

TRUVEO

VIDEO SEARCH ENGINE COVERAGE STUDY

September 2008

Greetings:

Since Truveo was founded we have consistently endeavored to provide the best coverage of web sites that host video. When we were just a startup we kind of eyeballed the quality of our search results and said “Yah, that looks good” and that was enough. However, a couple years ago we decided that this was not sufficient and we began the process of building a video search quality team at Truveo that takes a more scientific approach to the quality of video search. The data in this report is the result of one of the studies we perform on a regular basis.

Our goal in releasing this study is to show people that there are in fact objective ways to measure the quality of a video search engine and that we do very well when compared to other engines. In addition, we would like to see an independent organization do a similar study — one that uses objective metrics to compare the various video search engines in the market. Also, if you have suggestions or comments, please let us know. We’d like to hear from you.

Finally, doing a study like the one presented here takes time and effort and the detailed results are extremely valuable. It is for this reason that we have copyrighted the report and require that you do not distribute it. If you know someone who may be interested in it, please let us know and we’ll be happy to provide them a copy.

Sincerely,

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Video Search Engine Coverage Test Method

The goal of this study is to compare video search engines by measuring the breadth of coverage of websites with professional video content. The basic procedure is simple:

1. Select a video to search for.
2. Search for it in a video search engine.
3. Record if the video was found.
4. Repeat steps 1 to 3 for more videos and more video search engines.

Five industry-leading video search engines are to be evaluated using 1000 distinct videos that are viewable online. These videos should be selected from 100 websites that are in turn chosen from lists of high traffic websites published by Alexa (<http://www.alexa.com>.) Each step is described in detail in this document.

Video Search Engines

Five industry-leading video search engines to be evaluated:

- Truveo – <http://www.truveo.com>
- Blinkx – <http://www.blinkx.com>
- Google Video – <http://video.google.com>
- Yahoo! Video Search – <http://video.search.yahoo.com>
- Microsoft Live Video Search – <http://video.live.com>

Video Content Websites

Select the top 100 ranked video content websites from the Alexa top 100 lists of websites with the highest traffic rank for the following categories:

1. News – <http://www.alexa.com/browse/general/?&CategoryID=8&R=True>
2. Sports – <http://www.alexa.com/browse/general/?&CategoryID=15&R=True>
3. TV – <http://www.alexa.com/browse/general/?&CategoryID=28&R=True>
4. Music – <http://www.alexa.com/browse/general/?&CategoryID=27&R=True>
5. Movies – <http://www.alexa.com/browse/general/?&CategoryID=38&R=True>

These categories have been chosen in order to target websites that have high probability of hosting professionally produced online videos. (Note: For the results presented along with this document, the Alexa US traffic rank and other traffic details were recorded on August 6, 2008.)

Merge the 5 category listings into one Master List of 100 websites by following these steps.

1. Combine all 5 lists to create a Master List of up to 500 websites. (The total will be less than 500 because some websites appear in multiple lists.)
2. Sort the Master List by the Alexa US Traffic Rank. Note that Alexa only provides Traffic Rank by domains. For example, currently the “Yahoo! News” website is from the yahoo.com domain, and thus is assigned a US Traffic Rank of 2, because the yahoo.com domain is ranked #2.
3. Manually inspect each website in the Master List, and remove any site that does not meet ALL of the following criteria:
 - a. Website must host a reasonable number of videos. Most websites that meet this criterion have an easy-to-find video section that is linked to from the main page of the site.
 - b. Each domain can have a maximum of 3 websites in the study. For domains with multiple sites, choose the 3 sites that appear highest within the 5 category listings.

For example, the current top websites grouped under the yahoo.com domain are:

<u>Website</u>	<u>Rank within Category Listing</u>
Yahoo! News	#1 in News
Yahoo! Sports	#1 in Sports
Yahoo! Movies	#2 in Movies
My Yahoo!	#5 in News
Yahoo! Fantasy Baseball	#8 in Sports
Yahoo! TV	#13 in Television

Therefore, select Yahoo! News, Yahoo! Sports and Yahoo! Movies for the study because these 3 sites are the highest ranked within their category listings. Omit the rest of the yahoo websites.

