



Developing an Analytics Program

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Premises

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- **Version** — This document is not version-specific
- **Revision** — February 2016
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Introduction

Audience

This document is written for business and technical users who are interested in developing a speech analytics program on behalf of their organizations. Readers should have a basic level of familiarity with general networking, usage of a PC and its peripherals, the Windows operating system, inContact Workforce Optimization, and speech analytics theory.

Goals

The goal of this document is to provide knowledge and reference information necessary to plan and execute a speech analytics program using inContact Speech Analytics. Information is presented in the following order:

- Speech analytics strategy and planning
- Program implementation with inContact Speech Analytics

This document is NOT intended as a specific system or network design document, but simply provides some guidance and best practices around implementing speech analytics.

Need-to-Knows

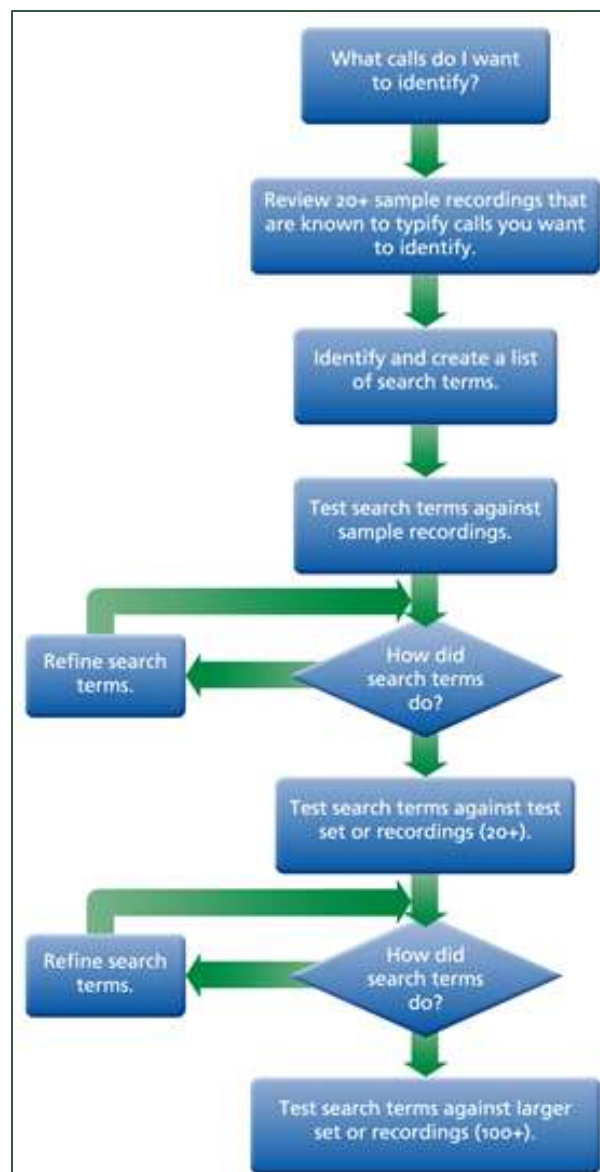
For more detailed, application-specific information, refer to the *inContact Speech Analytics Administration Guide* for your version of the software.

Program Strategy and Execution

This section recommends practices for identifying calls to analyze and developing speech tags.

Use a Recursive Process

Effective speech analytics tag groups and tags are not developed on the first attempt. This diagram shows the steps and recursive character of the tag development process. The diagram also illustrates the importance of reporting in assessing the effectiveness of tags to identify the needed information.



Define Strategy, Issues, and Goals

Speech analytics is most useful when it addresses a defined problem or goal. Your reasons for using analytics should determine what information is identified and how it is identified. Categorization, compliance, and discovery are three analytic strategies that address different issues and goals.

Categorization

Knowing why people are calling enables you to organize your agents, work flow, and equipment to achieve the goal of maximizing service quality and efficiency. Analytics can be used to identify call content by categories such as:

- Clients
- Call purpose: To identify the purpose of calls, you could search for the phrases “change billing address” or “request update on payment.”
- Call issues: To identify call issues, you could search for phrases such as:
 - “I’d like to speak to your supervisor”
 - “Is there anyone else I can talk to?”
 - “I’ve called multiple times” or
 - “Called the other day.”

Once categories have been identified, you can develop and improve standard business processes for handling the needs of each category. If your analytics program identifies lots of calls with particular issues, you can develop training for addressing those issues. Similarly, analytics can identify successful sales calls. These calls provide a data set of best practices for training curriculum that maximizes your other agents’ abilities.

Identifying calls that are difficult to categorize can lead to significant improvements in processes. These calls often require more time to handle and cause additional contacts. inContact Speech Analytics reports can identify calls that fit, or do not fit, the tags you create. You can review these calls and how they were handled to determine better ways to resolve them on the first contact and what training agents need.

Tips for categorizing calls:

- Identify categories that will encompass nearly every call.
- Use high confidence thresholds to eliminate false positives.

