Customer Interaction Analytics – Speech Analytics
The Next Frontier

RAJESH SEHGAL & SHALABH SRIVASTAVA
PROCESS LAB, MISSION QUALITY & OPERATIONAL EXCELLENCE, WIPRO BPO
# Table of Contents

Customer Interaction Analytics – An Overview.................................1
Speech Analytics..................................................................................2
Wipro’s Unique Solution .......................................................................2
Conventional Approaches of VoC Collection.................................3
  Transaction Monitoring.........................................................................3
  Customer Relationship Management (CRM) Database .......................4
  End User C-SAT Survey.........................................................................4
  Intelligent Voice Response (IVR)..........................................................4
Advantages of Speech Analytics............................................................4
How Wipro Delivers Value.................................................................4
  Customer Experience Enhancement for Large E&U Company .............5
Results.................................................................................................6
Other Projects .....................................................................................6
Conclusion............................................................................................7
Appendix...............................................................................................8
  About the Author .................................................................................8
Customer Interaction Analytics – Speech Analytics

The Next Frontier

Customer Interaction Analytics – An Overview

During the entire life cycle of a customer, remote interaction happens through the following four major channels:

- **Web**: Customer browses the website of the company to explore the products/services offered before acquisition or for self service as an existing customer
- **Contact Center**: User calls up the contact center for product or service related enquiries
- **End User Satisfaction Surveys**: Mostly rolled out through Web, e-mail and IVR etc.
- **Social Media**: May not be a direct interaction with the company, but this new channel has become one of the most significant forums for customers to share their experiences with the world and hence create significant impression about a company and its products or services etc.

The image below covers the key metrics that an organization needs to track across all the above mentioned channels.

It is a known fact that across all above mentioned channels, the “Contact Center” is the single most important channel as this is where the end user interacts with a human representative of the organization. The following sections in this paper cover how this experience of the end user can be enhanced to ensure maximum benefit for the organizations.
Speech Analytics

Speech analytics is a term used to describe automatic methods of analyzing speech to extract useful information about the speech content or the speakers. Although it often includes elements of automatic speech recognition, where the identities of spoken words or phrases are determined, it may also include analysis of one or more of the following:

- The topic(s) being discussed.
- The identities of the speaker(s)
- The emotional character of the speech
- The amount and locations of speech versus non-speech (e.g. background noise or silence)

Wipro’s Unique Solution

Speech analytics solutions available off-the-shelf are designed for captive contact centres. Most of the large third party BPO solution providers have not been able to leverage such solutions due to this fact. The architecture of the off-the-shelf solution needs integration of the speech analytics application with a recording platform – which means, it can be leveraged for one specific client only.

Wipro partnered with its solution provider after conducting a series of Proof of Concepts (PoC’s) and technical evaluations to develop a solution wherein calls from any campaign/process could be imported and analyzed for any given period of time. The architecture, though simple, is unique and highly scalable due its capability of handling multiple customers and projects simultaneously.
Conventional Approaches of VoC Collection

Some of the commonly used conventional methods of collecting the Voice of the Customer (VoC) and ensuring quality are – Transaction Monitoring, CRM Database and End User C-Sat surveys. Let us look at the limitations of all of these.

Transaction Monitoring

Quality monitoring or call monitoring or transaction monitoring (referred to as TM) in a contact center scenario has been the conventional method of measuring quality and identifying opportunities for improvement and training needs. Some of the common challenges with this conventional methodology are:

- Conventional TM is a sampling approach. Sampling can be a percentage of overall call volumes or a fixed number of audits for each agent. Hence, by design, a lot of important information in calls which are not monitored would be lost.
- TM is based on a checklist and therefore has only limited number of parameters that can be monitored.
- It is goal oriented and more often than not, is focused only on call quality and not business objectives. For example, a call that may be
excellent in terms of call opening, paraphrasing, call control, communication and call ending, may have an upset customer due to an unpopular policy. This would never get highlighted in a conventional TM scenario.

### Customer Relationship Management (CRM) Database

The biggest drawback of the CRM database based method of looking at call history and collecting VoC is that it is dependent on the entries done by the agents themselves. This is a secondary source of information for anyone who is trying to analyze the interaction.

### End User C-SAT Survey

While the CSAT survey is a direct source of information from end customers, it is again checklist driven and is driven by a sampling based approach. This method too suffers from the same challenges as TM due to its checklist based design and sampling based methodology. Also, end users may or may not choose to respond to the surveys.

### Intelligent Voice Response (IVR)

While it is very quick and sampling base can be much larger, the options in an IVR are very limited and give very limited opportunity to the customers to express themselves.

### Advantages of Speech Analytics

Speech analytics addresses the above mentioned challenges encountered in conventional TM scenarios in many ways. Key advantages of speech analytics are listed below:

- Analyzes the information directly at source (hence no dilution of information) with capability to drill down
- Not limited to parameters listed in form of a checklist
- Observations and reports available on (near) real time basis
- Actions can be immediate, short term, medium term or long term.
  - **Immediate:** Calling back an irate customer to address the concerns and ensuring healthy customer relationship and good satisfaction scores
  - **Short Term:** Training needs identification for individuals
  - **Medium Term:** Changes in process, verbiage or call flow to ensure certain call types are handled in a better way
  - **Long Term:** Business Process Re-Engineering and policy changes to maximize CSAT, improve efficiency and maximize revenue, etc.

