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## SEARCHING FOR VALUE IN SEARCH TECHNOLOGY

In our April issue, Sebastian provided a high-level taxonomy of search technology solutions, and some guidance on how to think about the search problem from an enterprise point of view. The largest, and most interesting, category of search solutions were labeled “premium search” solutions that “...are based upon advanced search technology and are focused primarily on large, strategic collections of content and whose customers are willing to pay top dollar to provide the most robust search capabilities possible.” These are sophisticated solutions with long lists of features, and are based on difficult-to-understand algorithms. The mostly-common feature lists don’t help much in differentiating between vendors. Unfortunately, even making the effort to fully comprehend the algorithms is not enough to inspire confidence that they will work as expected with *your* content.

It *is* worth the effort to learn something about how these advanced search technologies work, but you need to supplement this knowledge with an understanding of the subtle differences in the strategic value propositions between different vendors. This month Sebastian takes a look at three categories of value propositions, identifies some vendors focused on each, and provides additional advice to help you take the next step in determining which type of premium search solution is right for you.

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# SEARCHING FOR VALUE IN SEARCH TECHNOLOGY

This article takes a closer look at the category of “premium search” that was introduced in an earlier Gilbane Report article (*Vol. 10, Num. 3*), [In Search of Search Solutions](#). For the purposes of this article, let’s say that the average transaction size for a premium search vendor is greater than \$100K USD. We explore how these vendors build their value proposition today and how they see their offerings evolve to preserve that value. Constraints of time and space dictate that specific vendors cannot be reviewed. Rather, (sub) categories of premium search will be introduced with a small subset of suppliers used as illustration.

## SEARCH: IT’S AN UGLY BUSINESS BUT EVERYONE HAS TO DO IT

### Everyone has to do “it”

It is often said that the greater the number of terms a community has for a given object, the more important that object is to that culture. Inuit have numerous names for ice, Pacific Islanders do the same with coconuts and most every culture have a multitude of terms for money and for sex. Search, navigate, retrieve, report and query are just a few of the tags we use on a daily basis. Search is clearly important. In fact, I challenge anyone to name an operation that is more universal than search.

I would also like to introduce a corollary. The more meanings a community has for a single term, the poorer that community understands that term. In other words, if a term can have many meanings, then it essentially means nothing. Every organization and individual requires and/or provides search services. We search on the web, across our enterprise, through our desk, and for matching socks in the morning. Search is almost unique in its universality. This virtually assures that buying, selling or using a search tool will always mean many things at different times. Said another way, search will likely continue to devolve into a meaningless term for a variety of technology applications.

Premium search vendors agree. I could not find a single vendor that was comfortable being categorized as a search vendor and all were quick to characterize search as a commodity.

### It’s ugly

Search technology cannot meet end-user expectations.

Combine every advanced search algorithm smoothly across all media and it will not approach the sophistication that we employ when searching for (and finding) matching socks in the morning. Categorization (dresser drawers), predicate (where matching), visual search (color and pattern), profiling (plans for the day), clustering (formal/casual), media-specific retrieval (remove from drawer and put on feet) – are seamlessly prioritized, integrated, and flawlessly executed and all before a first cup of coffee!

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Cognitively, search is one of the seemingly effortless activities that are in fact marvels of the mind. Everyone searches yet very few people take the times to appreciate how complex and sophisticated our most basic searches are. The result is that when technologists tout their powerful search capabilities, user expectations are heightened and then somewhat dashed as even the most advanced search technologies rapidly reveal obvious limitations and inappropriate behaviors.

### **It's a business**

If it hurts when you do that – don't do that. This vaudevillian cliché has not been lost on the multitude of software vendors whose considerable value propositions rely heavily upon one or more aspects of search technology. (Search) vendors have wisely opted to position (or reposition) their offerings in a variety of ways, but none of them have chosen to make leadership in search technology the cornerstone of their business or sales strategy. Vendors have taken a number of strategies that will be reviewed here.

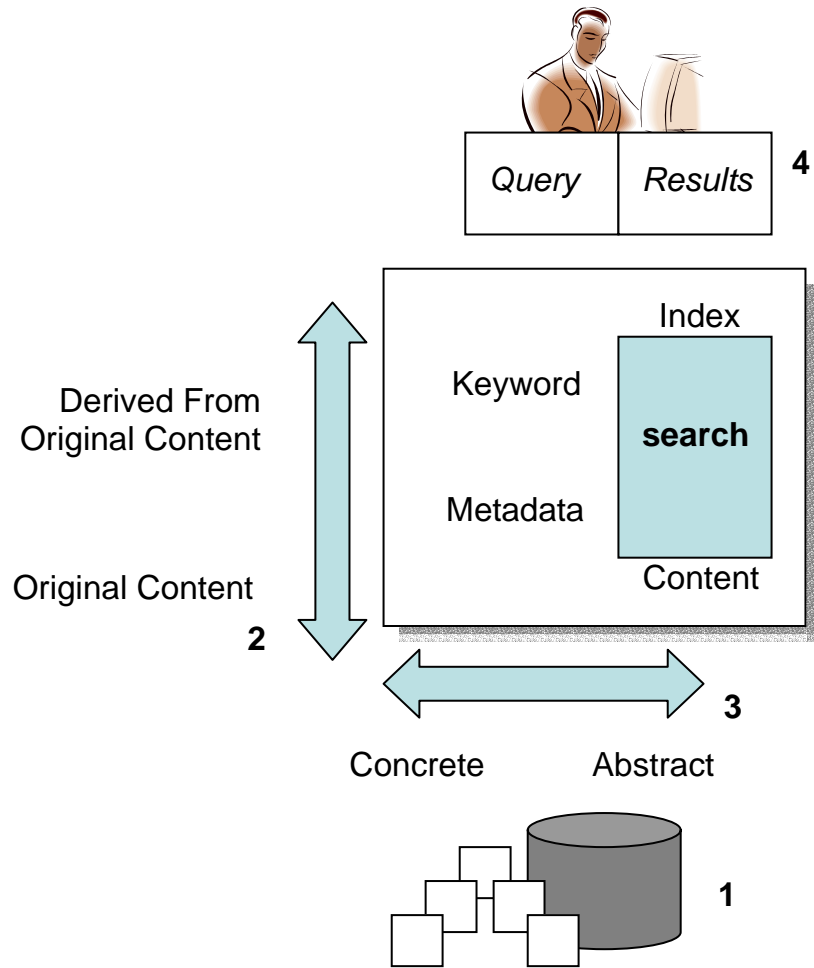
Understanding a vendor's self-perception is the best leading indicator of where that vendor will likely be investing their development resources, the kinds of partnerships that will be prioritized and ultimately, its ongoing viability.

