

Interaction Dialer 3.0

Best Practices

March 20, 2009

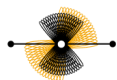
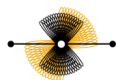


Table of Contents

Overview	3
Configuration	3
Default Settings.....	3
Copy & Paste	3
Automation with Rules	4
Change Auditing	4
Pacing.....	5
Key Concepts.....	5
AMD/LSD Trade-off	5
Blending.....	5
Pacing Slider Bar	6
Understanding Abandons	6
Calls per Agent & Server Parameters	6
Customer Experience	7
The Manage Scheduled Calls dialog.....	7
SIP Line configuration.....	8
Converting Callbacks.....	8
Dialer Efficiency.....	8
Use Filters vs. Policies.....	8
Minimize Policy Handler Use	8
No Answer Time Out	9
Auto-scheduling	9
Common Mistakes.....	9
Dialer Server Parameters	9
Sorting – Geography, Indexes	10
Zone Codes	10



Overview

Interaction Dialer (Dialer) is an automated dialing add-on to the Customer Interaction Center (CIC) which greatly increases the efficiency of outbound call centers. However, Dialer can only deliver on this efficiency if it is used effectively and correctly. The documentation set delivered with the Dialer product contains hundreds of pages of information on product concepts, administration procedures, reporting and monitoring, scripting, APIs, and more. The purpose of this document is to highlight some concepts and practices that are especially useful to the effective and efficient use of Dialer – learned by Interactive Intelligence staff working with many Dialer customers and partners over time.

These best practices are organized into 5 groups:

1. Configuration – tips to make configuring Dialer easier and more effective
2. Pacing – decreasing idle time
3. Customer Experience – optimizing the experience of the people you call
4. Dialer Efficiency – decreasing the load and increasing the capacity of Dialer
5. Common Mistakes – things to avoid

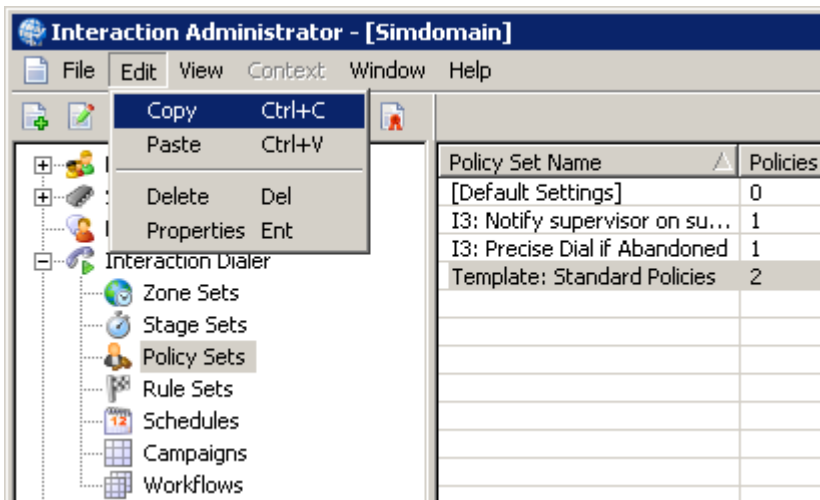
Configuration

Dialer is configured primarily using the Interaction Dialer container within Interaction Administrator. This section contains some tips and best practices for Dialer configuration.

Default Settings

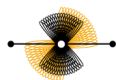
When new entries are created in the Dialer containers within Interaction Administrator, the initial values for that new entry are set to whatever the current values are in the “[Default Settings]” entry. For example, when a new workflow is created, the abandon rate settings and all the other values on the other workflow tabs are initialized to whatever is in the Default Settings entry at the top of the list of workflows. So, as a best practice, set the Default Settings values – for the Workflows and Campaigns contains especially – to values that make the most sense for your environment. This serves 2

purposes – it saves you time when creating new workflows, campaigns, etc... and it also maximizes consistency / minimizes the opportunity for an error in settings.



