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Online Intelligence Solutions

SEGMENTATION IN WEB ANALYTICS

A fundamental approach

By Jacques Warren



ABOUT JACQUES WARREN

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*“Web Analytics: Measuring the success and maximizing the profits of your website”

INTRODUCTION

The main task of any web analyst is to generate knowledge. There is an abundance of information available, information which is generated by company systems, and which Web Analytics tools are a part of. Having too much information available, however, leads to an information overload. There is no need for any more information to be generated, more knowledge is what is required.

Yet how can this knowledge be generated? Where has the learning, promised so much by Web Analytics over the past decade, come from? What do we actually know and how do we know it? These questions may seem rather philosophical for such a white paper, but they form the basis of the approach adopted by web analysts and the legitimacy of their efforts used in implementing Web Analytics.

Segmentation is at the heart of all of the tools which are used for generating knowledge in the field of web analytics. Without segmentation, it would not be possible to have such valuable and practical knowledge.

The term practical is used because segmentation helps analysts understand what a specific piece of data is trying to tell them. Segmentation also highlights the different points at which marketers must intervene.

FOR THE WEB ANALYST

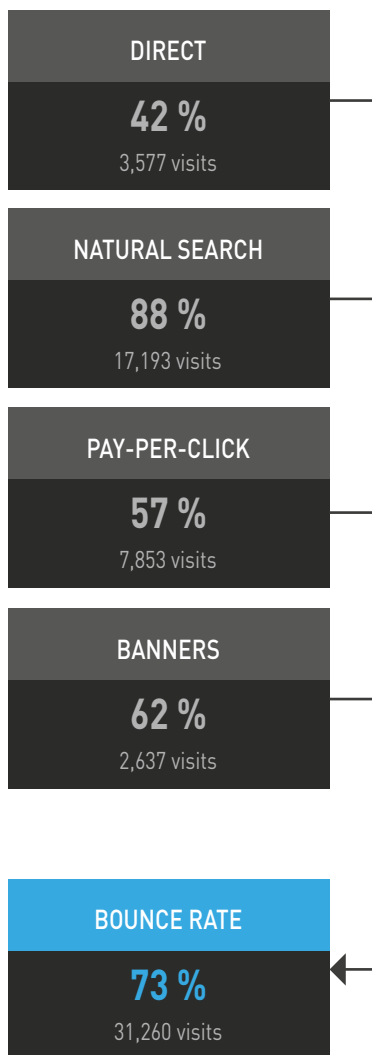
This means that this value must be extracted, in other words it becomes necessary to update the most important knowledge that is required, a task which is carried out by the process of segmentation.

An inexperienced web analyst must be careful when it comes to interpreting data: they need to consider average values. Averages represent a synthesis of a global set of values without expressing their distribution; they are also the point where extreme values meet. Averages can, of course, be an indicator of what is happening in a particular situation, but more so at a higher level, without any distinction being made in the different weights associated with each value that is part of an overall set. Averages are rarely used in any decision-making process that is used to help change a particular situation.

There are, of course, different statistical techniques which can be used to comment on average values, including distribution and extreme values etc., and any experienced analyst will be able to complete the task of weighting the different values. However, these “warning signs”, should we dare to use the expression, are not often found in Web Analytics products where, by force of habit, averages tend to form part of the foreground of reports.

This flaw in the synthesis means that a lot of information remains uncovered. We could even say that in the majority of cases, averages hide information which contains the most added value. This means that this value must be extracted, in other words it becomes necessary to update the most important knowledge that is required, a task which is carried out by the process of segmentation. Any sophisticated product will provide analysts with the different tools and capacities required so that segmentation can be applied to the basic results.

If a metaphor were to be applied to segmentation, we could say that segmentation is to web analysts as what dissection is to doctors. Analysts need to be able to understand how each part and how each element of everything works, to understand the relationships that each element has with other components and to also understand the importance associated with each element and how all of this, when combined together, produces knowledge on how the set functions as a whole.



The diagram shows that, thanks to segmentation, natural searches have had the most impact on the bounce rate. All that remains to be shown are the reasons why this result occurs, in order to respond to marketing requirements.

Whenever analysts understand what an average is made up of, in other words elements, factors or circumstances which have the most influence on the average, it then becomes possible to identify which element is the most effective and efficient to work with.

Web analysts are responsible for producing and sharing knowledge and this is only made possible thanks to segmentation.

The next few paragraphs outline the basic types of segmentation which a web analyst must carry out whenever they analyse activity on a web site. The different types of segmentation deal with fundamental traffic data, which in turn allows us to illustrate our examples.