## **PREMIUM SEARCH VALUE DRIVERS**

The basic processes of ingesting, processing and staging content to be searched were covered in the [previous article](#). Also covered were the various flavors of search technology. It is recommended that the reader refresh themselves as the following descriptions are intended to be incremental.

Figure 1. represents the essential components that one can now expect to find embedded in most DBMS, Internet and content management solutions. Consider this a baseline. It is the functionality beyond this baseline that vendors must use to justify their premium value propositions and fees. The following key provides context.

1. The ability to search content that is both stored in a DBMS and across a file system.
2. The "Y" axis represents the integration of generated or supplemental information that the search engine uses to speed retrieval or to better evaluate and prioritize potential results. Both metadata and key words can be entered manually, but typically there are always some metadata fields that are automatically generated such as format information and virtually all keywords are generated through a syntactic parser. Indexes are always 100% generated and exclusively machine-readable.
3. The "X" axis illustrates the move to extend searching beyond literal pattern matching to capture meaning or the semantics in fulfilling a search request.
4. The two boxes just below the user represent a moderate degree of query pre-processing and result formatting and prioritization that are present in virtually every search function.



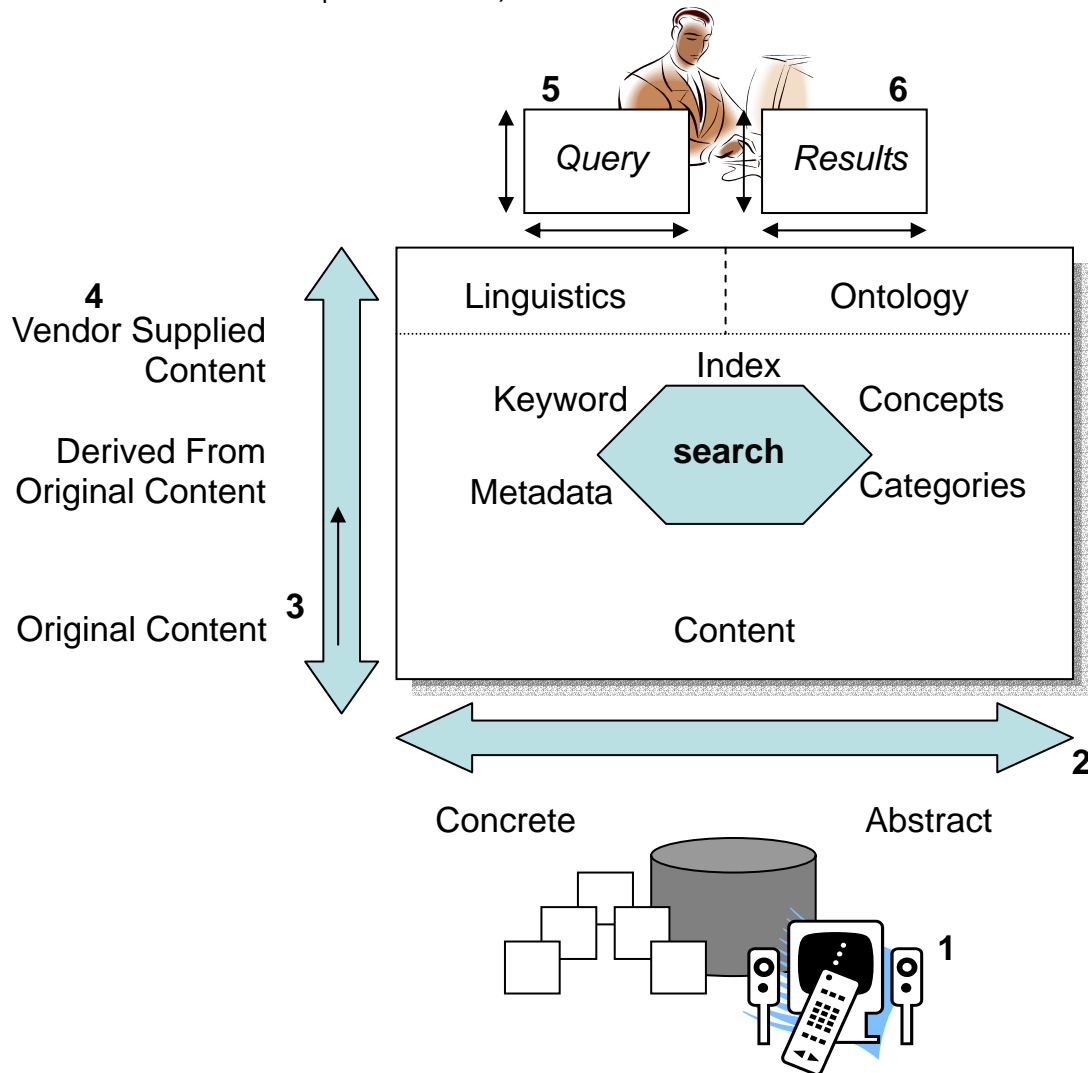
**Figure 1: Commodity Search in 2002**

Figure 2 illustrates where and how vendors have pushed beyond these basic functions to provide significant improvements in quality, performance and breadth of functionality. After a walk through of these enhancements, a more detailed set of explanations and examples will be provided under the umbrella of the actual value propositions themselves, *e.g.*, emphasizing the value to the consumer rather than the technology for its own sake. Here is an updated key for Figure 2.

1. The ability to ingest, traverse, retrieve, preview and return rich media including audio, video and high-end publishing materials is emerging as an optional set of functionality for a number of premium vendors.
2. The algorithms to automatically generate greater varieties of metadata, categories and key concepts is a now a standard premium feature.
3. The extraction of concepts automatically from content has pushed the degree of abstraction to even greater lengths permitting world views and subject matter expertise to influence the categorization of content.
4. Just as vendors have pushed the ability to abstract semantics, or meaning, from content – they have pushed supplemental information to new levels by providing their own original content as well. This is primarily in the form of

deep knowledge of syntax across multiple languages ensuring that all forms and declensions of a word can be found (concrete), and proprietary ontologies<sup>1</sup> that add significant value to automatic categorization, metadata generation and search pre-processing.

5. A great deal more attention has been placed upon the interpretation and internal representation of a user's query. There are approaches that apply all of the conceptual and computational categories in 1-4 to a query before it is ever submitted to a search engine. The rationale is a good one – the ability to simplify the experience and improve the results hits right to the heart of most users' frustrations with typical search tools. This also permits queries to be mapped to different search engines over time or simultaneously (see "mixed searches" in the previous article).



**Figure 2: Premium Search Attributes**

<sup>1</sup> An ontology is a "world view" as expressed through carefully selected terms, definitions and complex relationships. An ontology should be a *complete system* of concepts and is typically modeled using formal and precise modeling methodologies.

