ONLINE DAYPARTING STUDY REVEALS MISUNDERSTANDINGS OF CLICK RATE METRICS

SUMMARY

Dayparting (http://en.wikipedia.org/wiki/Dayparting) is the practice of dividing a calendar day into a series of parts based on time during which radio and television programming is scheduled. Programs are placed into time slots according to when target audiences will most likely see the program and engage. Dayparting is entirely based on the viewer's local time. Obviously, 8 am in New York is not 8 am in Los Angeles and programs are adjusted accordingly. Whether the content is being adjusted or not to accommodate the viewer's local time, the delivery of the advertising always must.

We don't see ads for toys at night, and we will not see ads for beer on Saturday mornings. Advertisers are highly sensitive to not only where and against what content their ads are seen, but also when. And the "when" must be based on the viewer's local time to have any relevancy for proper targeting. In addition, Dayparting plays a critical role in the management of advertising delivery scheduling based on the Reach (how many different people see the ad) and Frequency (how many times each viewer sees the ad) goals of the campaign.

For example, in TV or Radio, placing an ad in the Morning News would provide a more predictable certainty to achieve a desired Reach but limits Frequency as the audience might not be as consistent as, for example, during a game series for a local sports team where the audience is likely to be repetitive by nature. In contrast, to achieve a desired Frequency for a specific audience is made easier by placing an ad,

for example, into a Reality Show series but that would limit Reach to the audience of the show.

So, effective media planning is impossible without an analysis of the audience that is changing during times of the day that also may be different for different days of week. The ability to properly Daypart plays a critical and essential role in managing the audience structure by time and day to achieve effective advertising scheduling and delivery.

However, online ad serving platforms have failed to deploy reliable technologies that not only emulate television-like dayparting as well as actually make it integral to the scheduling schema. This is where Liqwid has finally broken the barriers and made real and actual dayparting a reality for online advertisers.

Most ad servers use "server time" to time ad deliveries, which often is not even a known time and can vary by server. Many systems provide an interface that allows for users to change the "reporting system time" to "system user's [local] time". Without an explanation as to what such a change to another point in time (that is irrespective to the actual audience's local time) would actually mean for the analysis of events happening in different from actual viewers' point in time, such a change may lead to a misguided statistical data analysis and mistaken conclusions.

Using One Point in Time for all viewers in the audience that by nature of the Internet may reside in different time zones is totally an inadequate approach and causes confusion and substantial inaccuracies in targeting and reporting. Assuming Advertisers are aware of the use of "server time" versus the viewer's "local time", they and their agencies must try to compensate by adjusting the server time to the desired local time with tables and time zone calculations based on each individual viewer geographical location. LIQWID® is the first ad delivery platform that provides "Dayparting" for online campaign scheduling and delivery that uses the viewer's local time, thus enabling proper targeting and synchronized scheduling across multiple media not only for events and time-sensitive promotions but also for effective advertising in general based on a reliable Reach and Frequency model.

The Liqwid advertising platform delivers fixed-sized and responsive ads to any responsive environment and creates new, viewable and premium inventory with the empty space outside of a content page. Liqwid Ads automatically adapt to any ad size, location, device, operating system, and browser inside the content area or out. This whitepaper is based on the statistical data gathered during an actual Premium Brand Campaign on a Premium Publisher Website with a Liqwid ad delivered by our Viewer-directed Placement technology utilizing our dayparting methodology.

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ABOUT LEFTSNRIGHTS, INC.

ABOUT LIQWID: Liqwid®, a brand of LeftsnRights, Inc., was founded by Nikolai Mentchoukov and Jim Rowan in 2010. The Liqwid advertising platform delivers fixed-sized and responsive ads to any responsive environment and creates new, viewable and premium inventory with the empty space outside of a content page. Ads automatically adapt to any ad size, location, device, operating system, and browser inside the content area or out. The company also features innovations like Viewer-Directed Placement™ and local dayparting to enhance the accuracy of measurable deliverables and scheduling. The company has offices in Salt Lake City, UT and Nevada. For more information about Liqwid technology, visit http://www.liqwid.com or contact Sarah Prater at 800-870-5006 or sp(at)liqwid(dot)com. The company's Twitter feed is @LiqwidAdTech (#liqwidads).

INTRODUCTION: TELEVISION VS. THE INTERNET

Television ads are delivered alongside scheduled programming. The schedule makes the same ads available in the same order at the same local time of day for each TV set regardless of the origination time of the show. For example the broadcasting of the Olympics originated from London based on GMT time, but in California, the ads ran based on a PST schedule. The Scheduled nature of television allows for an estimated count of TV sets turned to a specific channel to use as a basis for the size of the audience for a particular program (i.e. content).   By utilizing 50 years of science and modeling, both the size and demographics of the audience is estimated and used as the basis for Reach and Frequency modeling to determine the value of the ad placements. This information can be utilized at the planning stage of the [ad delivery] campaign to manage campaign goals.

On the Internet, content is delivered on-demand. Different internet users request different content pages at different times of the day in different time-zones in different and unscheduled orders. Since a TV - like scheduling approach for content is not possible on the Internet, two challenges present themselves when it comes to campaign planning. Not only must ads be tied to relevant content to capture appropriate demographics, but the time and order of the ads presentation must be controllable, for all different users regardless of when they request the content in order for Reach and Frequency to have any meaning whatsoever. Because the order of ads to be delivered on the Internet depends on the variable order of content pages requested by viewers, managing the delivery of ads in a specific order for each Internet user based on the user system's local time is required, irrespective to the variable order of content pages requested by each individual Internet user. Only if this is accomplished will TV-like delivery be achieved on the Internet.