Segmentation by traffic source is one of the most basic types of segmentation since each visitor's source often determines what the visitor will do on a given site. It becomes a question of describing visitors and their intentions once they arrive on a site, because in principle what leads visitors to a particular site often conditions what will or what will not be achieved once they are on the site. Let's consider the primary traffic metrics, e.g. average time spent, page views per visit and bounce rate etc. Are there any marked differences between the values per source type? Which source has the most influence on the average value? Remember that the majority of Web Analytics products can be used to carry out this type of segmentation without having to use any particular features. Analysts then have no excuse not to implement them! Let's take a closer look at the bounce rate: the bounce rate is expected to be low whenever a site has high levels of traffic. For example if the site has a bounce rate of 73%, what is it for each of the different sources? Do visits from organic sources have a bounce rate which is slightly higher than the other sources? If this is the case, then the analyst can carry out further research by examining keywords searched by category, such as brand terms, terms used for different product categories etc.

What about other sources such as PayPerClick and banners? Do they have a bounce rate which is much lower than the other sources? We expect this to be the case, given that paying for these visits is based on the possibility of improving targeting potential visitors. Traffic which companies have invested in should always outperform free visits, irrespective of the type of action made on a site (at least from new visitors).

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Analysts can also use segmentation to discover which actions have the most influence on visitors, otherwise known as conversions. For example, if we take subscriptions to a newsletter, is there a difference between the number of subscriptions per traffic source and conversion rate? It is not enough for analysts to state that a certain percentage of visits lead to a subscription, but rather what exact sources generate the best conversion rates.

Traffic segmentation does not only rely on visit sources. Analysts also want to be able to identify different visitor behaviour, including: clicks on a particular link, visits to specific content, which forms have been completed in as many segments as possible, inciting analysts to continue their research. What do these visits have in common? What would happen if we were to add other action functions such as purchases? Would there be a correlation between different visitor behaviours? The most experienced of analysts will exploit the richness and depth that segmentation has to offer by creating standard segments, relying on several characteristics, whilst refining the different research methods used, and to do so it becomes necessary to rely on the use of powerful tools such as AT Internet's DataExplorer.

Segmentation by visitor type uses visitor distribution, where visitors are distributed according to their different characteristics and behaviour. By placing the visitor at the centre of this type of segmentation the analysis transforms the visit into a reference for a series of sessions like a chain of actions over time. Some of the different principles which are part of this type of segmentation include distribution by recency and frequency, geography, and purchasing history etc. If we wanted to take this a little further we could say that an experienced web analyst would use this type of segmentation to identify prospects and determine elements with a strong correlation predicting the transformation of anonymous visitors into real prospects.

There is another type of segmentation possible, segmentation by operational KPI (Key Performance Indicators) . Although, generally speaking, it is not possible to segment by strategic KPI, strategic KPIs play a fundamental role when it comes to segmenting operational KPIs, as the aim of the strategic KPIs is to discover which elements have the most influence on the operational KPIs. This is the most important piece of segmentation work that any web analyst can undertake.

THE NEXT FEW PARAGRAPHS PROVIDE A BRIEF SUMMARY OF THE DIFFERENT TYPES OF SEGMENTATION:

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Segmentation by traffic – this type of segmentation refers to all segmentation which occurs within a session itself. The aim of this type of segmentation is to understand the profound characteristics of traffic by source, by behavioural type, by action type etc. Due to the anonymity associated with session data, this type of segmentation is unfortunately the least beneficial.

Segmentation by visitor type – this type of segmentation applies to visitors and relies on the ability of web analysts to group visitors according to descriptive or behavioural characteristics. This type of segmentation is more beneficial than the previous type but only if it is based on a multi-visit approach, which in reality is more like a product purchasing cycle. There are, however, serious technical limits associated with this method, especially if cookies are the main method used to identify visitors.

Segmentation by operational KPI – this type of segmentation refers to all segmentation that places business objectives at the centre of exploring the different results. Analysts will put visit and visitor data into perspective so that they can discover the most decisive influential factors which may explain the evolution of key operational indicators, which themselves are sources that have a direct impact on the KPIs. This type of segmentation, based on key metrics, is the most beneficial of the three.