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6. Processing results, particularly large volumes of results and rich media-based results require specialized preview, drill-down, navigation, and visualization techniques. This family of functionality is also rapidly taking on a product lifecycle of its own quite apart from (although obviously co-dependent upon) the underlying search engine.

## Search Concepts

Given the clear emphasis on the automation and enhanced abstraction of search technology, a very short selection of these concepts follows. While lengthy tomes have been written on each of these search concepts, here is the minimum required to establish enough of a context to follow the rest of the article.

- **Categorization:** The process of organizing information into related groups (buckets). Yahoo! is an example of a popular, manually maintained category-based search engine. It is not uncommon for large manufacturing companies to organize their content into well-defined categories that number in the many tens of thousands (of categories – *not* entries). Some classification products will attempt to classify data automatically, while others assist human catalogers.
- **Clustering:** Clustering is a technique for organizing documents/words into subsets of similar documents/words based on common elements between the documents/ words. This is similar to categorization, although clustering lacks the hierarchical depth of categorization and there are a multitude of clustering algorithms where categorization typically is based upon semantic meaning/relationships.
- **Clustering By Example:** Another approach to classifying unstructured data is to develop a subset of documents that pre-establish categories defined by a set of reference content. These “training sets” can be automatic or supervised. The software analyzes new documents in comparison to the training set and searches for similar concepts and ideas. This approach is also referred to as “machine learning.”
- **Linguistic Clustering:** This technology observes and measures co-occurrences of words. For example, “Java” used in connection with Starbucks probably relates to a document about coffee instead of a programming language. Relative placement of words is important. Words in the first lines of a document are likely more important than information contained in the copyright section. Statistical analysis and clustering also look for word frequency, placement, and grouping, as well as the distance between words in a document.
- **Semantic Clustering:** Semantic analysis depends on a particular language and dialect. Documents are clustered or grouped depending on meaning of words using thesauri, custom dictionaries (*e.g.*, a dictionary of abbreviations), parts-of-speech analyzers, rule based and probabilistic grammar, recognition of idioms, verb chain recognition, and noun phrase identifiers (*e.g.*, “business unit manager”). Linguistic software also analyzes the structure of the sentences identifying the subject, verbs and objects, like you did when you first studied grammar in grade school. Then sentence structure analysis is applied to extract the meaning. Stemming or reducing a word to its root also helps linguistic or semantic clustering.

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- **Ontology:** Used in Information Retrieval and Artificial Intelligence, an ontology defines concepts, providing a way to move towards consistency in vocabulary. It provides a working model of the entities and interactions of a particular topic, such as dentistry or anthropology.

Unfortunately, but not surprisingly, no one vendor has been able to push their offerings in all of these directions simultaneously. Rather than focus on a list of features, it is more meaningful to organize the various pockets of extended functionality under broader *value propositions*. This should provide a rationale as to how vendors can still offer material value without a complete suite of the latest search capabilities and, more importantly, provide a lens through which to view your own requirements.

## PREMIUM VALUE PROPOSITIONS

Search technology can be counted on to work as long as the following conditions are met:

### *The content*

- exists
- has been thoroughly ingested such that all metadata, categorization, indexes, *etc.* have been built
- the taxonomy, metadata, *etc.* accurately reflects the usage of the content

### *The users*

- have been properly trained in the search tool/application they are using
- are fluent in whatever search concepts are required in order to both express their requests and interpret their results.
- use the search tool, *e.g.*, are not frustrated or “turned-off” by the user interface

This is a short list but a long haul. In fact, there are only two essential ingredients to achieving this near-perfect state: unlimited time and exceptional expertise. Of course, no organization has either of these and this at the heart of all search value propositions – to permit organizations to approximate timely, regular, accurate and useful search results without investing the time or training required. We look at three types of value propositions:

- Simple is hard
- Time-to-value
- Solution sell.

### **Simple is hard**

*Add-value to search by simplifying or hiding complexity*

The following table lists the areas of complexity that most often frustrate or defeat users and the techniques that are used to overcome these obstacles.

Area of complexity	Simplifying Technique	Comments
Expressing a query	Natural Language Processing	Techniques that learn from specific users are most likely to provide best results over time.
	Profiling	Can work well assuming privacy issues are not violated or conversely, that individual behaviors are permitted to be tracked.
	Fact Extraction	This applies the same automated categorization to the query as was applied to the content. It compares apples to apples, but does not guarantee that the user will comprehend the full scope of the query they have just submitted.
	Navigation	This provides more control to the user and eliminates the most general query interpretations, which are often the most difficult for a computer to do well.
	By example	Like fact extraction, it applies apples to apples, <i>e.g.</i> , give me more results like this one – the only area of surprise is that users and software may not agree on what the original sample's essential elements are.
Multi-lingual searches	Linguistic and semantic knowledgebase	The syntactic piece has been fairly well worked out by the top tier search engines and there are techniques for dealing with the structural peculiarities of German, Japanese, English <i>etc.</i> However, applying a query specified in one language to content authored in another is still a black art that can amuse and horrify as often as it satisfies.
Defining a taxonomy	Pre-fabricated taxonomies or automatically generated taxonomies	Defining and maintaining taxonomies <i>is hard</i> . Extensible, pre-existing taxonomies are ideal <i>if</i> they are a fit for your needs. Automatically generated taxonomies are also simple, but come with their own set of caveats covered in the next section (Time-to-value).
Browsing results	Graphical visualization	There are a variety of visualization techniques from charting results against concepts and "topic maps" to the generation of webs where each



		node is a related piece of information.
	Thumbnail and Gists	This is the abstraction of content to essential concepts (for text) and low resolution formats for production print, audio and video. Users can browse results without having to pay the price of downloading what are typically large objects.

## Time-to-value

*Automation of ingestion, indexing, categorization, etc. through algorithms and content*

The debate over automation versus manual processes has no potential winner. From suits to software and from cars to content – the advantages and drawbacks are actually fairly generic. If one can afford (in time and money) a hand tailored suit or a handmade car (Rolls Royce is still made by hand I believe), there is typically little downside. If you need a fleet of cars or have to clothe an entire organization quickly and cheaply – mass production is your only option. As you can see in the following list, there is little difference when it comes to content and information modeling.

## Automatic

*Advantages*

- Logically consistent over time
- Scales to accommodate virtually any volume of content
- Can be centrally managed

*Limitations*

- Not synchronized with current business practices and behaviors of users
- Often difficult to extend or train

## Manual Processes

*Advantages*

- Highly precise
- Can be carefully mapped to user expectations and orientations

*Limitations*

- Inconsistent over time – information modelers change as do their perspectives
- Does not scale well requiring significant staffing
- High degree of skill required to develop and populate information structures
- Difficult to manage centrally or to audit behaviors

The theoretical ideal is an automatic process that can be rapidly taught and can be manually extended over time to account for any unique site requirements. However, these kinds of extensions are difficult to maintain whenever the automated systems need to be rerun. In other words, automated components can

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rarely, if ever, assimilate manual changes to generated content/index/taxonomies.