Copy & Paste

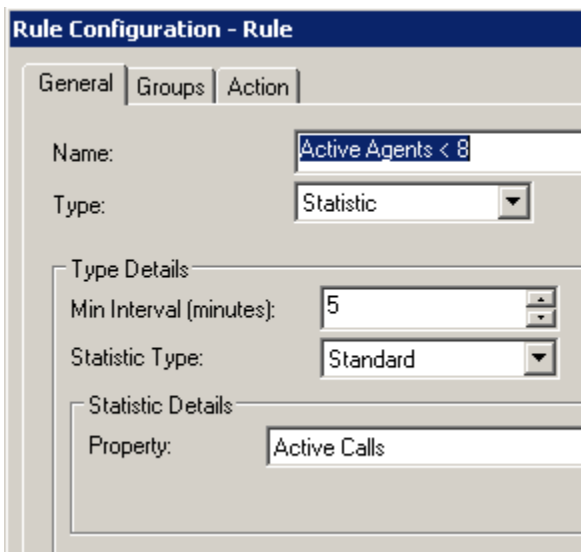
Interaction Administrator supports copy and paste similar to many applications. Copy and paste can be used to duplicate a campaign, workflow, policy set, rule set, etc. As a best practice, create “template” campaigns, workflows, etc – entries that your team can use as a baseline campaign, workflow, policy set. This will save much time and greatly improve consistency and reduce error.



Automation with Rules

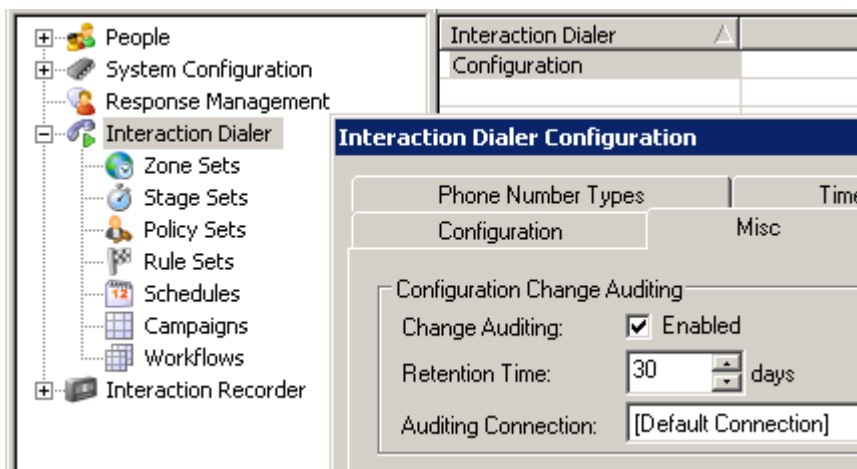
In Dialer, rules are executed for a workflow or campaign based on changes in statistics, day or time changes, or events. Rules are a powerful method for automating the management of Dialer. As a best practice, if there is a campaign or workflow setting that your team commonly changes at different times of the day based on time or circumstance or event (e.g. call list recycling), consider automating that change. This will save time and produce more consistency and flexibility. Just a few of the many examples of useful rules for automation include:

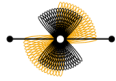
- Changing the dialing mode to “power” when there are fewer than say 8 active agents on the campaign. The companion rule to this changes the dialing mode to “predictive” when there are more than 8 active agents.
- Modifying the sort or filter criteria on a campaign based on time of day.
- Modifying the contact columns after 5pm – dialing work first then home before 5 and vice versa after.
- Recycling a list automatically at specific times in the day.
- Turning off max recycles on a campaign and instead using a rule to automate transition to the next campaign after a desired number of successful calls.



Change Auditing

Modifications to campaigns, workflows, and other Dialer components take affect right away in almost all cases. Obviously, these modifications can have a huge impact on an outbound operation’s success. As a best practice, it is wise to turn on change auditing in Dialer. This tells Dialer to keep track of who changed what when. It is especially important to use this feature when more than 1 person can make changes to Dialer. The Dialer Audit report can be used to report on the Dialer configuration change history collected in the audit table.





Pacing

Dialer automatically places calls to keep logged in agents busy without placing too many calls – this is called pacing.

Key Concepts

Dialer pacing is a balance between 2 goals: minimize idle time (the time agents wait between calls) and minimize abandoned calls (calls that connect to live speakers without an agent to talk to the person).