- c. Website must host content that is relevant to an American audience. To meet this criterion by only using data provided by Alexa: each website must be in the top 500 by Alexa US Traffic Rank; or it must have most of its traffic come from USA.
 - d. Videos from the website must be mostly free content.
 - e. Website must not be oriented towards adult or pornographic content.
4. Trim the resulting Master List to the first 100.

Test Procedure

To determine whether each video content website is covered by each video search engine, measure and record the percentage of videos hosted on each website found per video search engine query. Select ten videos from each website under consideration, and run queries against each video search engine under evaluation. The detailed procedure is as follows:

1. Select a representative sample of ten videos from the first Master List website. Select videos from different sections of the site, including the main page, video player pages, and video archive if available. If the website lists the date when videos were published on the site, select videos from different time periods.
 - Make sure all ten videos play in the same domain. Websites may link to partner sites with different domains; do not include videos found in this way as they are hosted on a different website.
2. Search for all ten videos on each search engine using the title of each video as the search query when possible.
 - In most cases, the title of a video is easy to define: it is usually the most prominent text on the page where the video is playing. In cases where the video does not have a clear title or has a title that is too general (i.e. “Ryan” or “Episode 1”), select an appropriate search query from available information about the video (*i.e.*, description, episode title, etc.).
 - If necessary, add the name or domain of the website to the end of your search query. (This is often useful for music videos or movie trailers where different websites have the same video.) You may need to try a few different queries to pick the most appropriate version.
3. Run the first search query and check the search results to see if the video you searched for is returned by the search engine. Make sure that the video returned by the search engine is an exact match to the video found on the host site and that it is from the Master List website you originally found it on.
 - The purpose of this test is to measure the coverage each search engine has of videos from premium video sites. For this reason it is important that only videos that are hosted on the Master List site being tested is counted. For example, if measuring the coverage of “AOL Music” and the search query is the title of a music video, only a video that streams from “AOL Music” counts as a match. The same video from “MTV” or “VH1” does not count.

- Examine the results returned by each search engine, and record whether or not the search engine has the video in a table similar to the following.

Coverage of Site 1

Query	Truveo	Blinkx	Live Video	Google Video	Yahoo! Video
Video title 1	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 2	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 3	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 4	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 5	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 6	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 7	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 8	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 9	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Video title 10	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0
Totals					

- Repeat steps 3 and 4 for all ten queries.
- Repeat all steps for all the other 100 websites from the Master List.

Conclusion and Summary

Summarize the data into a table describing the number of videos (out of 10) each search engine indexes from each video website, as shown below where each hash-mark (#) should be replaced by the actual count of matched videos.

Alexa Top Sites Coverage

Alexa Top 100 Video Sites	Truveo	Blinkx	Live Video	Google Video	Yahoo! Video
Yahoo! News	#	#	#	#	#
Weather.com	#	#	#	#	#
ESPN	#	#	#	#	#
IMDB	#	#	#	#	#
MTV	#	#	#	#	#
Etc.					

Further summarize the above table into a count of how many video websites are indexed by each search engine. A search engine is considered to have indexed a video website if it returned at least 5 out of 10 of the videos found on the host website. (Note: this rule has been chosen so that search engines are not penalized for cases where they do cover the website, but may not return every single video for various reasons. For example, they may not have indexed the most recent videos, or the host websites may not always contain complete metadata.)

Coverage Report

Search Engine	Number of Alexa Top 100 Video Sites in Searchable Index
Truveo	#
Blinkx	#
Live Video Search	#
Google Video	#
Yahoo! Video Search	#

Video Search Engine Coverage Test: Video Content Websites

The top 100 video content websites following the procedure defined in “Video Search Engine Coverage Test Method” using Alexa Traffic Rank on August 6, 2008.