Compliance

The most common goal of companies using analytics is to comply with internal and regulatory standards. Speech analytics identifies those calls that do and do not comply with standards. Compliance covers:

- Quality management
- Agent coaching
- Process adherence
- Script adherence

The tags necessary to measure compliance depend on the content and purpose of the standard. A client-written script or a regulatory standard may require that specific terms or phrases be used. For example, an agent may be required to inform a caller that an investment is not FDIC-insured.

In comparison, standards for quality management and agent coaching can require more common phrases or not require specific phrases. For example, agents may be expected to greet the caller but not be required to use a specific greeting. In this case, you may need to search for multiple phrases such as:

- "How are you today?"
- "Hello, my name is" or
- "How may I help you today?"

Tips for analyzing calls for compliance:

- Focus on tags and phrases that should occur on most transactions.
- Focus on calls that are out of compliance.
- Determine if a standard is specific enough for measuring compliance. Revise scripts and other standards that cannot be accurately assessed.
- Identify tags and phrases that agents should say and those that agents should NOT say.
- Use multiple phrases when measuring compliance with broader, non-specific standards.
- If analyzing for non-regulatory compliance and general phrases, use high confidence thresholds to eliminate false positives.
- If analyzing for regulatory or client-script client requiring specific terms, use low confidence thresholds.

Discovery

Customer calls may be the longest and most frequent direct interaction your company has with a customer. As such, they contain information about your customers' interests and problems, as well as what they like (and dislike) about your products and those of your competitors. Speech analytics can answer questions like:

- Why are calls increasing?
- Why are customers canceling accounts?
- How many customers complained about Product X, Product Y? What were those complaints?
- What information do customers want that you can provide via your website?

A marketing department can create speech tag phrases around competitor names and product names. To learn the results of specific promotions, tags can use key phrases for those promotions such as "President's day sale" or "back to school clearance sale". If information on geographic trends is needed, use tag phrases for branch locations, store locations, or new geographic markets. Geographic information can identify and quantify stores and branches that receive the most complaints.

To identify customer feedback about products, speech tags can use the product name or versions of the product, such as "Windows", "operating system", "XP", or "version 7". Calls about a product can be positive, negative, or both. To distinguish between them, one tag can use phrases related to the product name. Another tag can use negative phrases (for example, "I want to complain", "this is a problem"), and another tag can use positive phrases (for example, "I really like", "this product is great"). The tags can be put into one or more tag groups to generate information for different reports.

Tips for analyzing calls to discover information:

- Focus on specific business intelligence by looking for data that occurs infrequently. General tags such as "cancel account" are useful for process categorization. But they may need to be paired with more specific tags such as a product name to provide business intelligence that you can act on.
- Set low confidence thresholds. This increases false positives, but the benefits of discovery outweigh listening to irrelevant recordings.

Subject Matter Experts/Vocabulary

Calls are often related to a specific knowledge field (for example, a customer or a product). When designing speech tag phrases, you should gather information requirements from the departments and groups that are being recorded. These groups are knowledge experts who understand the vocabulary of their field and how it is used. Work with them to determine what data is most relevant to the issue being investigated and what terms and phrases are needed as tags.

Plan with a Spreadsheet

Before creating inContact Speech Analytics tag groups and tags, create them in a spreadsheet. This method shows the organization of the groups and tags and it is easier to edit than groups and tags in the application.

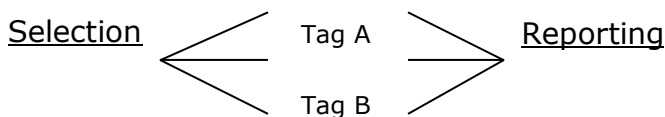
Strategy and System Configuration

This section reviews how analytics strategy is combined with the configuration of inContact Speech Analytics tag groups, tags, and phrases to produce an analytics program.

Call Criterion, Tag Groups, Tags, and Reporting

How you apply and organize call selection criteria, tag groups, and tags affects the information that appears on reports. Therefore, these items must be planned together before they are created in the system. Consider these guidelines when using these items.

Call Selection Criteria



A call selection criteria item can be related to one or many tags. A tag can be related to one or all criteria items. Typically, call selection criteria items are not related to specific tags, so the tags are applied to all calls selected for analysis.

You may have one client who needs calls analyzed for specific tags. You can create a criteria item to select those calls and then create tags for analyzing just those calls.

Tag Groups, Tags, and Phrases

Tag groups are required to make tags appear on some reports and they can make it easier to manage tags. Tags cannot be edited. If you want to change the tag effective dates, reuse a tag after its effective dates, or use different phrases, you have to disable or delete the tag and create a new one. If there are a lot of phrases in a tag, this can require significant time. Similarly, if you want to use some phrase temporarily in a tag, you would have to disable the existing tag, create and use a new tag, then disable that tag when it is not needed, and re-enable the original tag.

As a best practice, a tag should be placed in a tag group even if it is the only tag in the group.

This table provides examples of how to organize tag groups and tags.