The more agents that are logged in to a predictive or power campaign, the more efficient that campaign will be and the less idle time there should be (assuming there are enough lines and other resources available to dial).

Do not expect low idle times with a predictive or power campaign with only a few agents logged in.

AMD/LSD Trade-off

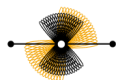
AMD stands for answering machine detection. LSD stands for live speaker detection. Machines and live speakers are detected using call analysis. Industry standard AMD accuracy is somewhere in the 80-95% range. AMD accuracy greater than 95% is possible with Dialer, but at a cost: LSD accuracy decreases. AMD and LSD are done by Dialer listening to audio on the call after it connects, just like a human does. Dialer has the added challenge of having to make the decision quickly since as soon as a person is called and says “Hello”, they expect to be talking to someone in a very short period of time.

Consider the following example scenario: there are 100 calls placed. 96 of those 100 were marked by the dialing system as machines and disconnected. The other 4 calls were detected as live speakers, routed to agents, and marked by agents as machines (i.e. the system misdetected them as people, but they were machines). At first, this looks like 96% AMD accuracy. However, it is likely that some of the 96 calls marked by the dialing system as machines were really people and were hung up on. Since no one was listening other than the system, 96% AMD accuracy sounds great. If 11 of those 96 calls marked as machines were really people, then the real AMD accuracy was 85% (11 people incorrecly detected as machines and 4 machines incorrecly detected as people). In order to balance out this trade-off, it is important to find the balancing point between AMD and LSD accuracy. This often occurs somewhere in the 85-90% range. Since live speakers are typically much less common than answering machines, success (talking to live speakers, lowering idle times) is often increased by sending a few more machines to the floor (i.e. being less aggressive on answering machine detection). More machines going to agents can become a problem if there are too many. However, the best way to measure agent time consumed by dealing with machines that leak to the floor is to consider the time that agents spend on machines leaked to the floor and not the number of machines that leak to the floor. Measure success by the amount of time agents are talking to live speakers and not by the number of machines that get to the floor.

Blending

Because Dialer leverages CIC’s ACD to deliver live speakers to agents, Dialer inherently blends inbound and outbound calls. Agents can be receiving calls from multiple inbound queues while receiving outbound calls generated by Dialer. Dialer automatically sets aside a percentage of agents to handle inbound calls based on the recent history of non-Dialer (e.g. inbound) calls that agents have been taking. This setting aside of agents to handle inbound calls can be turned off if desired.

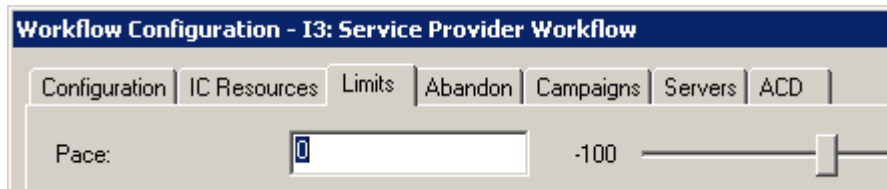
Typically, inbound calls take precedence over outbound dialing in a blended environment. In collections, inbound calls are often called “money calls” as they are someone who wants to pay. When a blended agent completes an outbound or inbound call and becomes available, the ACD first decides if there are any interactions appropriate for that agent (e.g. an inbound call). If there are none, the agent goes idle and Dialer adds the agent to its pool of idle agents.



On the IC Resources tab in the Workflow configuration in Interaction Administrator, inbound workgroups can be specified for monitoring by Dialer. If the volume in any 1 or the group of these workgroups exceeds a specified maximum, Dialer will slow down dialing to allow for these calls to be handled by the blended agents.

