# The Optimization of Campaign Size in order to Maximize Agent Productivity

In a time when outbound call center managers are called upon to do “more with less”, adding agents to a call center to maximize productivity may no longer be an available easy answer. Consolidating all of a center’s campaigns into one is not a viable option in cases where call tables need to be segmented based on agent skill set or contractual obligations. Outbound call center managers are now routinely asked to optimize efficiency across all of their campaigns using a fixed, finite number of agents. This study shows that by using predicative dialer simulation, a call center manager can determine the minimum staff size for each of their campaigns as to minimize the effects of dialer inefficiencies. This minimum size is affected by such attributes as the campaign’s connectivity, call handle time and the agents’ time on dialer (%TOD). Although the improvements in productivity that will be realized by optimizing campaign size will be based a campaign’s original configuration, this paper shows that the productivity of each agent in a given campaign may improve by 10% to 100% through optimal staffing.

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## About Exceptional Outcomes

Exceptional Outcomes is a provider of both tools and services for optimizing blended call centers. They help their clients maximize agent productivity, increase right party engagement and improve call conversions.

Their most popular service is the ‘Campaign Checkup’, which is performed solely off the call center’s dialer logs. It’s fast, it involves almost no effort on a call center’s part and does not cost anything unless opportunities for improvement are found.

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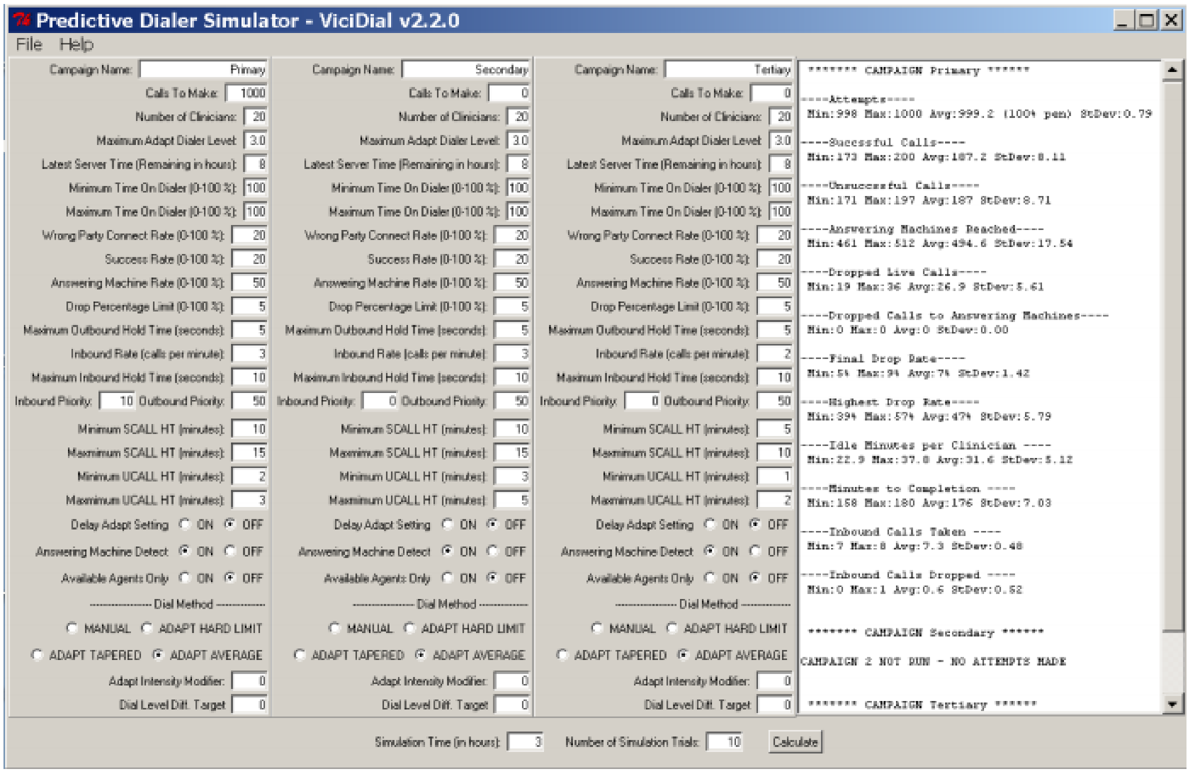
## Introduction

