GTS fuses document search with users' ESRI GIS map data.

Applications

Geographically Organize Information Assets

Only MetaCarta GTS provides a solution to search for documents using a combination of geography and keywords.

Leverage Intellectual Capital

Gain full and immediate access to thousands of reports, studies, emails and articles developed in-house, inherited through mergers or acquisitions, or archived in antiquated repositories.

Pipeline Management

Discover how changes in government regulations around the globe affect pipeline management policies.

Improve Competitive Intelligence Portals

Quickly identify competitor activities based on geography.

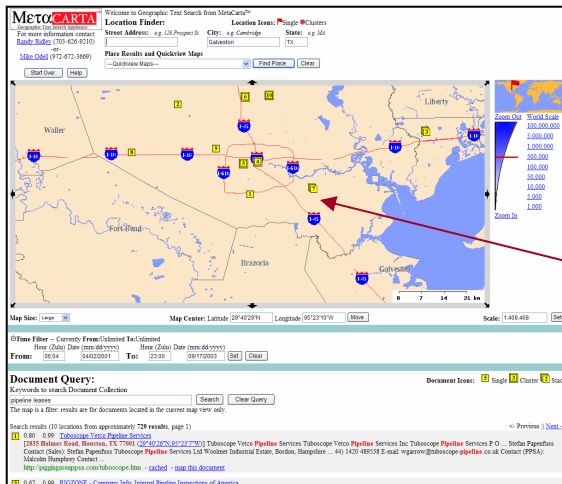
Asset Management

Develop an improved understanding of the impact of operational decisions, location by location.

E&P Operations Support

Rapidly locate documents that describe how geological and geophysical issues have been addressed in the past.

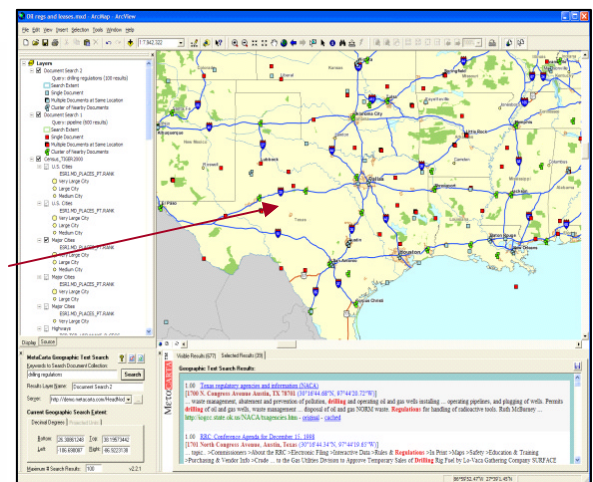
MetaCarta GTS Standard Default Interface



.DOC
.HTML
.HTM
.PDF
.PPT
.PS
.RTF
.TXT
.XML
.XLS



MetaCarta GTS Extension for ESRI ArcMap Interface



MetaCarta GTS automatically extracts geographic references from text to create an index of documents tagged with latitude and longitude coordinates

MetaCarta GTS Software

User Interface (GUI):	<i>Web browser-based:</i> Netscape v4.0+; IE v4.0+; Mozilla v1.0+ <i>Extension for ESRI ArcMap:</i> ESRI ArcMap v8.2+			
Ingestion File Formats:	.DOC	.HTML	.HTM	.PDF
	.PPT	.PS	.RTF	.TXT
	.XML	.XLS		
Protocol Support:	HTTP	HTTPs	IP	LDAP
	NFS	ODBC	SOAP	SSH
	SSL	TCP	XML	
Base Map:	Map backdrops based on the Digital Chart of the World (DCW); useful to 1:1,000,000 scale; Military Specification Mil-C-89009. Also complies w/ 3 rd party maps.			
Updates:	New releases shipped directly from MetaCarta on DVD/CD-ROM.			

MetaCarta GTS Server

Hardware:	Dell® PowerEdge 2650
Dimensions:	<i>Height</i> 3.375" (8.5725cm); 2U <i>Width</i> 19.00" (48.26cm) <i>Depth</i> 27.50" (69.85cm)
Processors:	2x Intel® Xeon Processors, 2.8+GHz
Cache:	512KB L2 Advanced Transfer Cache
Memory:	6GB DDR, 200MHz; 64x 1GB DIMMs
Hard Drive:	5x 146GB, Ultra 3 (Ultra 160) SCSI, 1"
Network Interface:	Dual on-board NICs
DVD Drive:	4.7GB, IDE, Internal
Ports:	Two 9-pin serial, 2 Universal Serial Bus, video, PS/2 mouse, PS/2 keyboard
Power Supply:	Redundant Power Supplies 2x 500W AC; 100-240 VAC
Regulatory:	FCC (U.S. only) Class A DOC (Canada) Class A CE Mark (EN 55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950) VCCI Class A

Security - Access Control and Network Security

MetaCarta GTS operates within the LDAP/X.509 environment. This enables the solution to authenticate and authorize users. Using LDAP/X.509 on MetaCarta GTS allows system administrators control over which personnel may see documents and submit queries. The "Manage Document Collection" feature allows individual users to upload desktop-based documents to the MetaCarta GTS server.

Ingesting Documents

MetaCarta GTS ingests and indexes documents prior to enabling geographic text searches. MetaCarta provides several ingestion templates, written in Perl and Java for ingesting documents from databases via SOAP and ODBC. Documents may also be ingested by querying databases such as Oracle and selecting and concatenating VARCHAR or CLOB fields. Once documents are ingested and tagged, they are available to every authorized MetaCarta GTS user.

Ingestion processing times vary based on the complexity and volume of documents. MetaCarta GTS ingests typical Web pages at a rate of approximately 2 million pages per day. Large binary documents take longer. For example, ingestion of a 250-page .PDF text document takes several seconds per document, resulting in an ingestion rate of approximately 10,000 documents per day. In comparison, it takes a human three 8-hour days to tag one 250-page .PDF text document.

CartaTrees™ Map Search Text Index

Combining text and geography requires a database operation called a 'join'. Text and geographic data are fundamentally different data types. Words are strings of symbols. Typical searches on collections of words involve pattern matching a search string against strings in the a document collection. Locations are geometric entities in a Euclidean vector space.

In general, search indices can be built based on text and location. A text index allows documents to be retrieved based on keywords. A spatial index allows documents to be retrieved based on a geographic area of interest. MetaCarta GTS features one index that contains both text and location data types. Known as CartaTrees™ Map Search Text Index, this is what makes MetaCarta GTS searches fast - hundreds of searches per second.

FETCH DOCUMENTS

INGEST / INDEX / PROCESS

SEARCH