Pacing Slider Bar

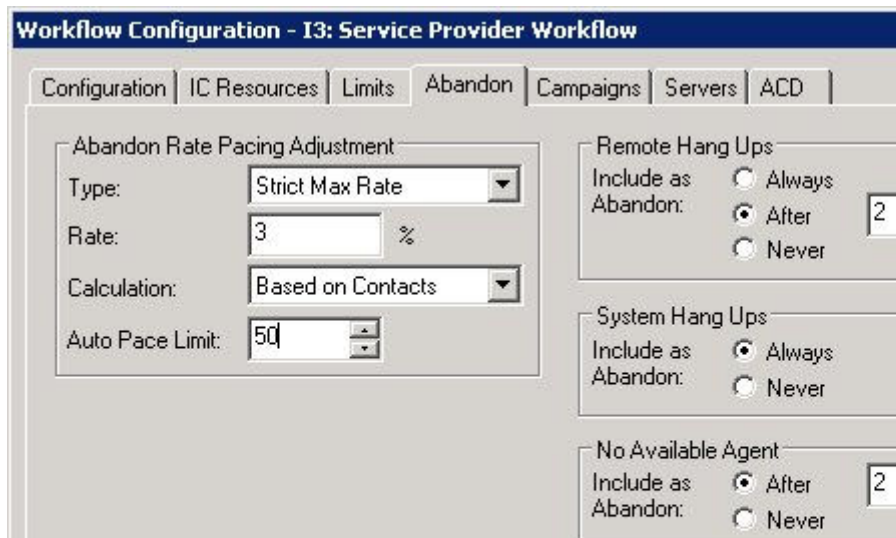
On the Limits tab of the Workflow configuration in Interaction Administration, a Pace value can be set directly or via a slide bar. If using Dialer 2.4 or later,



it is best practice to leave this Pace value alone. If it has been determined that a higher or lower Pace value works best for a given workflow/campaign, then set that value and leave it. Constantly adjusting this value up and down is counterproductive. Dialer is modifying the pace itself constantly based on actual dialing results and the abandon rate. Setting the abandon rate, the Initial and Maximum Calls per Agent, and other parameters (discussed later) so that Dialer can manage pacing is a best practice. If over several hours of operation, you can produce better results by adjusting the pace value up and down manually vs. letting Dialer manage the pace, please let Interactive Intelligence support know either via your partner or directly as appropriate. We have many tools and insights to uncover and correct such pacing issues.

Understanding Abandons

The definition of an outbound abandoned call varies depending on the application of Dialer – telemarketing has a few definitions as does collections. Dialer provides the ability to define what is considered an abandoned call and how abandoned calls affect pacing. The best practice here is to read through the documentation available on configuring the abandon rate and setting both the “Abandon Rate Pacing Adjustment” values (how abandoned calls affect pacing) and which calls to

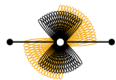


include as abandons on the right side of the tab (what is considered an abandoned call).

Calls per Agent & Server Parameters

Dialer’s pacing algorithm is constantly adjusting the calls per agent value to reflect how many calls should be in progress to keep the idle agents busy while staying within the configured abandon rate limit. There are 2 important configuration settings in Interaction Administrator that can affect Dialer’s pacing and use of the calls per agent value that Dialer is calculating.

Max Calls per Agent on the Workflow Limits tab puts a ceiling on the actual number of calls that Dialer can place per agent. For example, if the Max Calls per Agent value is set to 4 and Dialer’s pacing algorithm feels it should place 6 calls to keep the agents busy, Dialer will respect the setting and only place 4 calls. This can translate into longer idle times. So, if you are experiencing too much idle time

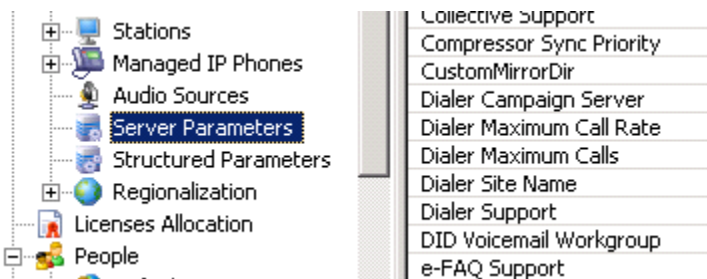


between calls, check this value. As a best practice, Max Calls per Agent should be set to a high value (e.g. 25) unless there is a specific reason for setting it lower.

Initial Calls per Agent on the Campaign Limits tab tells Dialer's pacing algorithm where to start the calls per agent value when a campaign starts. If this value is set to 1, the Dialer will start by placing 1 call for each idle agent and will slowly adjust the value up to the appropriate place based on results. If Dialer eventually adjusts the value to 5 calls per agent from 1 initially, agents will experience higher idle times to start until Dialer can adjust. If you have experience with a campaign from prior days, it is a best practice to set the Initial Calls per Agent value to the experienced steady state value for the campaign to reduce campaign startup idle time.