### How Wipro Delivers Value

Wipro has worked on some large projects in partnership with its clients to address their top issues and business concerns. Some of the highlights from key projects executed so far are illustrated subsequently.
Customer Experience Enhancement for Large E&U Company

The client is a prime energy and utility service provider in Canada with business segments spanning across utilities, energy & structures and logistics. The speech analytics project executed for the client helped in identifying real business issues that was driving dissatisfaction. Robust action plans to mitigate these unpopular policies were implemented. The first phase of the action plans included verbiage changes and policies were reworked by the client to maximize the benefits.

Approximately 18% of the total calls (amounting to 14,000 calls) were classified as DSAT calls wherein end customers had verbally expressed their dissatisfaction.

Listed below are the key reasons identified for the end customer dissatisfaction and the actions implemented to overcome these issues.
Listed below are the actions implemented by Wipro to overcome the issues mentioned. A script was developed for unpopular policies as per below.

**Policy #1:**
24 Hour timeline for the service personnel reaching the customer location
- Our service personnel are attending to the requests in the order we have booked the calls... I am really sorry for not being able to provide you with a definite timeline

**Policy #2:**
Reconnection fee of US $90
- This is a company-wide policy, etc... We will certainly take in the concern that you have raised.

**Policy #3:**
24 hour timeframe
- I apologize if the timeframe may seem too long for you... the time that it takes for the service personnel to work on one order would depend on the number of work orders in a day...

**Policy #4:**
High reconnection fees
- I understand your concern. This is a standard distributor fee every time we make a visit to reconnect your gas service. Would you like me to go ahead and schedule an appointment for you?
- As your distributor, we charge a reconnection fee to cover the cost of sending servicemen to your property to turn your gas meter ‘ON’ and re-light your gas appliances

### Results
With the analysis carried out in September 2010 it was observed that there was a significant improvement in the end user experience.

CSAT scores improved from 79% in the previous year to 93% this year and customers have greatly appreciated the value derived from speech analytics. With the changes in the policies and fee structures, the client has estimated a top line benefit of 5% - 15%.

### Other Projects
Other projects executed so far include large Manufacturing companies, retail organizations and reseller banks with varied objectives such as DSAT reduction, call volume mitigation and HR Contact Center quality improvement. All these are in various stages of implementation and action planning. Findings have been presented to internal and external stakeholders and each
The project has provided previously unknown vital pieces of information which can be leveraged in multiple ways for benefit of the organizations. Some of the graphical outputs from these projects are shown below.

**Conclusion**

The initiative of speech analytics has so far been an exciting journey with potentially great results for business. The next step is to integrate the speech analytics capability with the overall customer interaction analytics and leverage the immense power of analytics to transform the way clients look at outsourcing and create further differentiators for Wipro in the market place.
Appendix

About the Author

Rajesh Sehgal is a process excellence leader at Wipro. He has been with Wipro for over nine years and has played a leading role in transforming the role of the quality function from process compliance to value creation. He is a certified Master Black Belt and assessor for Malcolm Baldrige framework. He has represented and received awards and recognition at National and International Platforms (Global Six Sigma Business Improvement Award). His thought leadership papers have been published and shared at forums like Nasscom and ANQ. Rajesh is a mechanical engineer with an MBA in International Business from IIFT New Delhi.

Shalabh Srivastava is a senior manager with the Process Lab in Mission Quality and has over nine years of experience in Process Excellence, Six Sigma and Lean. His experience spans across various leading global organizations and industries such as automobile and ITeS with focus on process improvement methodologies and use of technology solutions for effective process management.
**About Wipro Technologies**

Wipro is the first PCMM Level 5 and SEI CMMi Level 5 certified IT Services Company globally. Wipro provides comprehensive IT solutions and services (including Systems Integration, IS Outsourcing, Package Implementation, Software Application Development and Maintenance) and Research & Development Services (hardware and software design, development and implementation) to corporations globally.

Wipro’s unique value proposition is further delivered through our pioneering offshore Outsourcing Model and stringent quality processes of SEI and Six Sigma.

**Wipro in Business Process Outsourcing**

Wipro BPO is uniquely positioned to service customer requirements by leveraging its tenets of quality and innovation, the best people talent, self sustaining process framework and domain knowledge. We offer customized service offerings; translating into the most flexible and cost effective services of the highest quality for our customers. With over 19,000 people, operating out of different locations (India and Eastern Europe), Wipro BPO has been a critical partner to all its customers in achieving their business goals. Wipro BPO services customers in various industries including Banking & Capital Markets, Insurance, Travel & Hospitality, Hi-Tech Manufacturing, Telecom & Healthcare sectors. Wipro BPO also has deep expertise in delivering process specific solutions in areas like Finance & Accounting, Procurement, HR Services, Loyalty Services and Knowledge Services.