## **Solution Sell**

*Providing turnkey solutions that benefit from, but are not exclusively, search-based*

If organizations are not buying search, sell them something else. Virtually every premium search vendor that I spoke with claimed that they were offering “solutions” not technology. However, only a very few actually offered fully formed solutions that solved business problems.

In my view, only the vendors that successfully make the transition from technology function vendor to solution provider will survive (independently) over the next two years. Examples of “solutions” include:

- **Contextual Advertising:** semantically analyze web-based queries to match them up with appropriate advertisements. This is essentially an advertising/personalization solution that leverages search technology behind the scenes.
- **Competitive Business Intelligence:** Analyzing, filtering and presenting competitive information as it comes over news wires, becomes available through public disclosure or by revisiting existing archives and repositories can be dramatically enhanced through semantic analysis, prioritization and navigation.
- **Domain Name Suggestions:** Ever try to select a domain name on the Internet? All of the good ones seem to be taken! There is an application that will suggest semantically related terms that are available when your first selection is already spoken for. This service combines the semantic and syntactic analysis with straight textual queries against the domain database.

The important element in each of these examples is that users and the technology consumers (not the same in these examples) don’t know or care how search plays a role in providing these services.

## **SOME VENDOR EXAMPLES**

Rather than provide a large matrix, which would do little to differentiate vendors from one another, this section uses a few select vendors to illustrate how the functionality outlined above can be effectively combined and positioned to provide premium value to customers. Thinking of vendors in this way can help you crystallize your own thinking about appropriate solution providers. This is not a complete list (see *In Search of Search Solutions* for a more complete list), nor is there any implied endorsement of the vendors included here. Further, this article reflects only what is available today and does not account for any future development.

Having inserted the requisite caveats, each of these vendors appears to have found a credible way to distinguish their offerings by solving large and expensive problems for the markets they serve.

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## To Simplify and Accelerate Time to Value

These select vendors do not offer turnkey *solutions*, although each takes great pride in the simplification and time to value that they offer. These vendors offer significant value-add to the traditional or baseline search experience. Each aligns proprietary, and often patented, technology behind the two essential roadblocks to successful information retrieval; inherent complexity and required investments in time and resources.

**Albert** [www.albert.com](http://www.albert.com)

**Value Proposition:** A relatively small investment that dramatically improves the value of your existing intranet and enterprise investments in infrastructure, content and processes.

### What they offer

- Query simplification: Natural language processing, automatic generation and maintenance of taxonomies, syntactic and semantic clustering, multilingual support and learning capabilities.
- Document/concept-centric indexing: A modular (optional) index that generates both surface (*e.g.*, statistical analysis of direct relationships between words and concepts) and deep (ontological mapping of conceptually related topics) indexes.

**Why this works:** Albert has chosen to focus on one of the greatest areas of frustration for all users and the IT management that is chartered to serve them – if users do not “use”, then 100% of all dollars and time invested are, in fact, wasted. Albert is focused on driving **adoption rates**<sup>2</sup> for existing intranet and enterprise content investments. Albert’s motto could be – “everything you know – remember” since users express their queries as they would normally, existing infrastructure and even existing indexes can be plugged in to Albert’s query processor and the complex and time consuming process of developing taxonomies is both automated and hidden.

**ClearForest** [www.clearforest.com](http://www.clearforest.com)

**Value proposition:** ClearForest extracts and transfers knowledge to users from existing and real-time content resulting in more intelligent and more rapid decision making, increased productivity and a reduction in expenses.

### What they offer

- Graphical visualization: a broad set of visualization and navigation mechanisms that lend themselves extremely well to monitoring competitive activity and correlating seemingly distinct events such as product releases and stock prices.
- Concept-centric indexing: automatic semantic tagging, real-time content ingestion and learning logic.

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<sup>2</sup> *Adoption rate* is defined as the use of technology in the context of the best practice that justified the initial investment **and** the abandonment of old, obsolete practices.

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**Why this works:** ClearForest has in many ways eliminated the query entirely and replaced it with interactive, graphical results. Users simply drill-down on interesting facets of a visually intuitive representation/slice of their content to see a more detailed or correlated view of their content. They have democratized the old, manual and expensive Executive Information System to the point where entire communities of users can explore, discover and take action on important events and relationships that have been historically obscured or hidden.

### **Solution Providers**

These select vendors have defined their business and revenue models in such a way that the majority of their customers (and revenue) are coming from customers that don't really care about search/information retrieval/whatever – they value specific business applications where to the user, search may not even be an obvious component (but, in point of fact, it is key).

#### **Autonomy** [www.autonomy.com](http://www.autonomy.com)

**Value proposition:** Autonomy provides infrastructure that processes and organizes all of an enterprise's information into personally relevant experiences. This horizontal platform drives Customer Relationship Management (CRM), Business Intelligence, Human Resource and other business functions that are the backbone of an enterprise.

**What they offer:** Autonomy has the most comprehensive collection of algorithms, applications, interfaces and partnerships making it the 800lb Gorilla in the Enterprise Information Ecosystem.

**Why this works:** Search is complex, information modeling is complex, application integration is complex, evaluating a strategic supplier's viability is complex, and negotiating licensing deals and managing multiple releases of multiple product components is complex. Autonomy proposes to solve all of these issues in a one-stop fashion.<sup>3</sup>

#### **Applied Semantics** [www.appliedsemantics.com](http://www.appliedsemantics.com)

**Value proposition:** Applied Semantics has embedded their core technology into specific solutions for publishing, domain name registration and online advertising. These solutions, and particularly the latter two, completely hide the categorization and searching to provide simple solutions to business problems. The domain name application uses their ontology to find semantically related domain name suggestions that are available when the initial request is denied. The advertising application matches appropriate/related advertising to an Internet user's location and navigation.

**What they offer:** A proprietary ontology, automated categorization, automatic metadata creation and the indexing to retrieve content via these relationships.

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<sup>3</sup> Read my July 2002 column on [www.gilbane.com](http://www.gilbane.com) for this author's own views on the pluses and minuses of end-to-end solutions.

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**Why this works:** Rather than leave the application of this sophisticated ontology and auto-modeling technology to the consumer's imagination, Applied Semantics is (yes) applying their technology to solve real problems and then going to market with those solutions.

**DreMedia** [www.dremedia.com](http://www.dremedia.com)

**Value proposition:** DreMedia focuses on simplifying many of the production processes for broadcasters. The premise is that by speeding and democratizing access to high quality video content, their customers will significantly reduce time-to-air and reduce the cost of their operations.