LIQWID's™ Viewer-Directed Placement Method uses the viewer's computer or mobile device as part of the ad serving process. This approach allows for a Viewer-directed queue of ads to be set for each individual viewer and managed similarly to a television-like queue of ads. Advertisers can also schedule ads in a specified order and for a specified number of times (controlled frequency) within a specified iteration of each individual ad to each individual viewer based on the viewer system's local time.

CAMPAIGN ANALYSIS

The analysis is based on a campaign that ran recently on a premium publisher website using our Viewer Directed Placement[1] technology. The data shows how Time of Day and Day of Week, based on the audience's local time instead of the ad server time, relates to Click Rate and demonstrates the potential for increased Clicks in absolute numbers for the same ads delivered based on a schedule that utilizes dayparting methodology and statistical data analysis specific to each online publication. This technology can be utilized in the process of media planning and ad delivery scheduling to effectively deliver campaign goals.

As utilized as a metric in the industry today, Click Rate is presented as a single constant number applied to an entire campaign. However, our analysis will show, in fact, it is a floating number and subject to many variables. Ad delivery parameters such as Time of Day and Day of Week as well as Ad Exposure [Viewable] Time and Frequency (number of times an ad was rendered on each unique viewer's screen) directly relate to Click Rate and can materially influence a campaign/ad performance.

A statistical data analysis of this campaign leads to understanding how a delivery method utilizing the audience's local (i.e. viewers' device) time can effectively increase the absolute number of Clicks registered per thousand Unique Viewers. It is our contention that Direct Response Rates should be measured as Clicks per Unique Viewers and not as Clicks per Impressions or Viewable Impressions. After all, if one thousand paid by advertiser ad impressions have resulted in a single Click, it is imperative to know whether 1000 people viewed the ad once and only one of them clicked, one individual clicked after viewing the ad 1000 times or anywhere in between.

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[1] Our Liqwid Ad Technology platform is based on a unique methodology of passing a queue of ad placements from the server to the browser that allows for controlled ad rotation and iteration managed for each individual viewer, with TV-like scheduling controls based on the audience's time zone, census-based reach and frequency, local dayparting, minimum size and minimum exposure time parameters and other features.
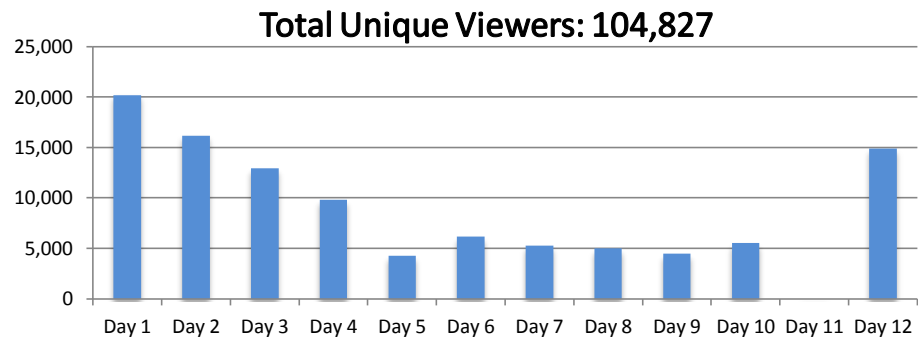
DELIVERY DATA

Total Liqwid Ad Impressions (ads rendered in the viewable area of the viewer's screen) for the 12-day campaign period: 252,602
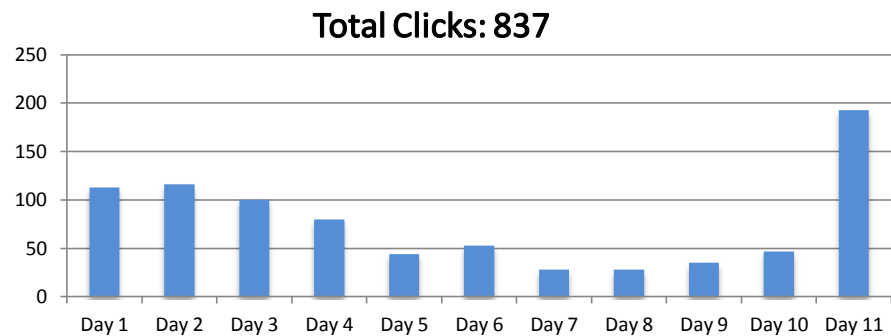
FIGURE 1
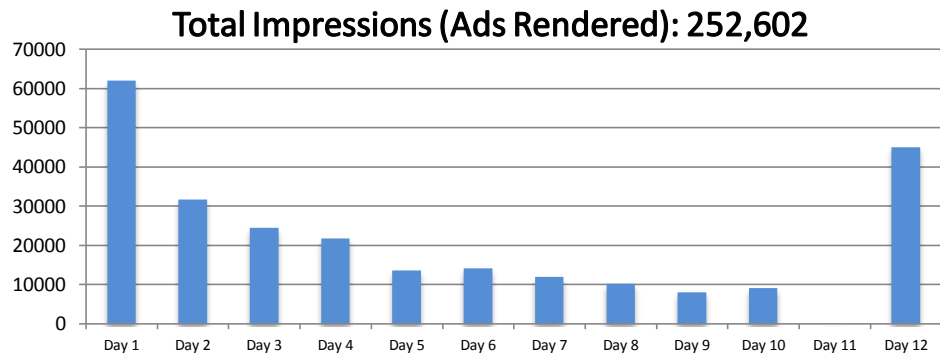
Total Unique Viewers (based on Browser Cookies): 104,827
Average Frequency: 2.4 (See Fig19 for Frequency Distribution)

FIGURE 2

Total number of Clicks for the campaign period: 837
Average Click Rate (Clicks to Impressions Ratio): 0.33%
Average Direct Response Rate (Clicks to Unique Viewers Ratio): 0.79%

FIGURE 3

Total Clicks: 837

MINIMUM EXPOSURE TIME

About 82.15`% of all ads delivered met the Minimum Exposure Time criteria defined for this campaign at 3 seconds (MET: 3). 17.85% of all Impressions were viewable between the initial 1 and 3 seconds time interval, when rendered.