Predictive dialing has become a cornerstone technology for outbound call centers, and for good reason – when used effectively; the dialer will increase the efficiency at which telephonic agents will connect with their members. Predictive dialing is conventionally considered an improvement to progressive dialing. While progressive dialing dials new calls when agents become available to take a call, predictive dialing dials new calls based on predictions of when agents will become available. The effectiveness of predictive dialing is measured by the percentage of time the agents are talking and wrapping up calls when they are logged into the dialer. How productive the agents are is ultimately based on how accurate system's dialing predictions are. If the system underestimates the number of calls to be made the agents will sit idle, whereas if the system overestimates the number of calls to be made, calls will most likely be aborted. Several campaign attributes play a role in determining the accuracy of a predictive dialer's call cadence. These factors include variation in the handle time for calls, the frequency at which the number of agents logged in a campaign changes, and the overall number of agents logged into a campaign. This paper looks at the impact of the number of agents in a campaign on each of the agent's productivity – measured as successful calls completed per hour per agent.

## Predictive Dialer Simulation

Exceptional Outcomes has developed a set of call center simulation programs which provide insight on how to improve agent productivity, telephonic engagement and call outcomes. Exceptional Outcomes uses advanced analytics to determine agent productivity under the various dialers that are commercially available. This includes both hardware and hosted dialers. The simulator shown below and used in the following example emulates the ViciDial dialer. Through manipulating attributes such as the number of agents in a campaign, the target abort rate and successful and unsuccessful call handle times, the user can see the effects on productivity at both the agent and campaign levels.



| | | | |
|---|---|---|---|
| Campaign Name: | Primary | Secondary | Tertiary |
| Calls To Make: | 1000 | 0 | 0 |
| Number of Clinicians: | 20 | 20 | 20 |
| Maximum Adapt Dialer Level: | 3.0 | 3.0 | 3.0 |
| Latest Server Time (Remaining in hours): | 8 | 8 | 8 |
| Minimum Time On Dialer (0-100 %): | 100 | 100 | 100 |
| Maximum Time On Dialer (0-100 %): | 100 | 100 | 100 |
| Wrong Party Connect Rate (0-100 %): | 20 | 20 | 20 |
| Success Rate (0-100 %): | 20 | 20 | 20 |
| Answering Machine Rate (0-100 %): | 50 | 50 | 50 |
| Drop Percentage Limit (0-100 %): | 5 | 5 | 5 |
| Maximum Outbound Hold Time (seconds): | 5 | 5 | 5 |
| Inbound Rate (calls per minute): | 3 | 3 | 2 |
| Maximum Inbound Hold Time (seconds): | 10 | 10 | 10 |
| Inbound Priority: | 10 | 0 | 0 |
| Outbound Priority: | 50 | 50 | 50 |
| Minimum SCALL HT (minutes): | 10 | 10 | 5 |
| Maximum SCALL HT (minutes): | 15 | 15 | 10 |
| Minimum UCALL HT (minutes): | 2 | 3 | 1 |
| Maximum UCALL HT (minutes): | 3 | 5 | 2 |
| Delay Adapt Setting | ○ ON ● OFF | ○ ON ● OFF | ○ ON ● OFF |
| Answering Machine Detect | ● ON ○ OFF | ● ON ○ OFF | ● ON ○ OFF |
| Available Agents Only | ○ ON ● OFF | ○ ON ● OFF | ○ ON ● OFF |
| Dial Method | ○ MANUAL ○ ADAPT HARD LIMIT<br>○ ADAPT TAPERED ● ADAPT AVERAGE | ○ MANUAL ○ ADAPT HARD LIMIT<br>○ ADAPT TAPERED ● ADAPT AVERAGE | ○ MANUAL ○ ADAPT HARD LIMIT<br>○ ADAPT TAPERED ● ADAPT AVERAGE |
| Adapt Intensity Modifier: | 0 | 0 | 0 |
| Dial Level Diff. Target | 0 | 0 | 0 |

