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Vertical Search Engines
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Abstract

This paper outlines the growth in popularity of vertical search engines, their origins, the differences between them and well-known broad based search engines such as Google and Yahoo. We also discuss their use in business-to-business, their marketing and advertising costs, what the revenue streams are and who uses them.

1 Introduction

A search engine is a program that will search for keywords in documents and then return a list of the documents that contained those keywords. Typically, it works by sending out a “spider” or “web crawler” that returns all the documents it can find. Each returned document is read and indexed based on its word content by a program known as an “indexer”. The indices are created using an algorithm so that in most cases only results that are relevant for the query are returned. The Interactive Television Dictionary & Business Index [1] defines vertical search engines as,

“Web sites which focus on particular topics and which especially allow you to search for information relating to those topics. The “vertical” term comes out of the idea that these are places where instead of searching horizontally, or broadly across a range of topics, you search vertically within only a narrow band of interest.”

A *Vertical Search Engine* can be defined as one that only contains content gathered from a particular narrowly defined web niche therefore the search results will only be relevant to certain users. Vertical search engines are also referred to as vertical portals - vortals, specialty search engines and topical search engines. When we think of a search engine we automatically think of a “broad-based” search engines such as Yahoo, Google, MSN, Altavista, Ask and Dogpile. Currently, these engines dominate the online search market however specialized search engines for niche markets are increasing in popularity. One of the biggest specialized engines at present is LookSmart (see figure 1).

While vertical search engines are not new, what has changed is their increased popularity. Like consumers, businesses use the Internet for a variety of needs. Sometimes they are looking for all the information they can get, and for that the likes of Google and the Yahoo search engines are used. More often however, they are looking for something very specific related to their businesses. That is where vertical search sites come in. Vertical search engines deliver to businesses what the big sites cannot without the use of complex keyword combinations. This results in relevant and essential content rather than an exhaustive return of information. Some examples of vertical search engines include

- **Jobs** - SimplyHired.com, Indeed.com, Eluta.ca , Recruit.net
- **Travel** - Sidestep.com, Kayak.com, Mobissimo.com, Pinpointtravel.com, Farechase.com
- **Health** - Amniota.com, GenieKnows.com, Healia.com, Healthline.com, MammaHealth.com
- **Classifieds** - Edgeio.com, Oodle.com
- **Blogs** - Technorati, Bloglines, Blogger Search, Sphere, Feedster
- **Source Code** - Koders.com, Krugle, Google Code
- **Academic/teen** - Answers.com, Teenja.com, Gradewinner.com, Scholar.google.com.
- **People** - Zoominfo.com, Ziggs.com
- **Shopping** - Become.com; Oodle.com, PinpointShopping.com.

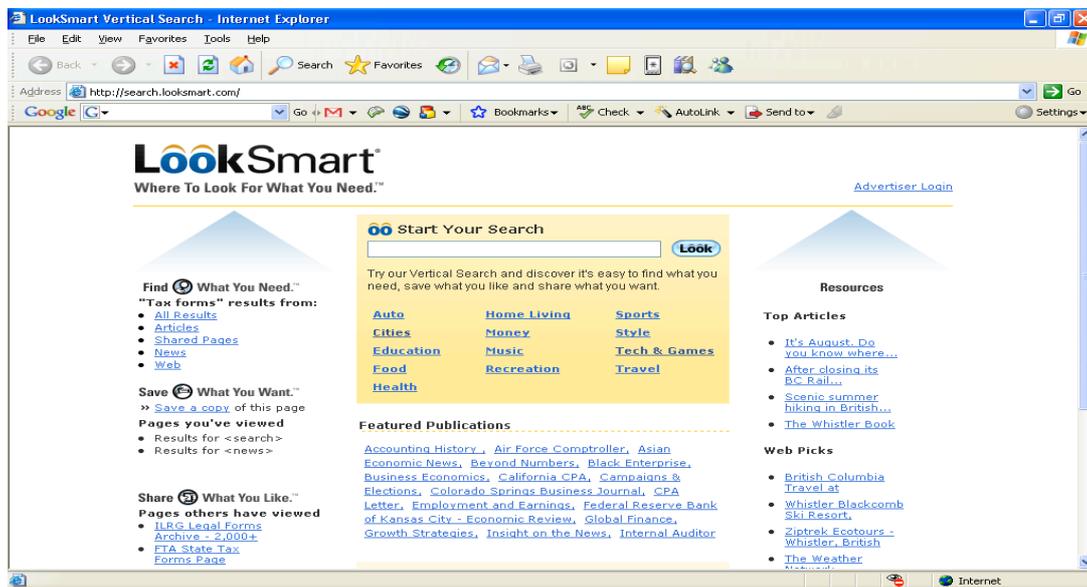


Figure 1: LookSmart

2 Vertical & Broad-Based Search Engines

Broad based search engines such as Google are not the ultimate for web searching as they are cluttered with all the returned information that matches the words in the requestor's query however relevant or irrelevant they are to what they want. There is a typical search failure rate of 31.9 percent on broad based search engines among business users [2]. It has also been demonstrated that the professionals using broad based search engines were unable to find important work-related information because they were not trained in their use and the broad based search engines were not designed as business tools. This resulted in a low business user satisfaction rating of forty percent for broad based search engines.

