



Analytics for Insights

Understanding your Customer and your System

Mobile Voice Conference 2015

Jeh Daruvala - CEO

jeh@yactraq.com

The New - Voice of the Customer (VoC)

- With universal mobile connectivity, VoC gets louder than ever
- Consumers provide feedback via different channel types
 - Phone Calls, Tweets, YouTube, Facebook, Websites, Chat Logs
- Managing all these channels drives changes in your business DNA
- Knowing, understanding, responding – A must have

- Legacy VoC methods cannot keep pace
- All channels (Text, Audio, Video) are vital to overall VoC

Outdated VoC Infrastructure

- Interview based VoC market research – inefficient, limited
- Legacy systems don't deliver competitive advantage
 - Text analytics – Call center agent notes
 - Phonetic speech systems
 - Small vocabularies
 - Custom vocabularies – Expensive, Time-consuming
- New solutions needed to scale VoC across traditional & new digital channels

A Traditional Channel With A Strong Signal

- Phone calls still provide a very strong and rich VoC signal
- But legacy systems underserve the channel:
 - Limited manual notes. Much VoC signal lost. Text analytics of limited value.
 - Phonetic speech - small vocabularies, cost prohibitive and slow customization
 - Keyword spotting – Limited grammars. No Natural Language Understanding (NLU)
- Current call center management methods - outdated and ineffective:
 - Call center managers randomly audit calls for service quality, resolution rates, compliance, etc.
 - Slow, expensive, unscalable

Phone Calls – The New VoC Frontier ?

- The *Yactraq* approach
- Automatically meta-tagging every minute of every call
- Searchable calls reveal deeper VoC
 - Product defect or Agent performance?
- Automated VoC Reporting - Saves manager time on random call audits, thereby reducing costs

How Yactraq makes it happen

- Accurate B2B Speech Systems need to understand,
 - Product and Brand names
 - Industry and Company specific Business Terms
- Mass customized vocabularies (Unique to each customer)
- Speech based Semantics (Speech + Text Analytics)
- Language Model (LM) based Systems
 - Legacy Phonetic Vocabularies < 1000 words
 - Language Models can contain tens of millions of sentences
 - Yet LM based systems can save \$ millions when building Custom Vocabularies !

Yactraq's Comprehensive Analytics

- Analyze Multiple Channel Types
 - Phone Calls, Tweets, YouTube, Facebook, Websites, Chat Logs
- With a single pattern recognition engine
- Using a unified taxonomy and linguistic data
- Via the *Fusion* of – Speech Recognition <> Natural Language Understanding
 - *Patent Pending*

Yactraq's AI focus – Game changing disruption

- Open source pattern recognition software:
 - Neural network based speech systems
 - Large vocabulary continuous speech recognizers (LVCSR – CMU Sphinx)
 - Natural Language Understanding (NLU)
- Machine Learning
 - Dynamic Language Models
 - Dynamic Pronunciation Dictionaries
- Technology Partnership with Global Speech / NLU Leader

Example Video



Speech2Topics Example Output

Brazil's luxury market growing

Summary

Minute By Minute

SEO

Transcript

JSON

Sentiment



1.58

Topics

brazil travel

brazil

Regional/South America/Brazil/Real Estate

brazil vacation

Regional/South America/Brazil/Transportation

Regional/South America/Brazil/Travel and Tourism

Topic Confidence

1.23

0.98

0.86

0.84

0.81

0.67

Acoustic Quality



60%

Average Word Confidence: 59%

Word Density: 130 words/min.

Speech2Topics Example Output

The "God particle" explained by Bill Nye the Science Guy

Summary

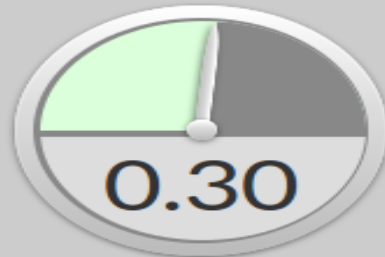
Minute By Minute

SEO

Transcript

JSON

Sentiment



Topics

Science/Physics/Particle/Publications

Topic
Confidence

2.21

Science/Physics/Particle/Alternative

2.04

Science/Physics/Particle/Standard Model

1.83

Science/Physics/Particle/Experiments

1.27

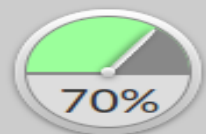
Science/Environment/Environmental Health/Health Physics and
Radiological Health/Particle Physics

1.20

Science/Physics/Electromagnetism/Software

1.01

Acoustic Quality



Average Word Confidence: 70%

Word Density: 153 words/min.

Speech2Topics Example Output

Three new species discovered in Australia

Summary

Minute By Minute

SEO

Transcript

JSON

Sentiment



Topics

Topic Confidence

species animals

2.61

find turtles

1.22

Regional/North America/Science and Environment/Biodiversity

0.99

Regional/South America/Science and Environment/Biodiversity

0.98

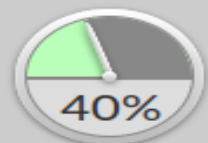
Regional/Central America/Science and Environment/Biodiversity

0.96

Science/Environment/Biodiversity/Invasive Species

0.92

Acoustic Quality



Average Word Confidence: 43%

Word Density: 127 words/min.



Analytics for Insights

Understanding your Customer and your System

Mobile Voice Conference 2015

Jeh Daruvala - CEO

jeh@yactraq.com