Simulation Time (in hours): 3
Number of Simulation Trials: 10

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******* CAMPAIGN Primary ******

----Attempts----
 Min:998 Max:1000 Avg:999.2 (100% pen) StDev:0.79

----Successful Calls----
 Min:173 Max:200 Avg:187.2 StDev:8.11

----Unsuccessful Calls----
 Min:171 Max:197 Avg:187 StDev:8.71

----Answering Machines Reached----
 Min:461 Max:512 Avg:494.6 StDev:17.54

----Dropped Live Calls----
 Min:19 Max:36 Avg:26.9 StDev:5.61

----Dropped Calls to Answering Machines----
 Min:0 Max:0 Avg:0 StDev:0.00

----Final Drop Rate----
 Min:5% Max:9% Avg:7% StDev:1.42

----Highest Drop Rate----
 Min:39% Max:57% Avg:47% StDev:5.79

----Idle Minutes per Clinician ----
 Min:22.9 Max:37.8 Avg:31.6 StDev:5.12

----Minutes to Completion ----
 Min:158 Max:180 Avg:176 StDev:7.03

----Inbound Calls Taken ----
 Min:7 Max:8 Avg:7.3 StDev:0.48

----Inbound Calls Dropped ----
 Min:0 Max:1 Avg:0.6 StDev:0.52


 ******* CAMPAIGN Secondary ******

CAMPAIGN 2 NOT RUN - NO ATTEMPTS MADE


 ******* CAMPAIGN Tertiary ******
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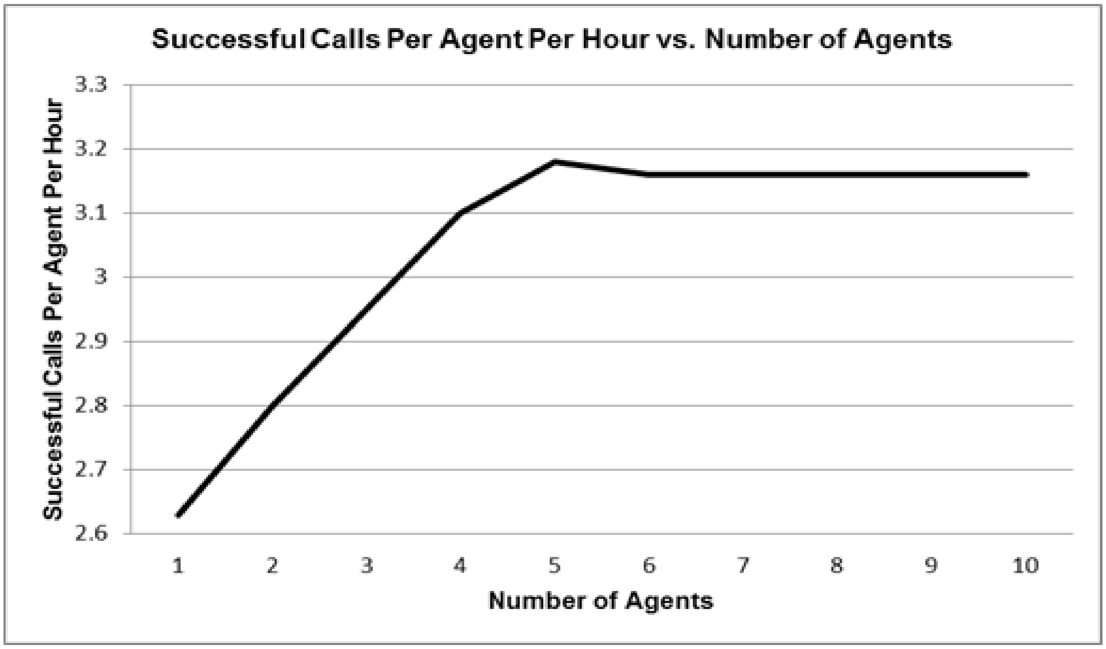
FIGURE 1: SCREENSHOT OF VICIDIAL V2.2 DIALER SIMULATOR MAIN WINDOW