**What they offer:** DreMedia combines advanced video, audio and unstructured textual ingestion, categorization and retrieval with applications specifically targeting broadcasters. Interestingly, this is incremental to Autonomy's offerings as the unstructured text component *IS* Autonomy.

**Why it works:** This is one of – if not the only – commercial offering that marries speech to text with advanced semantic and syntactic analysis. With the connection made between time-based content, the content and the concepts therein, DreMedia is able to build applications that permit users to cut and paste text to build new video and to put video and audio categorization, search and retrieval on par with structured text.

## WHAT IS A CONSUMER TO DO?

As with all IT investments, let your business and end-user requirements drive the process. Do not be distracted by technological feats of magic, regardless of how impressive they may be.

- Define the lens through which you will prioritize the features and functionality you will require. Since no vendor has it all – optimizations (trade-offs) must be made. Assess your customers' needs, their training levels, their willingness (and ability) for incorporate new behaviors and technology and do nothing that violates these essential requirements.
- Estimate the potential for your content. Depending on the current scope, scale and state of your content, some applications may not be practical or may require significant upgrades to your content (via metadata, categorization, accuracy, format, *etc.*). There may be hidden costs in dollars, time and quality if this step is not properly concluded.
- Never Assume. In today's economy, you should have no trouble trying before you buy. Test the algorithms, learning modules, visual interfaces, response times, *etc.* Heuristics are a funny thing – they do not always operate on your content in ways that you or your vendor may have expected.
- Drive adoption. Capture and socialize technology, best practices associated with that technology and the rationale for what's in it for the user.

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## SEARCH IS DEAD – LONG LIVE SEARCH.

Search will vanish from premium vendor lexicon, but the need for Time-to-value, simplification, and complete solutions that happen to leverage search will not only persist – it should continue to grow dramatically. Vendors that can stay one step ahead of the large infrastructure and application providers should remain viable and there is never a shortage of demand for a turn-key solution to a pressing business problem. However, the transition from horizontal technology vendor to solution provider is a very difficult one because it calls for completely different skill sets and investment profiles. The corporate re-alignment is often more challenging than the development of the application.

Search, and related technology, is getting better and, as we continue to integrate unstructured data into enterprise computing applications, it is becoming more critical — it will have a long, if often hidden, life.

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# INDUSTRY NEWS

More recent news, old news (to January 1999), and commentary is available at [www.gilbane.com/](http://www.gilbane.com/)

## **TRADOS'S GXT 5.2 AVAILABLE**

*8/29/2002*

TRADOS announced the general availability of TRADOS GXT v.5.2. With TRADOS GXT, TRADOS extends its suite of language technology with a new enterprise platform that minimizes the cost and streamlines the process of globalizing enterprise content. TRADOS' GXT solution provides a collaborative framework for sharing and storing language assets and automating the associated business processes of updating and adapting multilingual content for worldwide markets. The new system simplifies the globalization of enterprise Web sites, product documentation, marketing collateral, product catalogs and content in databases and content management systems. [www.trados.com](http://www.trados.com)

## **INKTOMI INTEGRATES ENTERPRISE SEARCH WITH MICROSOFT CONTENT MANAGEMENT SERVER**

*8/28/2002*

Inktomi Corp. announced an integration between Inktomi Enterprise Search software and Microsoft Content Management Server. The integration enables Inktomi Enterprise Search to index and retrieve Web content managed by Microsoft Content Management Server. Inktomi Enterprise Search integrated with Content Management Server closely aligns the content development and retrieval processes. This integration allows Inktomi to instantly crawl and index content and associated metadata published and managed by Microsoft Content Management Server, providing users with real-time access to information. Microsoft now offers customers and systems integrators an evaluation copy of Inktomi Enterprise Search as part of its Internet business solution kit, which includes Microsoft Content Management Server. Inktomi Consulting services are available to optimize the deployment of Inktomi Enterprise Search software with Microsoft Content Management Server to meet each customer's unique needs.

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

## **DIVINE TO RESELL MEDIABIN**

*8/28/2002*

divine, inc. announced that it has signed a reseller agreement forming an alliance with MediaBin Inc. divine will offer MediaBin's Digital Asset Management (DAM) solution to enable divine content management users to leverage rich media assets through divine Content Server. While divine Content Server can store, archive and deliver all forms of digital assets, the MediaBin Digital Asset Management system expands this capability by enabling business users to modify, transform and compile graphics for use within Web sites or other applications without requiring the assistance of creative professionals. MediaBin software enables dynamic resizing and other manipulations of digital images, photographs, graphics, logos, video, Quark files, and other rich media. The MediaBin capabilities complement divine multimedia-based products that include divine Showcase and divine Truelook. The combination of divine Content Server and MediaBin enables real-time previewing of both images and content as they will appear on the published site. [www.divine.com](http://www.divine.com)

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## **ARBORTEXT & SOFTWARE AG TO CO-MARKET XML CONTENT MANAGEMENT SYSTEM**

8/27/2002

Arbortext, Inc. announced it has entered into a Co-Marketing Alliance with Software AG, Inc. to immediately begin marketing a completely native XML system for the creation, management and publishing of complex business and technical documents. Through this alliance, Arbortext and Software AG are utilizing X.Systems' GEMt product, a content management system that integrates Arbortext's Epic XML authoring and publishing software with Software AG's native XML server, Tamino. GEMt, based on software developed by X.Systems, integrates with Tamino and brings native XML content management together with X.Systems' focus on productivity in the information life cycle. [www.softwareagusa.com](http://www.softwareagusa.com), [www.arbortext.com](http://www.arbortext.com)

## **IPHASE & STELLENT PARTNER**

8/26/2002

iPhrase Technologies, Inc. and Stellent, Inc. announced a partnership to integrate iPhrase One Step with the Stellent Content Server and Content Categorizer products. The companies will also engage in joint sales and marketing activities to their respective customer bases. The combined solution will help customers to deliver search results to a wide array of self-service systems, including portals and online customer support applications. The Stellent Content Categorizer supports the integration of third-party engines to enable the appropriate metadata to be extracted and specific taxonomies and vocabularies to be utilized during the check in process. iPhrase One Step self-service search provides the "last mile" of information access by automatically leveraging this organization and aggregation of content. [www.stellent.com](http://www.stellent.com), [www.iphase.com](http://www.iphase.com)