AVERAGE AD EXPOSURE TIME

The average length of time the ads were exposed to a viewer on a screen, when rendered, was approximately 20 seconds. To prevent the Average Ad Exposure Time data from being skewed by a small group of people who left an inactive browser window opened for a long time period, Liqwid only counts the first 30-seconds of viewable time for each ad rendered, and for those Impressions that resulted in a Click at some point, regardless of the viewable time.

IMPRESSIONS, CLICKS AND CLICK RATE DATA
AGGREGATED BY EXPOSURE TIME INTERVALS

Below are the Distributions of Impressions, Clicks and Click Rates based on 10-second increments during the initial 30-seconds Exposure Time interval along with an aggregated interval of an Exposure Time between 30 seconds and five minutes.

FIGURE 4

Exposure Time	No. of Impressions	No. of Clicks	Click Rate %
0-9 sec	63,805	59	0.0925
10-19 sec	24,057	73	0.3034
20-29 sec	18,075	74	0.4094
30+ sec	146,758	650	0.4429
Total:	252,602	837	act.0.46 (avg.0.92)

LIFETIME LENGTH DETERMINED FOR AD IMPRESSIONS

Only 41.9% (105,844) of all ads delivered were in exposure between 1 and 29 seconds, and noticeably 58.1% of all ads delivered, 146,758 impressions remained in exposure up to 30-seconds and longer.

FIGURE 5

Impressions Distribution by Exposure Time
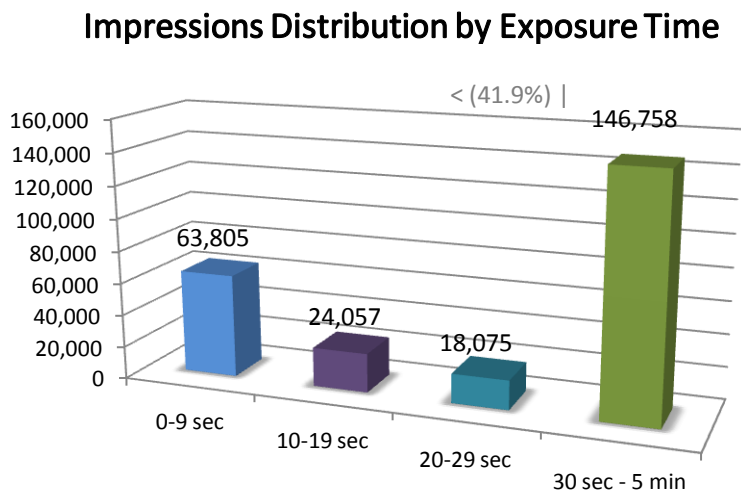
We do not measure maximum Exposure Time for ads that are rendered on a screen longer than 30 seconds. However the Click time is always registered regardless of the Ad Exposure Time on the viewer's screen, so the Ad Exposure Time is always registered at the moment of Click. This methodology allows for determination of Click Density and Click Rate in relation to Ad Exposure Time and Impression Density (degree of the audience activity.)

DENSITY OF CLICKS

An important factor is the density of clicks relative to the exposure time length of each impression. From the data of this Campaign, only 35.2% (295) out of all clicks registered (837) occurred during the initial 29-second in-exposure time period.