## Findings

A hypothetical campaign implemented in a ViciDial dialer is presented below. The attributes associated with this campaign is similar to those found in a typical outbound campaign. Key campaign attributes are listed below:

| Campaign Attribute | Attribute Value |
|---|---|
| Contact Rate (% of calls that are presented to an agent) | 40% |
| Success Rate (% of calls that result in a successful disposition) | 10% |
| Abandonment Rate | 3% |
| Successful Call Handling Time | 5 - 10 minutes |
| Unsuccessful Call Handling Time | 2 - 3 minutes |
| Agent Hourly Time on the Dialer | 90% |
| Answering Machine Detect | On |
| Available Agents Only | Yes |
| Dial Method | ADAPT_HARD_LIMIT |
| Adapt Intensity Modifier | 1.5 |
| Dial Level Difference Target | 1.0 |

The graph below shows the average successful calls per hour per agent versus the number of agents logged into the campaign.



**As shown in the graph, an individual agent's productivity may improve by up to 20% solely on how many other agents are assigned to their campaign. In the above example, consolidating two campaigns of three agents each into a single campaign of six agents would result in over 300 more successful calls in a month. However increasing the agent count past six will not improve the efficiency of each of the individual agents, and will not provide the same benefit. Hence those additional resources may better be utilized elsewhere.**

In regards to successful calls, the optimal number of agents per campaign will vary for each dialer make, but is generally correlated to both the average handling time for the calls as well as the maximum allowable abort rate. The impact of campaign size decreases as the variation of the individual agent hour time decreases.

## Operational Recommendations

Call Center Managers should utilize dialer simulation to determine the minimal number of agents required for a campaign in order to minimize dialer inefficiencies. Since the optimal number may vary due to such factors as connectivity rate, handing times and desired abandonment rate, campaigns need to be analyzed individually. If all campaigns cannot be optimized, the call center manager should target campaigns with calls of shorter handling times. Such campaigns will see a bigger impact from optimal staffing. In cases where there are not enough resources available to optimally staff a campaign, the call center manager should be vigilant in minimizing the frequency the agents log on and off the dialer in a given hour

## Our Free, Online Predictive Dialer Simulator

Exceptional Outcomes has a free, online generic version of its predictive dialer simulator available to everyone. It was designed to allow call center managers who are thinking of implementing a dialer to input in their current outbound and blended setups and see if there is a benefit to using predictive dialing and if so, how much. If they are already using a predictive dialer, it can provide a great value for determining optimal staffing and scheduling.

Our simulators work at the campaign level so each of your campaigns will need to be modeled individually. The free online version of our simulation technology uses an Erlang-B based pacing algorithm, which is the foundation for many commercial and open source dialers. Although the results provided by this simulator will closely approximate what you can expect at your site, its accuracy will vary based on how much your dialer's pacing algorithm differs from what is used in this simulator. ViciDial is a popular example of a dialer that isn't Erlang-B based. In addition, this online version does not include several features associated with specific dialer makes and versions.

Our free simulator may be found at www.exceptional-outcomes.com/dialer.html. Please send your questions and comments to info@exceptional-outcomes.com.