	Website	Website URL
1	Yahoo News	http://news.yahoo.com
2	Yahoo Sports	http://sports.yahoo.com
3	Yahoo! Movies	http://movies.yahoo.com
4	MSNBC News	http://www.msnbc.msn.com
5	MSN Video	http://video.msn.com
6	AOL Music	http://music.aol.com
7	Moviefone	http://movies.aol.com
8	AOL News	http://news.aol.com
9	CNN - Cable News Network	http://www.cnn.com
10	SI.com	http://sportsillustrated.cnn.com
11	CNN Money	http://money.cnn.com
12	The Internet Movie Database	http://www.imdb.com
13	ESPN Sportszone	http://espn.go.com
14	Weather.com	http://www.weather.com
15	The New York Times	http://www.nytimes.com
16	About.com	http://www.about.com
17	Apple Trailers	http://www.apple.com/trailers
18	MLB.com	http://mlb.com
19	IGN	http://www.ign.com
20	BBC News	http://news.bbc.co.uk
21	BBC Sport	http://news.bbc.co.uk/sport
22	Disney Channel	http://disney.go.com
23	Fox News Channel	http://www.foxnews.com
24	FOX Sports	http://msn.foxsports.com
25	Washington Post	http://www.washingtonpost.com
26	Fandango	http://www.fandango.com
27	Los Angeles Times	http://www.latimes.com
28	Cartoon Network.com	http://CartoonNetwork.com
29	MTV	http://www.mtv.com
30	Reuters	http://www.reuters.com
31	Wall Street Journal	http://online.wsj.com
32	CBS SportsLine	http://www.sportsline.com
33	NBA.com	http://www.nba.com
34	ABCNews.com	http://abcnews.go.com
35	USA Today	http://www.usatoday.com

36	Forbes.com	http://www.forbes.com
37	Boston Globe	http://www.boston.com
38	World Wrestling Entertainment, Inc.	http://www.wwe.com
39	Nickelodeon	http://www.nick.com
40	Rotten Tomatoes	http://www.rottentomatoes.com
41	TV.com	http://www.tv.com
42	Ultimate Guitar Archive	http://www.ultimate-guitar.com
43	AccuWeather	http://www.accuweather.com
44	Bloomberg	http://www.bloomberg.com
45	San Francisco Chronicle	http://www.sfgate.com
46	Chicago Tribune	http://www.chicagotribune.com
47	NFL.COM	http://www.nfl.com
48	Food Network	http://www.foodnetwork.com
49	Nick Jr.	http://www.nickjr.com
50	New York Post	http://www.nypost.com
51	Time Magazine	http://www.time.com
52	TV Guide	http://www.tvguide.com
53	Associated Content: The People's Media Co.	http://www.associatedcontent.com
54	PBS Kids!	http://pbskids.org
55	ABC	http://abc.go.com
56	Guardian Unlimited	http://www.guardian.co.uk
57	DIRECTV	http://www.directv.com
58	CBS.com	http://www.cbs.com
59	NBC.com	http://www.nbc.com
60	The Telegraph	http://www.telegraph.co.uk
61	Business Week	http://www.businessweek.com
62	Comcast	http://www.comcast.net
63	Times Online	http://www.timesonline.co.uk
64	NASCAR Online	http://www.nascar.com
65	Newsweek	http://www.newsweek.com
66	CNBC	http://www.cnbc.com
67	Bodybuilding.com	http://www.bodybuilding.com
68	Entertainment Weekly	http://www.ew.com/ew
69	Discovery Channel	http://www.discovery.com
70	The Learning Channel Online	http://www.tlc.com
71	Warner Bros. Studios	http://www.warnerbros.com
72	E! Online	http://www.eonline.com
73	Newsday	http://www.newsday.com
74	VH-1	http://www.vh1.com
75	Houston Chronicle	http://www.chron.com
76	Sherdog.com	http://www.sherdog.com
77	Home and Garden Television (HGTV)	http://www.hgtv.com
78	FOX.com	http://www.fox.com
79	Ultimate Fighting Championship	http://www.ufc.com
80	Adult Swim	http://adultswim.com