One interesting fact to note at this point is that 58.1% (146,758) of all ad impressions that were exposed to the audience for 30 seconds and longer (Fig. 5) contributed 64.7% (542) of total Clicks (Fig 6)!
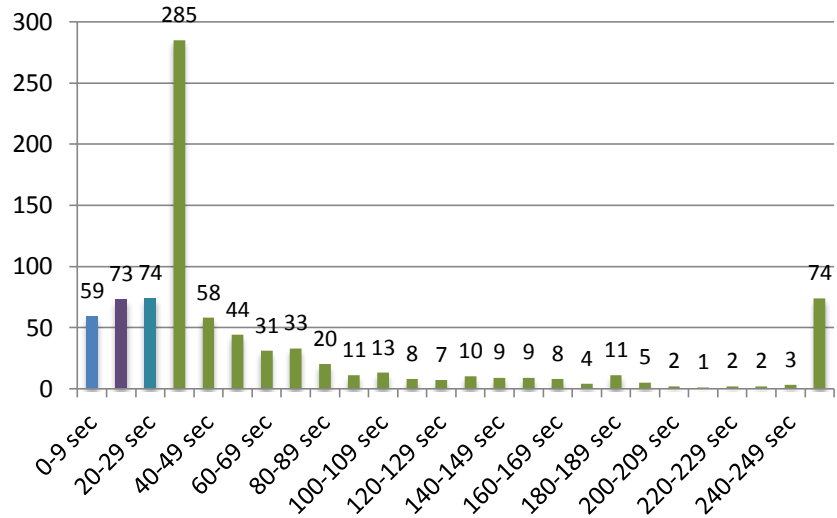
FIGURE 6
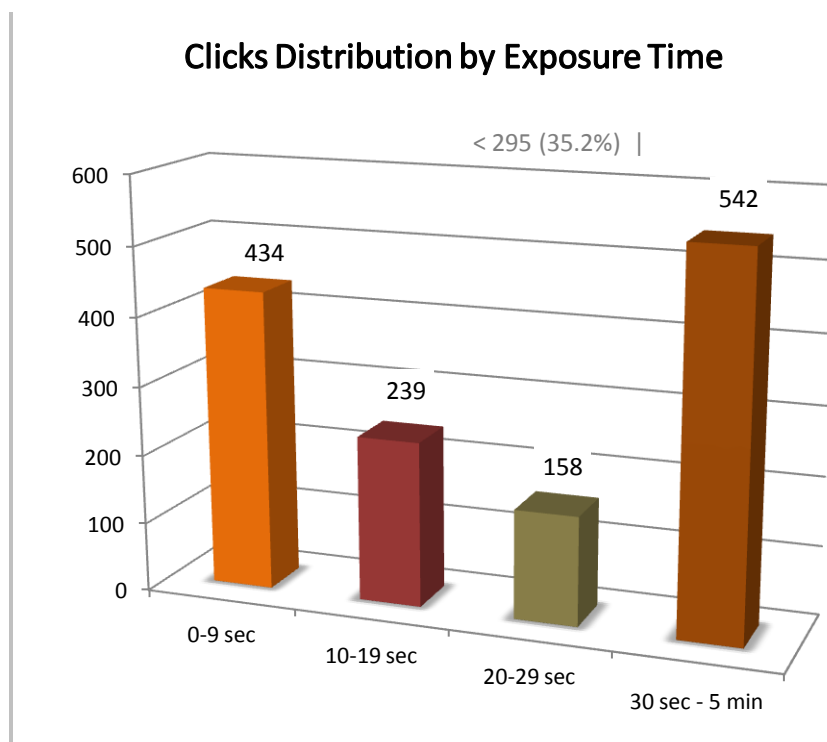
The following figure (Fig.7) demonstrates Click distribution by each 10-second interval with an aggregate interval from 30 seconds to 5 minutes for all Clicks registered. The density of the Clicks curve is smoothly sliding down after the initial 30-second in-exposure time. However, the length of the lifetime on the viewer's screen of 58.1% of all ads was longer than 30 seconds, in many cases significantly so, and these 30 second and longer impressions continuously contributed to the 64.7% of total Clicks.

FIGURE 7

Clicks Distribution by 10-sec View Time Interval
(up to 5 min)

The Click distribution based on 30-second increments shows how 64.7% of all clicks occurred after the initial 29-second Ad Exposure Time period.

FIGURE 8

Clicks Distribution by 30-sec View Time Interval
(up to 5 min)

FIGURE 9

Click Rate in Relation to Exposure Time Length

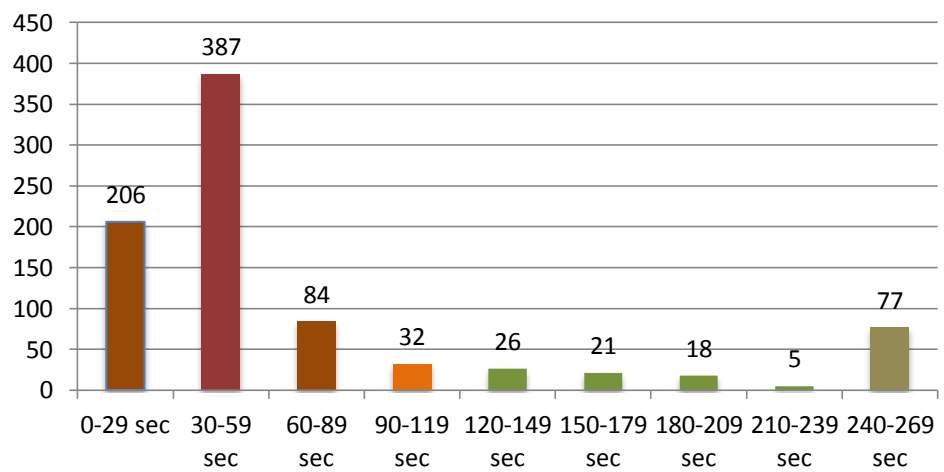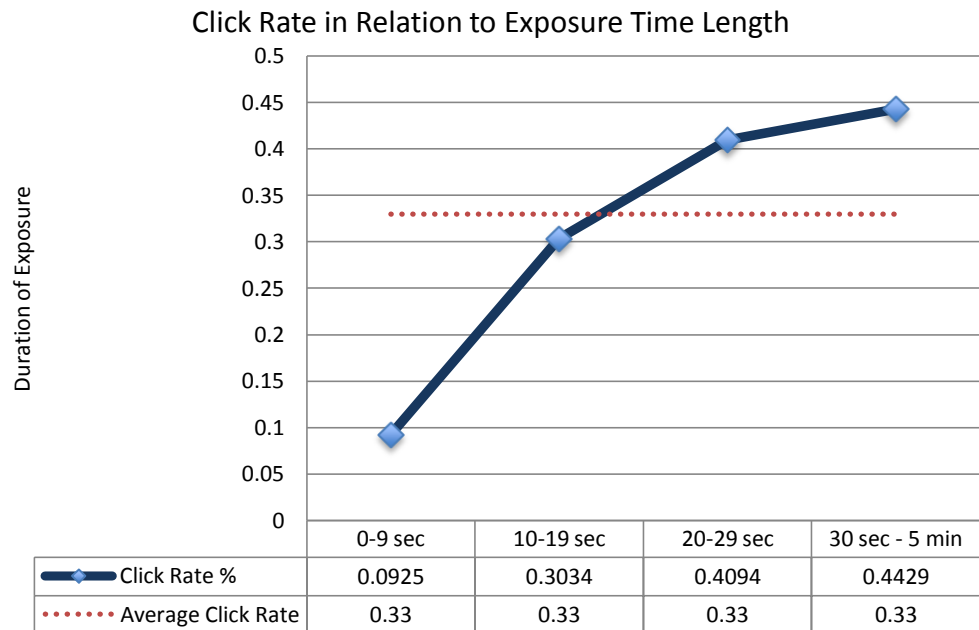| Duration of Exposure	0-9 sec	10-19 sec	20-29 sec	30 sec - 5 min
◆ Click Rate %	0.0925	0.3034	0.4094	0.4429
••••• Average Click Rate	0.33	0.33	0.33	0.33