There are 2 Dialer server parameters which can have significant impact on Dialer's ability to keep agents busy:

Dialer Maximum Call Rate governs the maximum number of calls that Dialer can place per second. Dialer 3.0 in a SIP environment can support 40+ calls per second. If you take the maximum calls per hour you have experienced and divide it by 3600 (seconds in an hour) and the result is anywhere near 8 or more, check the value of this server parameter. It may be inhibiting your Dialer's ability to keep agents busy and may be producing more idle time. Unless you are certain that your Dialer configuration can support much higher throughput, verify the new setting for this parameter with your partner or Interactive Intelligence support as appropriate before making the change.



Dialer Maximum Calls governs the maximum concurrent calls that all Dialer campaigns running on a server will have connected or dialing. The purpose of this parameter is to limit the Dialer's line usage if there are other line needs (e.g. inbound). This server parameter does not need to be set unless required to limit Dialer. Also, if this parameter is set, make sure that the value is adjusted if more lines are added for Dialer's use. Not managing this value correctly can impact Dialer's ability to keep agents busy.

Customer Experience

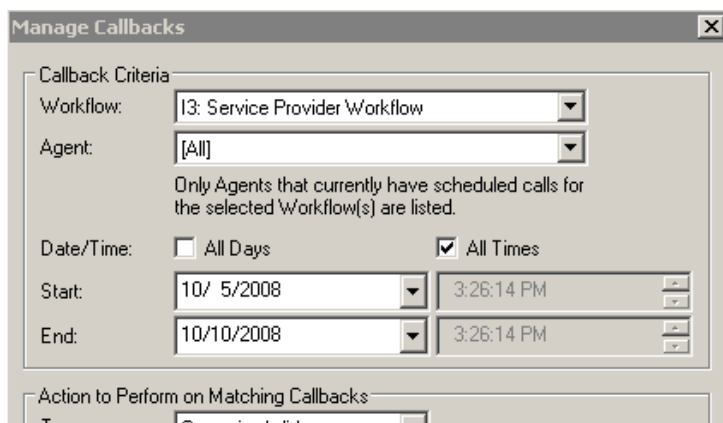
The concepts and best practices in this section relate to the called person's experience with saying "hello" and being connected to an agent as well as getting requested callbacks at the appropriate time.

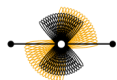
The Manage Scheduled Calls dialog

Accessed from the Misc tab on the Interaction Dialer configuration dialog, it is a best practice to be aware of and use the Manage Callbacks interface.

This dialog has multiple uses including:

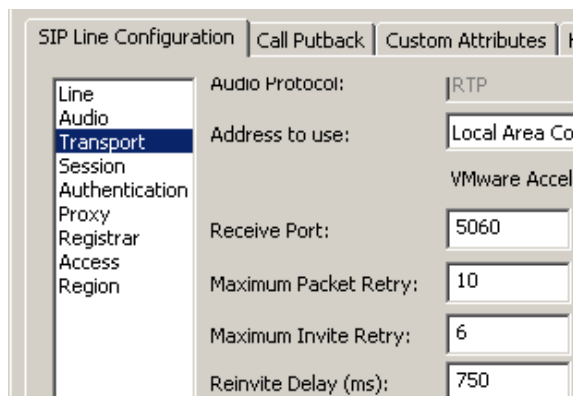
- Re-assign agent-owned callbacks to other agents
- Remove campaign-wide callbacks
- Move callbacks to another time





SIP Line configuration

In a SIP Dialer configuration, there can be a perceived delay between the time the caller completes his or her greeting and the agent is connected to the call. This delay can have significant impact on live speakers connections. In general, it is recommended that TCP be used with SIP lines configured for Dialer. If UDP is used, it is recommended that the Reinvite Delay be reduced from its default value of 750 to 50 ms for Dialer configurations.