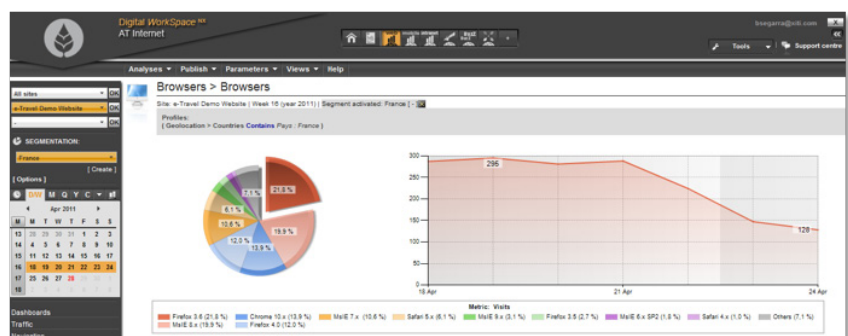
THE EXPLORATORY PROCESS

Web analysts will then come up with a series of hypotheses during their research. Segmentation makes it possible to state new hypotheses and to check them.

If we consider the comparison between segmentation and dissection described earlier in this paper, then it can be said that segmentation is a real scalpel for the web analyst. The examples given above are only indications of the different explorations which are possible. For example we cut something here, we remove something there, we continue to examine the different elements whilst trying to understand their differences; we isolate a particular aspect and compare it to the overall activity on a site to understand its most profound characteristics.

Web analysts will then come up with a series of hypotheses during their research. Segmentation makes it possible to state new hypotheses and to check them, and in this way segmentation is a web analyst's basic lab tool. In the absence of being able to experiment, analysts use segmentation as an experimental protocol. It is difficult to explain how this process of slowly creating knowledge takes place. Analysts follow a particular exploration track which in turn leads to others, motivated by an incessant series of "Why?" Don't we normally say that a question needs to be asked three times to confirm that something is true? Analysts put forward suggestions, receive feedback, and often find themselves empty-handed. Not everyone can claim to be an analyst, as they need to feel comfortable in what they are doing.

It has now become essential to have a flexible application or tool at hand which can be used as an improvisation tool, and which supports and facilitates any productive research work. Attention is given to the tool's capacity of being able to cross analyse different dimensions, isolate them, and regroup them according to custom parameters during any product evaluation.



FOR THE E-MARKETER

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On a completely different note to what was mentioned previously, segmentation plays an important role for the online marketer and this will be discussed briefly in the next few paragraphs. We believe that two main categories of segmentation exist for online marketers: one which is based on behaviour and the other which is based on socio-demographic characteristics. The two can, of course, be very easily interlinked with one another, for example via analyses which cross demographic segments according to behaviour history. Another type of segmentation can also be added to the two categories which have just been mentioned, “attitudinal” segmentation, in other words segmentation which reflects the perceptions, opinions and values of visitors. Marketers are free to experiment with this type of segmentation. With attitudinal segmentation actual visitor behaviour is preferred to visitor will as the tool to be used for predicting future visitor behaviour.

There are of course many different theories which exist on the different segmentation models available, a subject which is too broad to deal with in this paper.

As far as Web analytics is concerned we believe that behavioural segmentation is the most operational of the two, since a piece of Web data is both behavioural and factual. We can of course adopt a socio-demographic approach, in particular for operations which target a specific type of audience. Today top of the range Web Analytics systems, such as Analyzer^{NX}, make it possible to integrate data taken from client attributes, for example to match the data with its associated behavioural data on a given site.

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Online marketer must also explain to their Web analysts the need to accompany general results with plausible explanations of the most influential factors revealed by segmentation.
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We also believe that behavioural analyses provide the most concrete benefits, simply because Web Analytics can create them with higher levels of certainty. It goes without saying that behaviour is closely linked with socio-demographic attributes and this is why the latter also plays an essential role in targeting email campaigns. The online marketer, however, can still not expect to obtain all the tools they need for behavioural targeting or for crossing analyses of visitor profiles with visitor preferences and typical lifestyle habits, both of which are associated with attitudinal segmentation. It is highly possible that this will happen one day, taking trends from sophisticated Web Analytics tools and then using them as a targeting platform thanks to the increased efforts made in developing testing features, or connections with other systems which are specialised in attitudinal analyses.

Online marketers are entitled to expect that the Web analyses will be based on the principle of data segmentation as described above, a concept which they are familiar with. They must also explain to their Web analysts the need to accompany general results with plausible explanations of the most influential factors revealed by segmentation.

By regularly using segmentation Web analysts will discover not only a tool with enormous heuristic potential, but also a piece of design logic which will bring analysts that much closer to the people who receive their work, and which will considerably increase the relevance of their work; relevance which must be proved in many cases.



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