Click rate in relation to exposure time length. The highest Click Rate 0.44% (common ratio between Impressions and Clicks) was registered for the ads that were in exposure during 30 seconds and longer. As we can see the Click Rate taken as Average for all Exposure Time intervals is significantly skewed by a number of impressions (64.7% of total impressions) that remained on the viewer's screens for a longer period of time. The average Click Rate for the initial 29sec of Exposure Time is about 0.3%, but for the ads being in view for 30 sec and longer it is actually higher at 0.44%

Comparing data of absolute number of Clicks (Fig. 7 – 9) and Click Rate relative to Exposure Time (Fig. 10) helps to understand that Click Rate as a reporting metric does not relate directly to an increase or decrease of absolute number of Clicks, as many may think. In other words, a higher Click Rate time period does not imply that this time period is better for collecting a higher number of Clicks in absolute numbers. As an example, if you have two Impressions and one Click then your Click Rate is 50%. If you have 1,000 impressions and 10 Clicks then your Click Rate is 50 times smaller (just 1%), but you have collected 10 times more Clicks. This basic concept can be misleading when it comes to analysis of statistical data based on actual Campaigns as demonstrated here. For example in this campaign, we can see that less and less people clicked during Exposure Time intervals after 30 sec (Fig. 8) as less ads were staying that long in view, but the ratio between impressions and clicks kept getting higher (Fig. 10) continuing to contribute to absolute number of clicks collected.

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IMPRESSIONS AND CLICKS

Liqwid reports are based on each individual Viewer's system [local] time reported at the point of Impression or Click registered. A part of this campaign was targeted to the Washington DC (511) DMA, so dayparting related reports such as Click, Click-rate and Impressions density in respect to time of day are specific to the Publisher's traffic (audience) in that region for that placement. However, viewers from other regions did not skew the overall picture as their local time is used for Fig 11-13.

FIGURE 10

Impressions Distribution by Time of Day
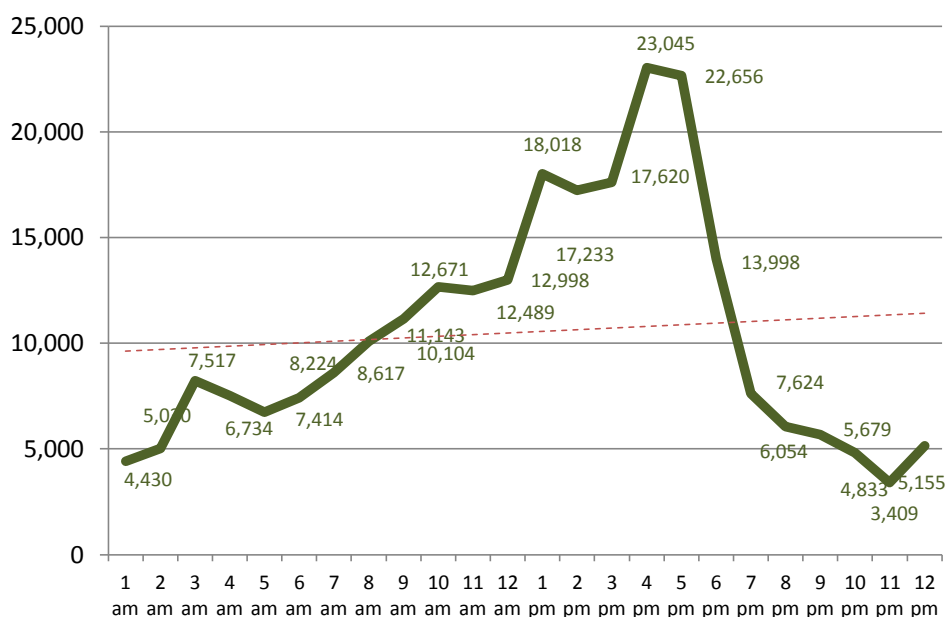
The trend of the Clicks distribution curve (above Fig 10) deviates from the trend of the Impression distribution curve showing that people tend to click more during morning and evening hours.

Click Rate distribution charts below (Figs. 11-13.B) tell us that Click Rate is not a constant and its value changes according to time of day. In fact, the campaign data collected during this campaign shows that Click Rate is a floating number and increases and decreases according to time of day with up to a 50% deviation from the average.