## **FILENET DELIVERS INTEGRATED REPORTING & ANALYTICS**

8/26/2002

FileNET Corporation introduced the Process Analyzer, a reporting and analytics tool designed to help enterprises optimize their business operations and increase the returns they realize from their Business Process Management (BPM) investment. Using a graphical interface, the Process Analyzer provides visibility into business processes with tracking metrics and reports. The solution offers seamless integration with FileNET's Enterprise Content Management framework. The Process Analyzer helps companies establish benchmarks for evaluating business performance, and analyze productivity, efficiency and cycle time. It also enables managers to identify bottlenecks in their operations so they can reallocate under- or over-utilized resources. The Process Analyzer will be available in September and has a base configuration price point of \$70,000 USD. [www.FileNET.com](http://www.FileNET.com)

## **ENIGMA ROLLS OUT NEW VERSION OF 3C PLATFORM**

8/26/2002

Enigma, Inc. announced the availability of Enigma 3C Version 8. Version 8 combines content, commerce and collaboration, allowing manufacturers, service partners and operators of complex capital equipment to improve the efficiency of support operations, increase equipment utilization and enhance aftermarket revenue. Enigma 3C Version 8 was developed to meet the needs of the people who maintain and support capital equipment and complex products, such as jet engines, construction machinery, automobiles and telecommunications equipment – from initial installation through operation and product lifecycle maintenance. By creating an as-



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maintained encyclopedia of product information, that both the OEM and end-user can dynamically update, Version 8 allows operators and service providers to access all the information they need, when and where they need it, for the exact configuration of equipment they are servicing. Version 8 allows the OEM to dynamically update the previously deployed product information with maintenance revisions and service bulletins and to reach out and receive feedback from their customers. [www.enigma.com](http://www.enigma.com)

## **OBTREE ADDS TRANSLATION VERSION CONTROL**

*8/26/2002*

Obtree Technologies Inc. announced that Obtree C4 version 4.1 will include translation version control. This tool could reduce translation costs and increase the efficiency and continuity of content associated with multilingual Web sites. With Obtree C4 version 4.1, site translators can make changes via the Web from any country location. Translation providers do not require any technical skills to translate content directly. Integration with 'multilingual management systems', e.g., translation software company SDL International, which use 'Translation Memory' engines to reduce the volume of words requiring translation, simplifies the process even further. The Obtree C4 platform provides IT managers an enterprise content management infrastructure to build tailored, flexible content management solutions. Version 4.1 will track the edits and any re-organization of text, automatically alerting the appropriate person for approval or translation. Obtree handles content such that translation will be solely restricted to updated text. [www.obtree.com](http://www.obtree.com)

## **IPEDO INTRODUCES XML VIEWS INTEGRATION TECHNOLOGY**

*8/26/2002*

Ipedo introduced Ipedo XML Views, an integration technology that unifies information management for portals, custom Web applications and Web services initiatives. Integrated into its Ipedo XML Database and Ipedo Integration Manager, XML Views expands the reach of corporate information resources. Ipedo XML Views are virtual, real-time snapshots of information from external XML and non-XML sources presented in XML to simplify integration tasks in applications. Once constructed, XML Views can be manipulated using XML query and transformation standards, and multiple XML Views can be combined to create information composites tailored for specific applications. Ipedo's XML Views technology provides virtual connections to remote information sources for quick, easy access, whether structured data from databases or unstructured Web content. The XML Views architecture works across existing relational databases, content management systems and Web Services, and can be tailored using an adapter development kit. The all-Java design includes support for JDBC, JMS, and SOAP, and can be deployed in conjunction with J2EE application servers such as BEA WebLogic or IBM WebSphere. [www.ipedo.com](http://www.ipedo.com)

## **REDDOT ANNOUNCES LIVE SUPPORT**

*8/22/2002*

RedDot Solutions announced the launch of RedDot Live Support, a web-based customer support system that enables visitors of the Extranet to instantaneously communicate with the technical support personnel. Extranet visitors simply click a Live Support button and are connected with one of the customer support representatives. RedDot Technical Support Consultants then assist the visitors by providing information, links, graphics, or even guiding them through the RedDot Content Management Server (CMS). RedDot's technical support representatives can handle concurrent multiple Live Support calls instead of being limited to one phone conversation. All chat conversations are logged. [www.reddot.com](http://www.reddot.com)

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## **CETARA RELEASES VERSION 4 OF WORDSHARE**

8/20/2002

Cetara Corporation announced the release of Cetara WordShare version 4. This software, which enables authors to create, manage and share document content in an efficient and consistent manner, integrates seamlessly with Microsoft Word for Windows, providing the authors with the ability to compose, edit and automate documents. Cetara WordShare users generate documents by using common elements referred to as 'components.' The users store components containing document content, and their corresponding information, in Microsoft SQL Server or Oracle databases. Using these components as building blocks, a user can quickly produce documents such as contracts, proposals, government and legal documents and loan applications. To download a free trial version of Cetara WordShare, see [www.cetara.com/wordshare](http://www.cetara.com/wordshare)

## **NEXTPAGE & XYENTERPRISE ANNOUNCE PARTNERSHIP**

8/19/2002

NextPage Inc. announced that it has entered into a partnership with XyEnterprise to provide NextPage customers with a comprehensive content solution. NextPage technology enables users to build Content Networks – networks of distributed servers, which often reside in different locations, connected in a unified manner. Knowledge workers can access current and accurate information in real time from these distributed servers as if all of the information resides on their desktops. [www.XyEnterprise.com](http://www.XyEnterprise.com), [www.nextpage.com](http://www.nextpage.com)

## **NEOCORE ANNOUNCES XMS 2.6**

8/19/2002

NeoCore Inc. announced version 2.6 of its core product, NeoCore XML Information Management System (XMS), a self-constructing native XML database that reduces the cost and time to market for dynamic business applications. This release includes an optimized stand-alone server architecture, substantial support of XQuery, and the option for a Solaris 64-bit platform. NeoCore leverages the natural characteristics of XML and couples that with the company's Digital Pattern Processing (DPP) technology to enable a fast and simple development capability. NeoCore XMS 2.6 is available Aug. 30. The Standard Edition, for 32-bit platforms, is priced at \$20,000 per CPU. The Professional Edition, for 64-bit platforms, is \$30,000 per CPU. [www.neocore.com](http://www.neocore.com)

## **WEBVERSA ACQUIRES SEMIO BUSINESS**

8/19/2002

Webversa, a developer of Voice-to-Enterprise (V2E) software that enables real-time alerting and interactive access to any enterprise application, announced that it has completed the acquisition of the business of Semio Corporation. The transaction closed on August 15, 2002. Terms were not disclosed. Combined with Webversa's real-time alerting and multimodal interactive access technology, the new Webversa/Semio suite's intelligent, stealth, robotic sensing and alerting engine will provide any enterprise with the ability to continuously monitor any data stream, surfacing patterns of information activity that meet established criteria and notifying the appropriate individuals in real-time. In addition to the suite, Webversa will continue to support and enhance existing Semio and Webversa products in the marketplace. Webversa sells its voice-to-enterprise (V2E) access and alerting software to private sector and government customers through strategic professional services partners as well as directly. [www.webversa.com](http://www.webversa.com)