Additionally for businesses the broad based search engine has resulted in lower productivity from the failure of users to find critical information, however this has created a gap that is being filled by vertical search engines which the advantage because they can serve highly relevant results [3]. Second generation broad based search engines have tried to overcome this productivity loss by ranking using various

human element factors. Yahoo Mindset¹ allows the user to set the bias of commercial vs. non-commercial bias on the returned results by the use of a slide rule (see Figure 2)

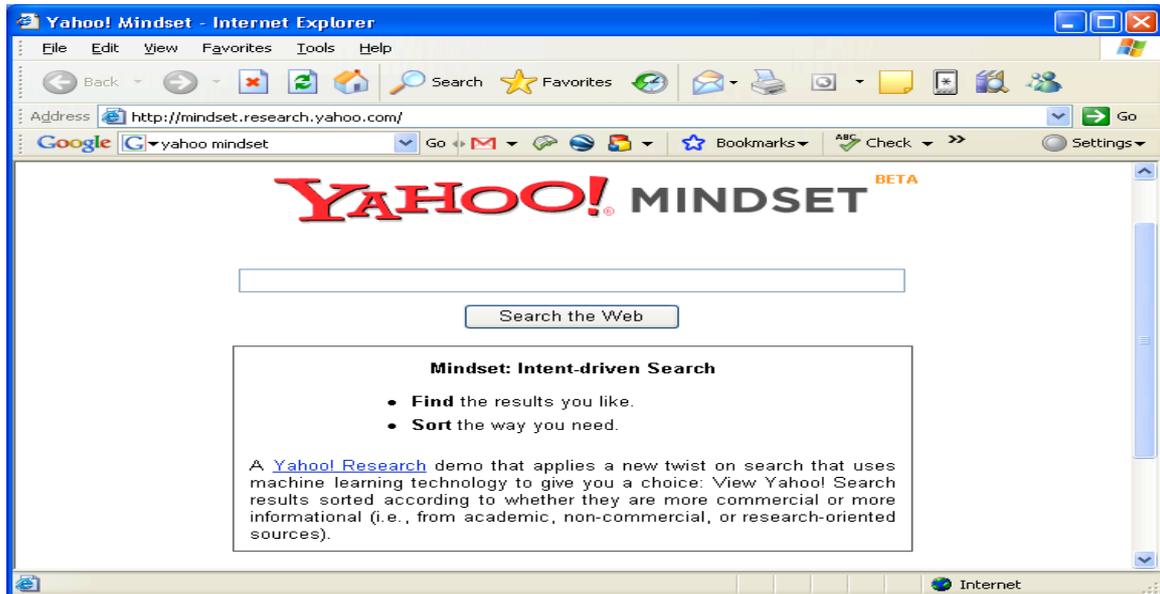


Figure 2: Yahoo Mindset

As broad-based search engines are getting broader, so too have their search results, therefore users, particularly business users are starting to make the switch to vertical search engines. Consider the example of a dentist who is looking for information on ceramics, a common material used in dental work. If the dentist performs a Google search on the keyword “ceramics,” Google will serve up millions of results, but most of the entries on the first few pages will concern hobbies like pottery. On the other hand, if the dentist performs the same search on DentalProducts.net Web site, it will return much more relevant results. It would appear that Web users are starting to access / use the Internet the way they do multi channel television namely opting for specialized channels that give them the specialized information that they want e.g. a child wanting to see cartoons will go directly to the cartoon channel.

3 Vertical Search Engine Advertising

Vertical search engines are attracting professionals and business users searching for niche topics and are providing them with a satisfactory user experience. The high cost of advertising on the mainstream search engines is causing those in marketing to switch to vertical search engines because the space inventory is less crowded and they can negotiate better rates, possibly get better conversions and receive a better return-on-investment (ROI) for their marketing campaigns. Trends to consider include:

- \$7.4 billion was spent on search engine marketing in 2005 (16% of which was b2b).
- More than 40% of the average marketer’s budget is devoted to search.
- Nearly 38% of Yahoo’s and 50% of Google’s advertisers are defined as b-to-b.
- Nearly 64% of search engine users search for business information first. [4]

¹ <http://mindset.research.yahoo.com/>

Local online advertising is on the upswing. eMarketer's current estimate shows the U.S. local online ad spend at \$1.3 billion in 2006, representing 7.9 percent of a total U.S. online ad spend of \$16.7 billion. If the local online ad spend were to double this year to \$2.6 billion, it would still represent roughly 10 percent of the estimated \$20.3 billion total ad spend for 2007 [2]. A cost-effective way for smaller businesses to compete in pay-per-click (PPC) advertising is through Vertical Search engines. Broad based search engines such as Google and Yahoo! have mainstream advertisers like Amazon who spend millions each week on search advertising, buying every possible term related to their strategic keywords. That prevents smaller businesses from competing for these key terms.