Based on data from Fig. 13.A, which gives a statistical data overview sorted by Click Rate in relation to time of day, the Click Rate prime-time (date parts) for collecting the maximum Clicks in absolute numbers and get a higher Click Rate is in the evening and early morning hours.
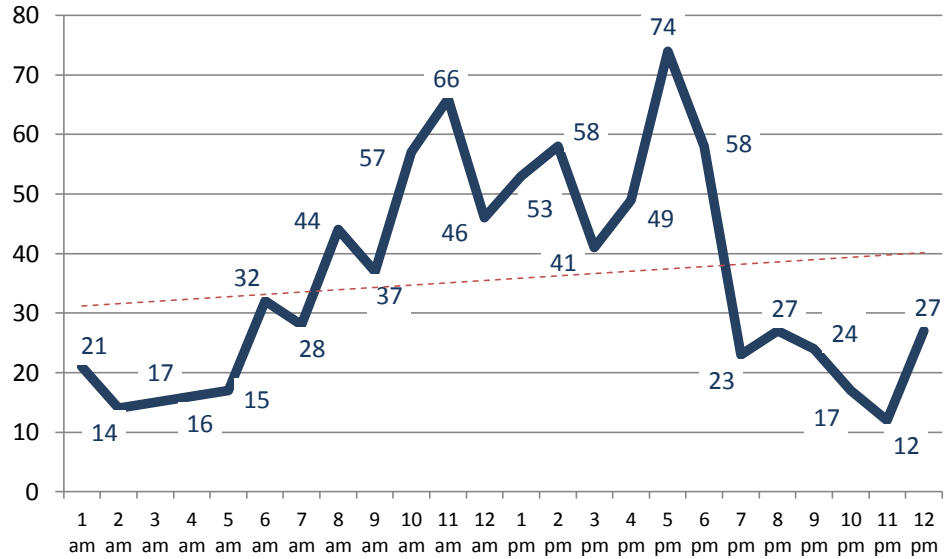
FIGURE 11

Clicks Distribution by Time of Day

FIGURE 12

Click Rate in Relation to Time of Day

%

FIGURE 13.A

% **Click Rate in Relation to Time of Day** (sorted by Click Rate)

0.60

0.53
0.52
0.47
0.45
0.45
0.44
0.43
0.42
0.41
0.35
0.35
0.35
0.34
0.33
0.33
0.32
0.30
0.29
0.28
0.25
0.23
0.21
0.21
0.18

0.33

0.50

0.40

0.30

0.20

0.10

0.00

10-11 23-24 0-1 9-10 19-20 7-8 5-6 20-21 17-18 11-12 22-23 21-22 13-14 8-9 16-17 6-7 18-19 12-13 1-2 4-5 14-15 3-4 15-16 2-3