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## **E-BOTZ RELEASES CONTENTANYWHERE 2.0**

8/19/2002

E-Botz released ContentAnywhere 2.0, a major upgrade of its content management product. ContentAnywhere is based on Network Query Language (NQL) and is focused on delivery. With ContentAnywhere, information can be inserted into popular desktop applications, mail messages, contact managers, word processors, spreadsheets, presentation systems, and financial applications. The biggest improvement in ContentAnywhere 2.0 is in the area of scalability. Organizations can set up multiple content servers like a server farm and use the same data (taxonomy, cache, scripts, etc). An improved user interface and additional functions extend the ease of use of the product. [www.E-Botz.com](http://www.E-Botz.com)

## **VIGNETTE ENHANCES ANALYSIS & REPORTING CAPABILITIES IN V6**

8/14/2002

Vignette Corp. announced significant enhancements to the analysis and reporting capabilities of Vignette V6. Customers are now able to leverage detailed reports on content activity by provider, channel, site and content type. Vignette V6 goes beyond simple clickstream analysis by providing additional data to help users gain insight into user activity at the site, page and content levels, including content affinities and marketing campaign comparisons. [www.vignette.com](http://www.vignette.com)

## **TARIUS INTERACTIVE INTRODUCES UPDATED XML SEARCH ENGINE**

8/13/2002

Tarius Interactive announced the launch of the next generation of the Tarius Interactive search engine. The new features in the next generation will enable database users to search for phrases, synonyms and keywords in an even more user-friendly way than before. Pharmaceutical legislation and guidelines are full of frequently used phrases, like "Investigational new drug application", "Good laboratory practice", "Adverse reaction", etc. Tarius will support searches for exact matches of these phrases. When searching for acronyms, users will also want to access documents that use the full expression instead of the acronym. British and American English have a lot of common words spelled differently. For example 'aluminum' vs 'aluminium'. Searching with the American spelling will normally result in missing hits among European documents and vice versa. Tarius will now support the automatic combination of US and British spelling in one search. Major differences between British and American English lie in the choice of vocabulary. For example 'antenatal' vs 'prenatal' and 'attorney' vs 'lawyer'. This is relevant not only in daily language but also for searching among the pharmaceutical documents. Tarius will automatically support the inclusion of British as well as American words in one search. [www.tarius.com](http://www.tarius.com)

## **NIMBLE RELEASES INTEGRATION SUITE 2.0**

8/13/2002

Nimble Technology, Inc. announced the release of the Nimble Integration Suite 2.0. Nimble Integration Suite 2.0 provides both ODBC and XQuery access. Nimble's software gives enterprises a tool to integrate and access multiple data sources, inside and outside the firewall, for real-time data integration and information sharing capability. The Nimble Integration Suite 2.0's XQuery functionality enables enterprises to query disparate data sources using an XML standard query language. The Nimble Concordance Developer creates a framework to specify business rules and automate a process to reconcile differences in how various data sources represent the same things, such as persons, products and accounts. Version 2.0 includes more powerful and effi-

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cient matching techniques and enhanced concordance database management capabilities, including specialized support for Oracle. The Nimble IntegrationSuite can now integrate data from sources, such as corporate employee information systems that use LDAP. New support for Crystal Reports and Microsoft Excel aid users in preparing reports of their data integration results. [www.nimble.com](http://www.nimble.com)

## **APPLIED SEMANTICS ANNOUNCES NEWS SERIES**

8/13/2002

Applied Semantics, Inc. announced the availability of Applied Semantics News Series, an integrated content processing solution developed specifically for today's online and print publishers. Applied Semantics News Series provides content categorization, summarization, event identification, and concept tagging software that streamlines newswire, editorial, archiving, and syndication processes. The publishing-focused solution comes bundled with industry standard taxonomies such as International Press Telecommunications Council (IPTC) Subject Codes and SIC Codes and works with XML standards such as NITF, NewsML, ANPA, and PRISM. Applied Semantics News Series is powered by CIRCA Technology, a semantic engine that employs the use of an ontology, or database of millions of concepts and relationships between concepts, to read and assign meaning to any piece of unstructured content by building a profile of the key meanings residing on a page. The ontology covers millions of broad and deep concepts and terms and is compatible with the wide range of news content handled by publishers. Applied Semantics News Series is available for immediate shipment. [www.appliedsemantics.com](http://www.appliedsemantics.com)

## **AUTHENTICA ANNOUNCES ALLIANCE WITH MATRIX LOGIC**

8/6/2002

Authentica, Inc. announced a technology integration alliance with Matrix Logic Corporation. The companies will integrate Authentica's content security software into Hummingbird document management systems and eRoom digital collaboration environments. This integration effort will bolster the content security for Hummingbird DM (formerly PC DOCS) and eRoom by adding a level of access control, encryption, and revision and auditing controls for content and information assets shared outside corporate boundaries. The integration of Authentica's content security software with Hummingbird DOCS Open, PowerDOCS and DM 5, will enable users to securely share documents with business associates and customers outside of the DOCS environment and across the internet. For eRoom environments, users will now not only control who has access to the meeting room itself, but they will also be able to continuously protect the business information exchanged in that meeting room. [www.matrix-logic.com](http://www.matrix-logic.com), [www.authentica.com](http://www.authentica.com)

## **IUPLOAD UPDATES WEB CONTENT MANAGEMENT SERVICE**

8/6/2002

iUpload is now delivering version 3.0 of its solution to new and current subscribers. New features in iUpload 3.0 speed up and simplify site development and maintenance, reducing or eliminating the requirement to involve the webmaster in the content authoring process. With version 3.0 tools like cascading style sheet support, enhanced WYSIWYG editing and content type additions to further simplify authoring, Web designers can empower contributors to easily create content, while flexibly controlling the look and feel for a site. In addition, with iUpload's enhanced asset management, administrators can easily manage images, files, links and other assets for reuse throughout the organization's web venues. For current iUpload subscribers, migration will occur automatically the first time they login to the application. All features of version 3.0 are fully backward compatible with the previous version of iUpload. iUpload version

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3.0 is available immediately directly from iUpload and its partners. Subscription-based pricing is dependent on the number of users and starts at \$400 per month. [www.iupload.com](http://www.iupload.com)