Converting Callbacks

Dialer supports agent-owned callbacks, which are callbacks destined for a specific agent. If that agent is not available when the time for a callback arrives, the contact will not receive the call at the desired time. If possible, it is best practice to use Dialer’s ability to convert agent-owned callbacks to campaign-wide callbacks after a few attempts (e.g. 3) and a relatively brief reschedule delay (e.g. 5 minutes). This feature is configured and turned on using the Campaign Limits tab.

Dialer Efficiency

There are often multiple ways to do similar things in Dialer. Using the most efficient method will make Dialer and CIC more efficient and capable of supporting more agents, calls, and other processing. This section highlights some important considerations for Dialer efficiency.

Use Filters vs. Policies

Filters are applied to the campaign’s specified call list on the database server using a SQL WHERE clause. Policies are applied by Dialer per contact retrieved from the call list. As a best practice, use a filter to restrict which records to dial instead of a policy’s “Do Not Dial” behavior if at all possible. To better understand the impact of using a filter vs. a policy for this purpose, consider a 100,000 record call list in which only 40,000 records will be dialed because of restrictions – if those restrictions are applied by a filter, only 40,000 records will be retrieved from the database to Dialer while using a policy to not dial the 60,000 records still requires that 100,000 records be retrieved from the database to Dialer.

Examples where a filter should be used instead of a policy include:

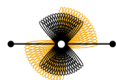
- Goal: Don’t Dial Texas. Policy: If state = ‘TX’, don’t dial. Filter: state <> ‘TX’
- Goal: Don’t Dial Area Code 317. Policy: If areacode = ‘317’, don’t dial. Filter: areacode <> ‘317’... or... HomePhone Not Like ‘317%’
- Goal: Don’t Re-Try Fax Machines. Policy: if i3_attemptsfax > 0, don’t dial. Filter: i3_attemptsfax = 0

Minimize Policy Handler Use

It is possible to call handlers from Dialer policy behaviors; however, in many cases, it is not recommended because handlers can be relatively expensive in terms of Dialer/CIC processing, especially if the handler does database access or otherwise interacts with outside systems.

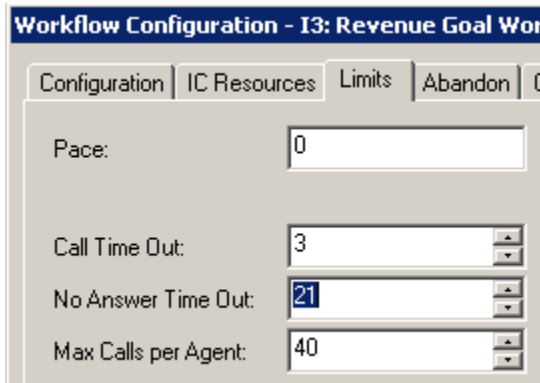
If possible, consider other ways to deliver the same capability without handlers if possible such as:

- Pre-process the call list prior to loading
- Add columns to the call list that can be used in policies without handlers
- Using existing Dialer capabilities (e.g. skills-based dialing, contact exclusion API)



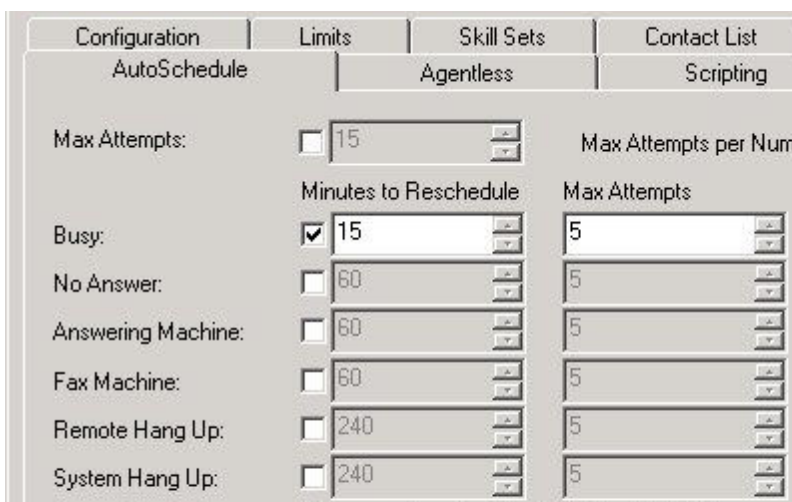
No Answer Time Out

The No Answer Time Out value on the Workflow Limits tab controls when Dialer gives up on a call which has not answered. In the US, answering machines most commonly answer after the 4th ring and each ring cycle takes 6 seconds with the first ring often occurring in under 6 seconds. So a value of 20 to 23 seconds for the No Answer Time Out will give the called party the most amount of time to answer without connecting to many answering machines. If a campaign does not leave messages on answering machines, it is best practice to set the No Answer Time Out to a value under 24 seconds. Connecting to an answering machine can increase long distance charges for no purpose if messages are not being left.



