Impact of Daylight Saving Time on website usage – Case study of Nestoria.co.uk

The economic benefits of Daylight Saving Time (DST) are hotly disputed. It is frequently argued that the impact of DST on behaviour of people is disrupting and undesirable. Daylight Saving Time is the world-wide practice of advancing the official time so that mornings have less daylight and afternoons have more. DST was implemented to reduce incandescent lighting usage as a way to conserve coal during World War I. Nowadays incandescent lighting is no longer the primary use of electricity and its use does not always peak after sunset.

The impact of Daylight Saving can be measured with precision on the usage of web sites

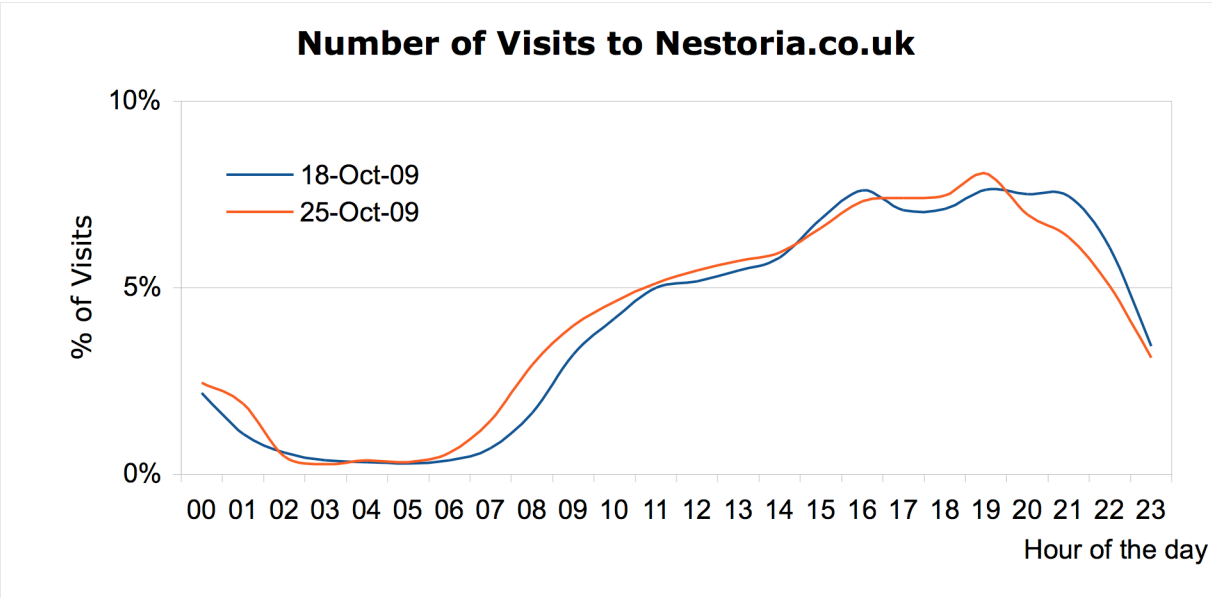
Energy-consumption depends on the number of visitors and their time on site, which is a proxy metric for the intensity of their activity. The longer visitors spend visiting a web site, the more extensive is their interaction with it, including clicks on links, pagination, downloads, etc. Webmasters of large websites track the performance in other to maximize the ROI of ther resources.

We measured the day-on-day impact of DST on the last Sunday in October 2009 on Nestoria.co.uk. Nestoria is a UK property search engine targeting residential users. The site is an established operation with more than one million visits per month. It ranked 5th in terms of Unique Visitors per month in the property category in the UK for the last 12 months (*source: Comscore*). We compared the activity on the Sunday 25th October, when clocks were adjusted one hour backward, with the previous Sunday, October 18th. Sundays are, along with Saturdays, the days of the week with the longest average time on site. The duration of the day was adjusted to identical periods of 24 hours and the number of visits normalized for the two days of comparison.

Shift in hourly patterns of visits

Hourly patterns of visitors (circadian rhythms) are very consistent when comparing the same days of the week, week after week. The distribution of the visitors in percentage of the total daily hardly varies beyond 7% on the total daily average, measured as the differences in the sum of percentages of visits of the visitors .

We found that Daylight Saving does show a significant shift in the hourly pattern of usage of the web site: up to 10% of users shifted the beginning and end of their visits during the beginning and the end of the day. Whilst the total variation is small in numbers, the shift of activity shows the expected behaviour of visits that start earlier in the day and start to decline also earlier.



Similar patterns in can be found in other web sites of Nestoria in countries that still make use of DST (Nestoria Deutschland, Nestoria Italia and Nestoria España).

One additional hour does not generate as much activity

The additional hour of the last Sunday in October increased by 4% (from 24 hours to 25 hours) the real duration of that day. The number of visits increased by 2% on average, all 4 websites combined. It is unclear whether this variation in total nuber of visitors is due to weekly seasonality and/or increased duration of the day.

It seems that additional availability of time is not spent in more activity online. That extra hour that day could dedicated to rest or leisure. It would be interesting to compare these patterns of online activity with offline behaviour like retail sales, transport use, telephone usage, etc.

Conclusion

Daylight Saving Time has no significant impact on the usage of web sites in terms of visits or performance of those visits.

Author: Ruben Martinez is director of marketing at Lokku Ltd, the company behind Nestoria and Lokkulabs