81	CBS News	http://www.cbsnews.com
82	New Jersey Online	http://www.nj.com
83	The Atlanta Journal-Constitution	http://www.ajc.com
84	Philly.com	http://www.philly.com
85	NHL.com	http://www.nhl.com
86	PBS Online	http://www.pbs.org
87	National Geographic	http://www.nationalgeographic.com
88	San Jose Mercury News	http://www.mercurynews.com
89	G4 TV	http://www.g4tv.com
90	The Dallas Morning News	http://www.dallasnews.com
91	The Associated Press	http://www.ap.org
92	Comedy Central	http://www.comedycentral.com
93	The Onion	http://www.theonion.com
94	Star Tribune	http://www.startribune.com
95	KSL-TV 5 Salt Lake City	http://www.ksl.com
96	The Arizona Republic	http://www.azcentral.com
97	NewsMax	http://www.newsmax.com
98	Detroit Free Press	http://www.freep.com
99	The Oprah Winfrey Show	http://www.oprah.com
100	The Baltimore Sun	http://www.baltimoresun.com

Video Search Engine Coverage Test: Sample Results Data

See Attached Page

Site: ABC		URL: http://abc.go.com		Date Reviewed: 8/21/2008				
QUERY (Title of Video)	Date of Video	Section of Site Where Video was Found	Truveo	Blinkx	Google Video	Yahoo! Video	MSN Live Video	
1 The Bachelorette - Meet The Happy Couple!	7/8/08	Primetime	1	0	0	0	0	
2 Dance Machine Moment 7/11	7/11/08	Primetime	1	1	0	0	0	
3 Starcrossed: James & Vanessa	Not available	Online Originals	1	1	0	0	1	
4 OMG Moment: 8/21/08	8/21/08	Online Originals	1	1	0	0	0	
5 ABC.com Start Now: 8/21/08	8/21/08	Featured Video	1	0	0	0	0	
6 Bring Someone Back To Life!	Not available	Top 5 Videos	1	1	0	0	0	
7 Wipeout LOL Moment 8/12	8/12/08	Top 5 Videos	1	0	0	0	0	
8 Previously on I Survived... 8/5	8/5/08	Primetime	1	1	0	0	0	
9 ABC.com Lounge: Dave Annable	Not available	Primetime	1	1	0	0	0	
10 Paley Festival: Excited To Be Back!	Not available	Primetime	1	0	0	0	0	
TOTALS			10	6	0	0	1	

Site: CNN		URL: http://www.cnn.com		Date Reviewed: 8/12/2008				
QUERY (Title of Video)	Date of Video	Section of Site Where Video was Found	Truveo	Blinkx	Google Video	Yahoo! Video	MSN Live Video	
1 AC360: Cavlee update	Not available	Front Page	1	0	0	0	0	
2 Fuel subsidies in Asia	Not available	Page 2 of Video Section	1	1	0	0	1	
3 OSCE, EU want Georgia-Russia truce	Not available	Page 2 of Video Section	1	0	0	0	0	
4 IReport For CNN: August 2 part 3	8/5/08	IReport	1	0	0	0	0	
5 Fake torch relay	8/11/08	Staff Picks	1	1	0	0	1	
6 Dogs maul man in wheelchair	8/11/08	Most Popular	0	0	0	0	0	
7 Traffic builds at Empire State	8/10/08	By Section	1	0	0	0	0	
8 Deadly helicopter crash	8/7/08	By Section	1	1	0	0	1	
9 U.S. sub had nuclear leak	8/7/08	By Section	1	1	0	0	1	
10 Pakistan in turmoil	8/11/08	By Section	1	1	0	0	0	
TOTALS			9	5	0	0	4	