Auto-scheduling

Dialer allows calls to be automatically rescheduled based on the result of the call. This is configured on the Campaign AutoSchedule tab. In general, it is a best practice to only auto-schedule "busy" result calls. Auto-scheduling answering machines does not make sense in most cases. Auto-scheduling too many calls can cause Dialer to become consumed making auto-scheduled calls to numbers already attempted instead of further penetrating the call list.



Common Mistakes

This section covers a few of the more common mistakes made in configuring or using Dialer.

Dialer Server Parameters

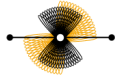
There are 3 key Dialer server parameters that should be set by the install and that should typically not be changed. If there are problems with Dialer,



CustomMirrorDir	+U
Dialer Campaign Server	Ru
Dialer Maximum Call Rate	30
Dialer Maximum Calls	100
Dialer Site Name	De
Dialer Support	1
DTN Voicemail Workgroup	

verify the values of these parameters. If they do not appear to have the right values, contact your partner or Interactive Intelligence support as appropriate to verify. The 3 server parameters are:

- Dialer Sitename – for a switch-over pair, this value is the same on both servers in the pair
- Dialer Support – this should be set to 1 if Dialer is installed
- Dialer Campaign Server



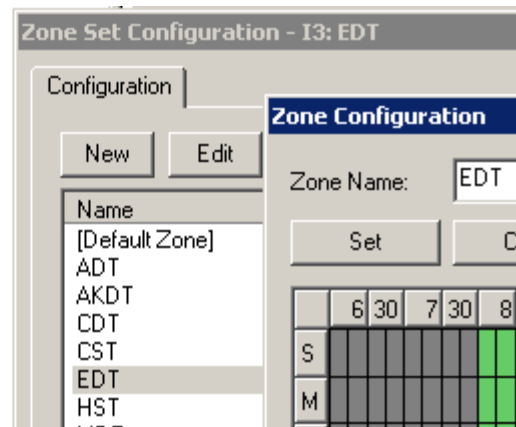
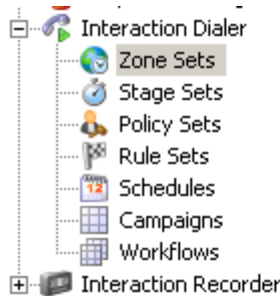
Sorting – Geography, Indexes

In general, it is not a good idea to sort a call list by anything related to specific geography. For example, sorting by phone number or zip code can have a negative impact on idle time. Sorting by specific geography introduces the potential for large variability in contact rates between areas – for example, if it is raining in one area, more people will be inside. The smoother the contact rate, the less opportunity there is for over- and under-dialing. As a best practice, sort by attempts ascending plus other appropriate non-geographic values such as balance or date contact added.

Especially for large call lists, it is important that appropriate database indexes be created on the columns included in the sort criteria. The same is true of columns used in a campaign’s filter – include appropriate indexes on the columns involved.

Zone Codes

Time zone codes used in the call list must match the actual values configured in the Zone Set used with the campaign. Zone codes are case sensitive. If Dialer does not find a match for the zone code used for a contact or phone number, the “[Default Zone]” value is used. Unless the Default Zone is defined restrictively (a best practice), using the Default Zone when not intended can cause dialing outside of legal or conventionally appropriate time ranges.



Document Name	Purpose and Revision History	Date Issued:
Interaction Dialer 3.0 Best Practices	Initial Release	March 20, 2009



Parallax Technologies Corporation

7640 Dixie Hwy., Clarkston MI 48436 Phone 800-929-2340
www.parallaxtechnologies.com