FIGURE 14.B

Click Rate Distribution by Day of Week

0.50
0.45   0.45
0.42   0.39   0.38
0.40   0.33
0.35   0.28
0.30   0.20
0.25
0.20
0.15
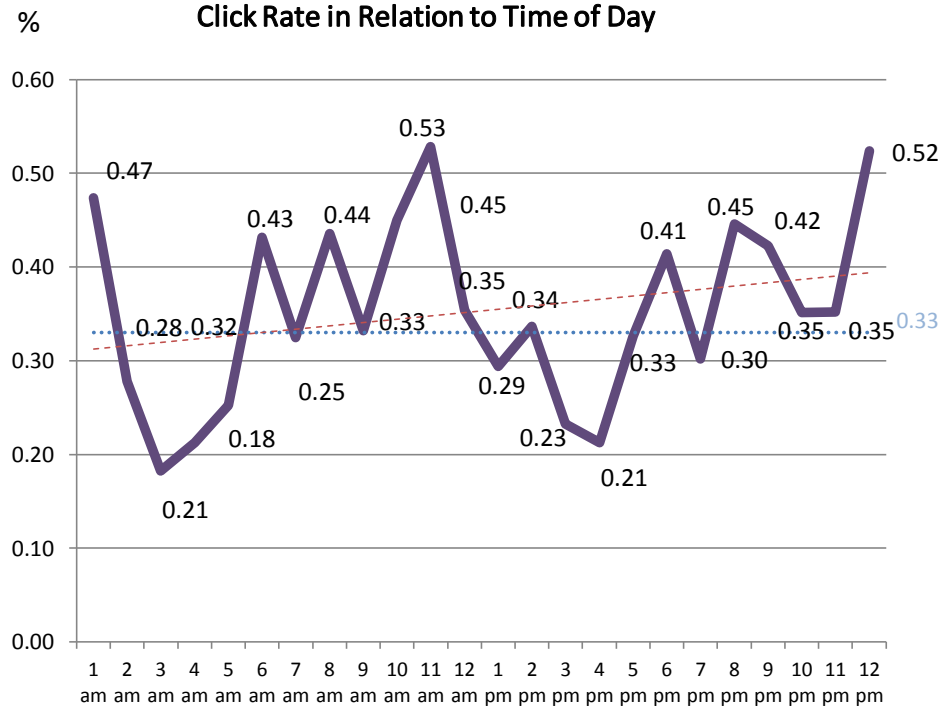0.10
0.05
0.00
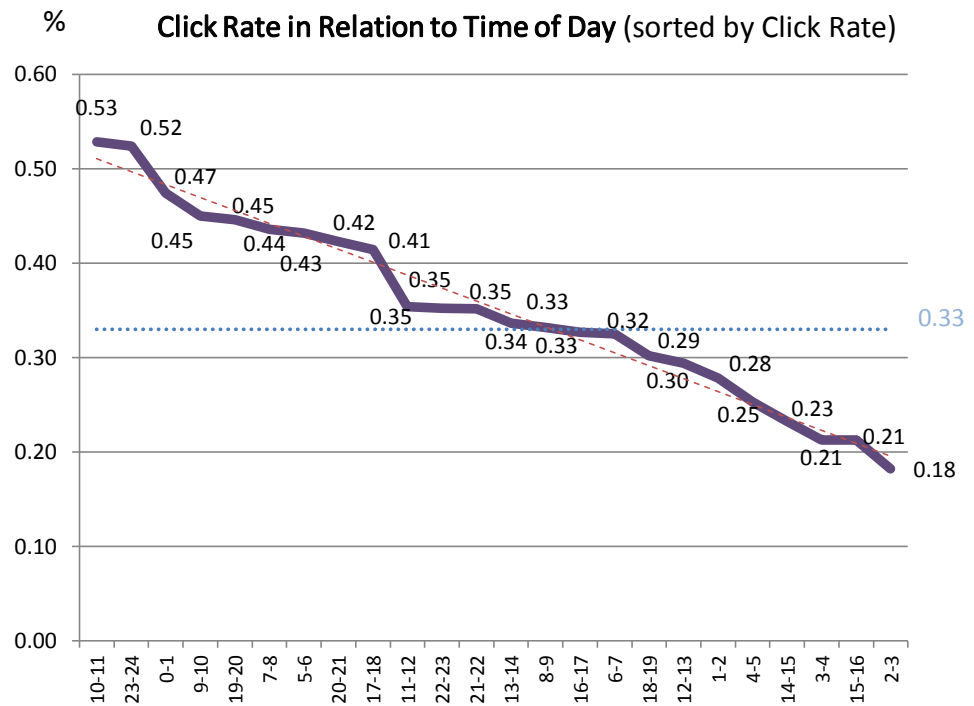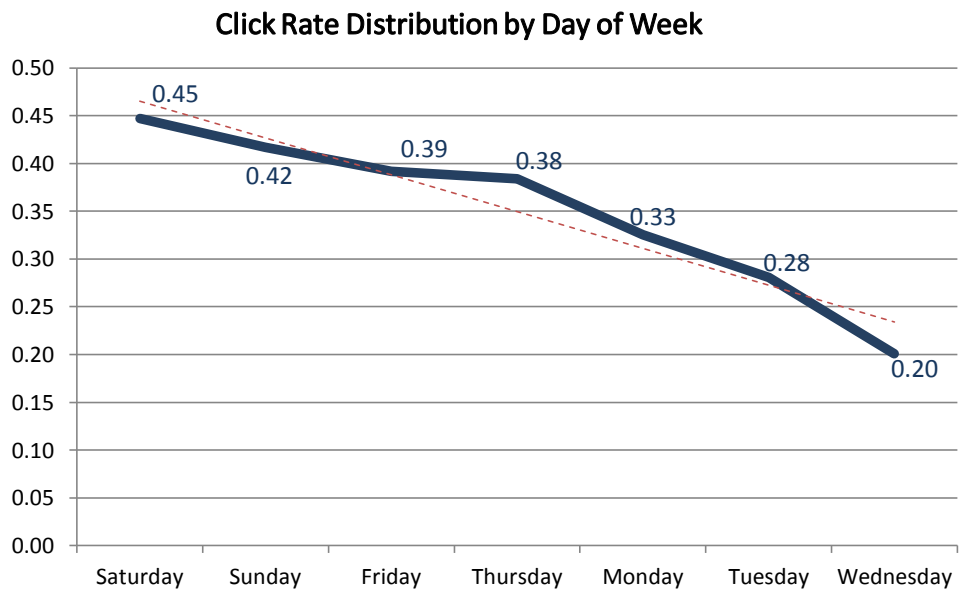
Saturday Sunday Friday Thursday Monday Tuesday Wednesday

FREQUENCY DISTRIBUTION

As already noted, Click Rate is a floating number and may be different for each day of the week. Fig. 13.B illustrates that for this campaign, click rate deviated more than 50% from 0.45% on Saturday to 0.20 on Wednesday. Data analysis for numerous campaigns for the Publisher suggest that Day of Week is consistently affecting click rate and can be taken in consideration if needed to achieve campaign goals.

As shown in Figure 14, the ad was delivered once for 47.55% of all Unique Viewers. The ad was delivered two times to 19.24% of all Unique Viewers and three times to 10% of all Unique Viewers.

We can see that only 10% of all Unique Viewers (Fig. 14) were exposed to the ads three times and contributed 12.27% of all Clicks (Fig.15), when 47.55% of viewers (the larger group by nearly five times) exposed to the ads just once, contributed only 26.17% of all Clicks. Only 3.89% of viewers were exposed to the ads five times but contributed 7.24% of clicks – demonstrating clearly that frequency up to five times helps to get clicks.

Direct Response Rate is different here from common Click-through Rate as it is taken as a ratio between unique viewers (instead of Impressions) and unique viewers who clicked. Fig. 16 demonstrate that Frequency also directly affects Click Rate: 47.55% of all Viewers were exposed to the ad once (Fig 14) and just 0.65% of them Clicked (Fig. 16). At the same time only 3.89% of all Viewers were exposed to the ad five times, but 2.21% of them Clicked.