Tag Group	Tag	Phrases
Script Adherence	Greeting	hello, good afternoon, good evening, good morning
	Purpose	may I help you, can I do for you, why are you calling
	Follow up	is that all, need anything else, further assistance
	Ending	thank you for calling, have a good day, good bye
Script Adherence	Script Adherence	hello, good afternoon, good evening, good morning, may I help you, can I do for you, why are you calling, is that all, need anything else, further assistance, thank you for calling, have a good day, good bye
Compliance	FDIC	FDIC insured, FDIC guaranteed, member FDIC, FDIC account
Lead	Lead	learn about us, web search, google search, internet search, friend told me, friend referred

Reporting

Tag group, tags, and phrases determine what information appears on reports and how that information is organized. Consider these factors when choosing groups, tags, and phrases:

- After designing your speech tags in a spreadsheet, analyze where the tag and phrase information will appear on reports.
- Plan on using multiple reports to find the needed information. For example, the Speech Tag Exception Detail report does not show phrases. If you have created tags with multiple dissimilar sounding phrases (for example, “not FDIC insured”, “past performance is no guarantee of future performance”), that report may not provide the needed information. However, phrase information can be found on the Speech Tag Detail report.
- The Analytics Speech Tag Frequency and Speech Tag Trending Reports provide information on phrases. Using phrases with similar pronunciations (for example, “cancel” and “can sell”) may spread information about cancelations over several report lines. This display could make it difficult for users to see the related information and make these reports less useful. In this case, the Speech Tag Frequency Summary report could be easier to use.
- Exception reports are useful compliance efforts when it is important to find things that should not be said.

- Trending reports are useful for categorization and discovery efforts. Trending reports are most useful when created for multiple time periods (for example, week and month).
- Depending on the information you need, custom reports may have to be created. Your inContact representative can provide additional information on custom reports.

Homophones, Accents, and Synonyms

The accuracy of analytic results can be greatly affected by common words. Common words can have homophones (in other words, words that have different spellings and meanings but whose pronunciations are similar), or different speakers can pronounce them differently. Some common items may also be called by different names in different regions. When you create a tag, you must consider whether homophones and accents should be used as phrases. For example:

- Short homophones (such as pin/pen) usually are identified as the same thing by the speech analytics engine because phonetically they are very similar.
- Terms and phrases such as “cancel” and “can sell”, “realize” and “real lies”, or “weekend” and “we can” are not homophones but can be pronounced similarly. The speech engine tends to identify these phrases as the same thing with a confidence level greater than 50 percent. To assure that all valid calls are identified, both phrases should be added to a tag. To avoid such matches, the confidence level has to be set higher, but doing so risks missing valid matches.
- Consider adding phrases to tags in order to catch terms that may be pronounced differently based on speakers’ accents. Examples include “color” and “collar”, “washington” and “warshington”, “nuclear” and “nukular”, and “for”, “fir”, and “fur”.
- Be aware if callers will be using regional words and phrases such as “soda” and “pop” or “interstate”, “freeway”, “turnpike”, and “parkway”.

Search Phrase Length

Longer phrases allow the search engine to match more variables, which increases accuracy and avoids false positives (results that are not the desired words). These phrases eliminate problems such as:

- Similar phoneme combinations for different words such as “cancel” and “can sell”. Using “cancel my account” or “I’m cancelling” increases accuracy.
- One word with a different intention when used by a caller and an agent. For example, a call has one purpose if the caller says, “I want to cancel my account.” It has a different purpose if the agent says, “You can cancel at any time.”

Search phrases that are more than 10 phonemes long have higher confidence levels and are more accurate.

Phrases can be too long. Consider the phrase “Hello. Thank you for calling. How may I help you today?” The speech analytics engine would have to check for every phoneme in that phrase, which would use computer processor capacity and make the analytics process slower.

“How may I help you” may be enough to determine if the agent is or is not greeting the customer adequately. For those agents who consistently appear on exception reports as not greeting customers properly, the Speech Tag Detail report can identify calls during which the greeting was not correct. A supervisor can review those calls using the inContact Web Player. Speech Analytics tag phrases are limited to 255 characters including spaces.

This table provides examples of both good and bad speech phrases.

Quality	Phrase	Phonemes
Good	Pursuit of happiness	15
Poor	Happiness	7
Bad	Happy	4
Good	Systems of government	19
Poor	Government	10
Bad	Govern	6
Good	Right of the people	11
Poor	The People	6
Bad	Right	3

Target Confidence Settings

Every search result shows a confidence level value you can use to determine how effective speech tags are at identifying desired information. Results that do not meet the target confidence level set on the speech tag are excluded from the results. If the target is too low, many unneeded results are returned. If the target is too high, potentially useful results are omitted. Effective target confidence settings vary by search purpose and content.

A high target confidence should be set for very common or standard phrases that appear on the majority of call recordings. This target limits the number of false positives.

A low target confidence should be set for high-liability phrases or phrases that occur infrequently. With liability issues, the cost of missing the phrase could potentially be worse than parsing through a large number of false positives.

Document Revision History

Revision	Change Description	Effective Date
0	Initial version for this release	2016-02-02