For instance, a search on Google for the term "wholesale toys" will feature results such as AOL and the Discovery Channel. AOL and Discovery are not wholesalers however they will buy every term that people use to buy toys as it attracts traffic and they can quite simply afford it. This creates a problem for smaller advertisers. When companies like AOL and Amazon start bidding on search terms without regulation, the bid price and ability for real businesses to compete get distorted, making it difficult for small businesses to buy these terms. While many small businesses might actually be the most relevant source for a term like "wholesale toys," they can never compete with those 50-million-dollar-a-year search budgets. That is the primary reason why vertical search engines are gaining a toehold and are becoming known as category killers. A vertical in a small niche can become the information super highway on a specialized topic. Many vertical search engines have forums, blogs, fresh content and huge networks set up around a niche topic, providing many attractive promotional opportunities for advertisers. The cost to compete on a VSE is much lower than on general search engines, and marketers can expect much higher clickthroughs and conversions on their search ads, as well as a higher return on investment on their marketing campaigns. There are many benefits of advertising on vertical search engines versus Google AdWords if you pick the right vertical for your product or service. Examples showing how vertical search engines can be used to good advantage [2] are:

- **Clickthrough rates:** You can get higher clickthrough rates (CTRs) because the audience is segmented and highly qualified
- **Banner ads:** You can request custom positioning for your banners on vertical search engines. Most verticals offer users highly relevant content with targeted banners.
- **Direct links:** Link directly to the client's site or requested URL which gives the advertisers an SEO benefit because engines can now associate the advertiser with a highly ranked vertical search engine.
- **Special ad placement:** Verticals can accommodate a client's request quickly and on the fly. Vertical search engines are lean and versatile; they can react quickly to changing market conditions and industry trends.
- **User-generated media:** Vertical search engines cover issues related to specific topics or industries. Therefore, they can enable customers to blog on their sites, encouraging industry participation. Blog and story links provide great SEO benefits if a customer is linked to them.
- **Email marketing:** Many verticals have email lists, and these databases consist of recipients interested in the niche. These opt-in email lists can be more relevant than any mass-market offerings. Users look forward to receiving weekly newsletters with stories on the industry.

- **B2B ad advantage:** The big difference is that vertical search engines provide an ad advantage for B2B marketers because their ads are exposed to a highly motivated, targeted audience. Clickthroughs can be fewer, saving you money and conversions can be higher [2].

Research analysts at Forrester Research, Jupiter Research and Marketing Sherpa have identified a new tier in search dubbed “specialized search,” which includes “local,” “topical” and “vertical” search. [4]

- **Local** - This is geographic or place based relevance e.g. www.chicago.com
- **Topical** - This is about consumer niches such as travel, golf, hobbies etc e.g. www.kayak.com
- **Vertical or B2B** - This is about search engines designed to serve the needs of businesses in specific industries. In terms of design and implementation, several models are emerging in vertical search they include
 - **The vertical search engine as a destination or “portal”:** Example www.VetMedSearch.com. Often media companies that own these destination sites optimize them and buy keywords on Google to drive their audience to visit.
 - **Vertical search as a complementary Web site application:** This model entails embedding a search engine on an existing, already trafficked site e.g. www.CertMag.com.
 - **Parametric search:** This tool, more prevalent in engineering and other product-specific, information-intensive, procurement-driven industries, often allows for face-to-face product and manufacturer comparison.

In terms of revenue that these vertical search engines generate, a variety of advertising programs are gaining favor, including *cost per click*, in which the advertiser pays only for each time that a user clicks on its ad; *Cost per action*, an emerging model in which the advertiser pays, not on click, or for impressions, but only if the consumer performs a specific action, such as purchases a good and finally, *Flat fee/fixed fee* which is the most popular early ad model for most of the vertical search engines.

With the vertical search engine advertising revenue expected to reach \$1 billion by 2009 [5] and their continued growth rate it would not be unexpected that the vertical search engines become more important due to their specialised nature than the broad based engines such as Google unless search engine companies fight back with some form of content control much more advanced. As it is virtually impossible to have a vertical search engine for every speciality, and it is highly likely that vertical search engines specializing in shopping, financial services, media and entertainment, and travel have the best chance of survival, therefore it is not a large surprise to find that advertisers are already spending large amounts of money within these sectors [6].

3 Conclusion

A Vertical Search Engine contains content gathered from a particular narrowly defined web niche so that the search results will only be relevant to specific users. Vertical search engines are also referred to as vertical portals or topical search engines. Broad-based search engines include Yahoo, Google, MSN, Altavista etc. Currently, these engines dominate the online search market however specialized search engines for

niche markets are increasing in popularity. Broad based search engines such as Google are not the ultimate for web searching as they are cluttered with all the returned information that matches the words in the requestor's query however relevant or irrelevant they are to what they want. One of the biggest specialized engines at present is LookSmart. The cost to compete on a vertical search engine is much lower than on general search engines, and marketers can expect much higher clickthroughs and conversions on their search ads, as well as a higher return on investment on their marketing campaigns. There are many benefits of advertising on vertical search engines versus Google AdWords if you pick the right vertical for your product or service.

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