Site: Food Network		URL: http://www.foodnetwork.com		Date Reviewed: 8/13/2008				
QUERY (Title of Video)	Date of Video	Section of Site Where Video was Found	Truveo	Blinkx	Google Video	Yahoo! Video	MSN Live Video	
1 Onset at Big Daddy's House	Not available	Video > FN Dish Channel	1	0	0	0	0	
2 Honey Glazed Salmon with Orzo	Not available	Video > Meal Ideas	1	0	0	0	0	
3 Sweet and Sour Wing Glaze	Not available	Video > Food on TV	1	0	0	0	0	
4 Mix and Match Salsa	Not available	Video > Salsa	1	0	0	0	0	
5 Red, White and Blue Trifle	Not available	Video > Sandra Lee	1	0	0	0	0	
6 Banana Crunch Muffins	Not available	Video > Bananas	1	0	0	0	0	
7 Gobble-up Peach Galette	Not available	Video > Peaches	1	0	0	0	0	
8 Bacon with Shrimp and Scallops	Not available	Video > Summer Seafood	1	0	0	0	0	
9 Ask Aida's Composting Project	Not available	TV Page > Ask Aida	0	0	0	0	0	
10 Bobby's First Kitchen Memory	Not available	TV Page > Bobby Videos	1	0	0	0	0	
TOTALS			9	0	0	0	0	

Site: NFL.COM		URL: http://www.nfl.com		Date Reviewed: 8/13/2008				
QUERY (Title of Video)	Date of Video	Section of Site Where Video was Found	Truveo	Blinkx	Google Video	Yahoo! Video	MSN Live Video	
1 Running Back Competitions	8/13/08	Network Highlights	0	0	0	0	0	
2 Gerard's Goals	8/13/08	Network Highlights	0	0	0	0	0	
3 Brady on Pats progress	8/13/08	Events	1	0	0	0	0	
4 Titans 34, Rams 13	8/11/08	Highlights	1	0	0	0	0	
5 49ers Draft plans	4/24/08	Find (Search Bar)	1	0	0	0	0	
6 Diet Pepsi Rookie of the Week	1/31/08	Featured > Rookie of the Week	1	0	0	0	0	
7 Giants' Jerry Reese on Draft	5/12/08	Events > Draft	1	0	0	0	0	
8 The Life of Coach	8/13/08	Featured	1	0	0	0	0	
9 Who is Aaron Rodgers?	8/11/08	Featured	1	0	0	0	0	
10 Ravens Camp Update	7/28/08	Browsed	1	0	0	0	0	
TOTALS			8	0	0	0	0	

Site: Cartoon Network		URL: http://CartoonNetwork.com		Date Reviewed: 8/18/2008				
QUERY (Title of Video)	Date of Video	Section of Site Where Video was Found	Truveo	Blinkx	Google Video	Yahoo! Video	MSN Live Video	
1 Cabaret Courage	Not available	What's New	1	0	0	0	0	
2 The Rowdyruff Boys	Not available	What's New	1	1	0	0	0	
3 Dock of Shame - Sadie	Not available	What's New	1	0	0	0	1	
4 And Then There Were 10	Not available	Shows > Ben 10	1	0	0	0	1	
5 Cow's Dream Catcher	Not available	Shows > Cow and Chicken	1	0	0	0	1	
6 Did You See a Bull Run by Here?	Not available	Shows > Johnny Bravo	1	0	0	0	1	
7 Flatbottom's Up	Not available	Shows > Squirrel Boy	1	0	0	0	1	
8 Care Bears on Fire Everybody Else	Not available	Extras > Fried Dynamite	1	1	0	0	0	
9 Cartoon Network THARSDays	Not available	Extras > Spotlight	1	0	0	0	1	
10 Chowder - "The Apprentice Games"	Not available	Extras > Premieres	1	0	0	0	1	
TOTALS			10	2	0	0	7	