About the Alexa Traffic Rankings

A listing of all sites on the Web, sorted by traffic...

Alexa computes traffic rankings by analyzing the Web usage of millions of Alexa Toolbar users. The information is sorted, sifted, anonymized, counted, and computed, until, finally, we get the traffic rankings shown in the Alexa service. The process is relatively complex, but if you have a need to know, please read on.

What is Traffic Rank?
The traffic rank is based on three months of aggregated historical traffic data from millions of Alexa Toolbar users and is a combined measure of page views and users (reach). As a first step, Alexa computes the reach and number of page views for all sites on the Web on a daily basis. The main Alexa traffic rank is based on the geometric mean of these two quantities averaged over time (so that the rank of a site reflects both the number of users who visit that site as well as the number of pages on the site viewed by those users). The three-month change is determined by comparing the site’s current rank with its rank from three months ago. For example, on July 1, the three-month change would show the difference between the rank based on traffic during the first quarter of the year and the rank based on traffic during the second quarter.

What are sites and Web hosts?
Traffic is computed for sites, which are typically defined at the domain level. For example, the Web hosts www.msn.com, carpoint.msn.com and slate.msn.com are all treated as part of the same site, because they all reside on the same domain, msn.com. An exception is personal home pages, which are treated separately if they can be automatically identified as such from the URLs in question. Also, sites which are found to be serving the “same” content are generally counted together as the same site.

What is Reach?
Reach measures the number of users. Reach is typically expressed as the percentage of all Internet users who visit a given site. So, for example, if a site like yahoo.com has a reach of 28%, this means that if you took random samples of one million Internet users, you would on average find that 280,000 of them visit yahoo.com. Alexa expresses reach as number of users per million. Alexa’s one-week and three-month average reach are measures of daily reach, averaged over the specified time period. The reach rank is a ranking of all sites based solely on their reach. The three-month changes are determined by comparing a site’s current reach and reach rank with its values from three month ago.

What are Page Views?
Page views measure the number of pages viewed by Alexa Toolbar users. Multiple page views of the same page made by the same user on the same day are counted only once. The page views per user numbers are the average numbers of unique pages viewed per user per day by the users visiting the site. The page view rank is a ranking of all sites based solely on their page view. The three-month changes are determined by comparing a site’s current page view and page view rank with its values from three month ago.

Page views per million indicates what fraction of all the page views by toolbar users go to a particular site. For example, if yahoo.com has 70,000 page views per million, this means that 7% of all page views go to yahoo.com. If you summed the fractional page views over all sites, you would get 100% (this is not true of reach, since each user can of course visit more than one site).

How Are Traffic Trend Graphs Calculated?
The Trend graph shows you a three-day moving average of the site’s daily traffic rank, charted over time. The daily traffic rank reflects the traffic to the site based on data for a single day. In contrast, the main traffic rank shown in the Alexa Toolbar and elsewhere in the service is calculated from three months of aggregate traffic data.

Daily traffic rankings will sometimes benefit sites with sporadically high traffic, while the three-month traffic ranking benefits sites with consistent traffic over time. Since we feel that consistent traffic is a better indication of a site’s value, we’ve chosen to use the three-month traffic rank to represent the site’s overall popularity. We use the daily traffic rank in the Trend graphs because it allows you to see short-term fluctuations in traffic much more clearly.

It is possible for a site’s three-month traffic rank to be higher than any single daily rank shown in the Trend graph. On any
given day there may be many sites that temporarily shoot up in the rankings. But if a site has consistent traffic performance, it may end up with the best ranking when the traffic data are aggregated into the three-month average. A good analogy is a four-day golf tournament: if a different player comes in first at each match, but you come in second at all four matches, you can end up winning the tournament.

How are Movers & Shakers Calculated?
The movers and shakers list is based on changes in average reach (numbers of users). For each site on the net, we compute the average weekly reach and compare it with the average reach during previous weeks. The more significant the change, the higher the site will be on the list. The percent change shown on the Movers & Shakers list is based on the change in reach. It is important to note that the traffic rankings shown on the Movers & Shakers page are weekly traffic rankings; they are not the same as the three-month average traffic rankings shown in the other Alexa services and are not the same as the reach numbers used to generate the list.

Some Important Disclaimers
The traffic data are based on the set of Alexa users, which may not be a representative sample of the global Internet population. Known biases include (but are likely not limited to) the following:

- Our users are disproportionately likely to visit alexa.com, amazon.com and archive.org, and traffic to these sites may be substantially overcounted.
- The Alexa Toolbar works only with the Internet Explorer browser. Sites frequented mainly by users of other browsers will be undercounted. For example, the AOL/Netscape browser is not supported, which means that Alexa collects little data from AOL users, and our traffic to aol.com is likely lower than it would be for a more representative sample.
- The Alexa Toolbar works only on Windows operating systems. Although a large majority of the Internet population currently used Windows, traffic to any sites which are disproportionately visited by users of other operating systems will be undercounted.
- The rate of adoption of Alexa software in different parts of the world may vary widely due to advertising locality, language, and other geographic and cultural factors. For example, to some extent the prominence of Korean sites among our top-ranked sites reflects known high rates of general Internet usage in South Korea, but there may also be a disproportionate number of Korean Alexa users.
- In some cases traffic data may also be adversely affected by our "site" definitions. With tens of millions of hosts on the Internet, our automated procedures for determining which hosts are serving the "same" content may be incorrect and/or out-of-date. Similarly, the determinations of domains and home pages may not always be accurate. When these determinations change (as they do periodically), there may be sudden artificial changes in the Alexa traffic rankings for some sites as a consequence.
- The Alexa Toolbar turns itself off on secure pages (https:). Sites with secure page views will be under-represented in the Alexa traffic data.

In addition to the biases above, the Alexa user base is only a sample of the Internet population, and sites with relatively low traffic will not be accurately ranked by Alexa due to the statistical limitations of the sample. Alexa's data come from a large sample of several million Alexa Toolbar users; however, this is not large enough to accurately determine the rankings of sites with fewer than roughly 1,000 total monthly visitors. Generally, Traffic Rankings of 100,000+ should be regarded as not reliable because the amount of data we receive is not statistically significant. Conversely, the more traffic a site receives (the closer it gets to the number 1 position), the more reliable its Traffic Ranking becomes.