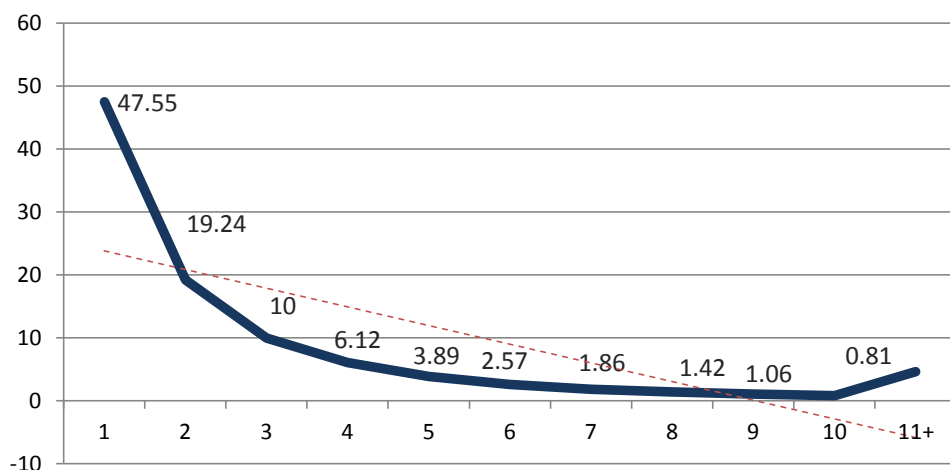### Frequency Distribution based on % of Total Unique Viewers

FIGURE 16

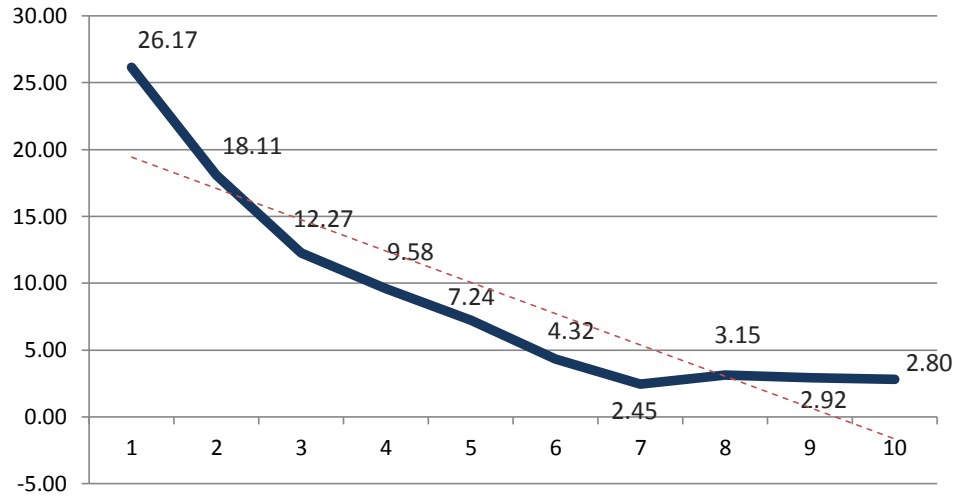## Frequency in Relation to % of Total Clicks

FIGURE 17

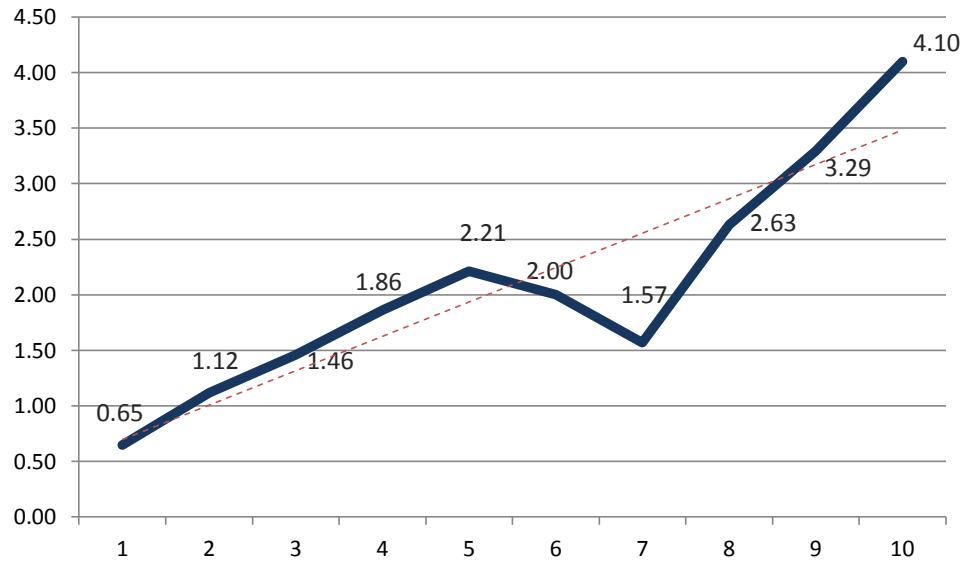## Click Rate in Relation to Frequency

CONCLUSION

Click Rate is a floating number. It fluctuates during different times of the day that is also different for different days of week and subject to many variables. Managing ad delivery and schedule parameters such as Time of Day and Day of Week as well as Ad Exposure(Viewable) Time and Frequency can materially impact a campaign/ad performance and directly relate to Click Rate.

A statistical data analysis of this and many similar campaigns leads to an understanding that a delivery method utilizing the audience's local (i.e. viewers' device) time for scheduling and dayparting can effectively increase the absolute number of Clicks registered per thousand Unique Viewers. Based on substantial data collected and its analysis, it is our contention that Direct Response Rates should be measured as Clicks per Unique Viewers and not as Clicks per Impressions or Viewable Impressions. After all, if one thousand paid by advertiser ad impressions have resulted in a single click, it is imperative to know how this number of impressions relates to the actual audience: whether 1000 people viewed the ad once and only one of them clicked, one individual clicked after viewing the ad 1000 times or anywhere in between.

CONTACT INFORMATION

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