## **IPHASE & eFORCE IN STRATEGIC ALLIANCE**

8/6/2002

iPhrase Technologies, Inc. and eFORCE announced an agreement to jointly market their combined solution. iPhrase will leverage eFORCE's to further expand its reach into several vertical markets in which iPhrase is already established: financial services, retail, the service provider industry and technology and manufacturing. eFORCE's has a standardized approach for delivering enterprise content management, customer relationship management, corporate portals, supply chain, enterprise application integration and business intelligence within a set timeframe and price. Each of these areas represents solution opportunities for iPhrase's self-service search capabilities, particularly in the areas of enterprise content management and corporate portals. eFORCE will also work jointly with iPhrase to bring BEA Portal related offerings to market. [www.iphase.com](http://www.iphase.com), [www.eforceglobal.com](http://www.eforceglobal.com)

## **XHTML 1.0 SECOND EDITION A W3C RECOMMENDATION & 2.0 DRAFT PUBLISHED**

8/5/2002

The World Wide Web Consortium released "XHTML 1.0: The Extensible HyperText Markup Language (Second Edition)" as a W3C Recommendation. XHTML 1.0 is a reformulation of HTML in XML, giving the rigor of XML to Web pages. The second edition is not a new version; it brings the XHTML 1.0 Recommendation up to date with comments from the community, ongoing work within the HTML Working Group, and the first edition errata. The HTML Working Group has released the first public Working Draft of "XHTML 2.0." XHTML 2.0 is a relative of the Web's familiar publishing languages, HTML 4 and XHTML 1.0 and 1.1, and is not intended to be backward compatible with them. The draft contains the XHTML 2.0 markup language in modules for creating rich, portable Web-based applications. Comments are welcome. [www.w3.org/TR/2002/REC-xhtml1-20020801/](http://www.w3.org/TR/2002/REC-xhtml1-20020801/), [www.w3.org/TR/2002/WD-xhtml2-20020805/](http://www.w3.org/TR/2002/WD-xhtml2-20020805/)

## **ANCEPT & FANTASTIC TO PROVIDE IBM CONTENT MANAGER SOLUTIONS**

8/5/2002

Ancept, Inc. and The Fantastic Corporation announced a strategic alliance to deliver integrated solutions based on IBM Content Manager and the IBM Digital Media Factory. By integrating Ancept Media Server, a DAM solution designed to centrally manage vast collections of media, with Fantastic's Content Delivery Network products companies have the ability to effectively and securely store, manage, protect and distribute digital video, audio, imagery and text-based information. The partnership exploits the IBM Content Manager infrastructure and is synchronous with the IBM strategy for delivering leading digital media creation, management and distribution solutions. [www.Ancept.com](http://www.Ancept.com), [www.Fantastic.com](http://www.Fantastic.com), [www-3.ibm.com/software/data/cm/](http://www-3.ibm.com/software/data/cm/)

## **VIVÍSIMO ANNOUNCES CONTENT INTEGRATOR & ENTERPRISE PUBLISHER**

8/5/2002

Vivísimo, Inc. added two new products to its software portfolio: the Content Integrator and Enterprise Publisher. These join Vivísimo's Clustering Engine which automatically organizes search or database query results into meaningful hierarchical folders. The company's Clustering Engine

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interfaces with any search engine or document database to transform long lists of search results into categorized information, on-the-fly, without pre-processing the source documents. The Vivisimo Content Integrator combines with the Clustering Engine to integrate search/database query results from multiple sources. The Vivisimo Enterprise Publisher, a stand-alone document clustering product, automatically clusters document collections into categories that are intelligently selected from the words and phrases contained within the documents themselves. It publishes the organized content in a PC folders-style interface. <http://vivisimo.com>

## **CONVERA ANNOUNCES VISUAL RETRIEVALWARE 5.0**

*8/5/2002*

Convera announced the availability of Visual RetrievalWare 5.0. Visual RetrievalWare 5.0 now features support for more than twenty of the most widely used image and video formats. New image formats supported include PCX, PNM, SGIRGB, TGA and XPM. TYS has been added to the list of supported video formats, which also includes AVI, FIT, MPEG2, PIT, QT and SMJ. Visual RetrievalWare 5.0 is now available on Darwin, FreeBSD and NetBSD platforms. Visual RetrievalWare can also run on Linux, Solaris and Windows. New APIs included in Visual RetrievalWare 5.0 are an Associative Memory API for memory management and Time Code conversion support for common frame representations such as microseconds, frames, NTSC and non-drop. System Performance Enhancements: New enhancements include MPEG decompression performance and image format support, added support for QuickTime 5 and an upgrade to Tcl/Tk 8.4a4. Visual RetrievalWare 5.0 features enhancements for automatic video clip indexing and fuzzy search. [www.convera.com](http://www.convera.com)

## **PRO TEXT UNVEILES LAVA PT FOR ORACLE 9IFS**

*8/1/2002*

Pro Text unveiled LAVA PT which extends Oracle 9iFS's feature-rich abilities to manage documents beyond the current language borders. Integrated in the standard iFS web user interface, LAVA PT allows to create the needed language variants for any source document. LAVA PT offers support for every document format; even translating XML document fragments using Oracle iFS's integration with ArborText's Epic editor becomes uncomplicated and trouble-free. Language variants are sent then to a translator, a translation memory and/or machine translation via e-mail (or another standard internet protocol). Once translated and returned, the translated documents are checked in and stored into the Oracle iFS system. When the base or source language document is revised or updated, LAVA PT identifies the language variants that should be (re)translated and automatically initiates a new translation cycle for these. The web interface shows the status of each document variant within this translation process. LAVA PT is available now with prices starting from \$20.000. [www.protext.be](http://www.protext.be), [www.icmsgroup.com](http://www.icmsgroup.com)

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# RECENT ISSUES

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## CALENDAR

**Integration 2002 – Forum XML & Web Services.** November 13-14, 2002, *Palais des Congrès – Paris, France*. TechnoForum's 5th annual conference on XML and integration. Among the topics covered this year : Web Services, Enterprise Application Integration (EAI), Corporate Portals architectures, Content management, XML-EDI and ebXML, XML standards, Supply-Chain & B2B Integration, .Net & J2EE Architectures, and XML databases. [www.gilbane.com/events/programme\\_integration\\_2002.pdf](http://www.gilbane.com/events/programme_integration_2002.pdf), [www.technoforum.fr/index.html](http://www.technoforum.fr/index.html)

**XML 2002.** December 8-13, 2002, *Baltimore Convention Center, Baltimore, MD*. The XML Conference & Exposition 2002 is the largest and longest-running annual gathering of XML users and developers in the world. This event is well known in the XML community for attracting high quality speakers and attendees. **Special Offer to Gilbane Report subscribers: Save \$300 off the cost of a Conference Gold Pass.** Login to the Gilbane subscribers section ([www.gilbane.com](http://www.gilbane.com)) to get the discount priority code to use on the registration form. (Discounts cannot be combined.) <http://www.xmlconference.org/xmlusa/>

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