VOICE ANALYTICS IN CUSTOMER SERVICE

Mobile Voice Conference 2014 - Dr. Joachim Stegmann, Deutsche Telekom AG
THE WORLD IS CHANGING
CHANGED CUSTOMER BEHAVIOUR & EXPECTATIONS

Customers now have unlimited access to information and can instantly share it.

Social networking and mobile commerce have dramatically changed the dynamic between customer and provider.

Customers expectations for service, price, and delivery are growing.

Impacts the way products and services are sourced and distributed – making business more complex than ever.

Customers have moved to a position of power that has strongly changed the relationship they have with our business.
CUSTOMER SERVICE FACES NEW CHALLENGES
BIG DATA ANALYSIS CAN PAY OFF

CHANGING CUSTOMER EXPECTATIONS ...
make an impact on customer service. It would be naive to believe in customer’s loyalty.

BIG DATA ANALYSIS ...
can help
- to recognize and monitor these changes and
- to make the right decisions to stay in business.
TELEKOM’S BIG DATA VALUE CHAIN
CUSTOMER CARE WITH SUBSTANTIAL DATA PROPORTION

Product / service offering
Data analysis
Data processing
Data collection

Marketing
Advertise-
campaigns
Product
management
Network
optimization
Scouting
Innovation

Customer profiles
Behavior patterns
Billing patterns ...

Customer profiles
Behavior patterns
Billing patterns ...

MOBILE FIXED NET
SOC. MEDIA DEVICES

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Relevance
Quality
Enrichment
Aggregation

CUSTOMER CARE

Telekom Innovation Laboratories

MVC 2014
BIG DATA ANALYSIS IN CUSTOMER SERVICE
WHAT SOURCES DO WE HAVE?

TYPICAL DATA GENERATED BY CUSTOMER SERVICE
account data, call volume, call handling time, recurring calls, customer complaints, first contact resolution rate, customer satisfaction, ...

ARE THEY APPLICABLE ...
- to administrate customers? **YES!**
- to classify customers? **YES!**
- to analyze trends? **LIMITED!**
- to recognize short-term abnormalities of critical importance? **VERY LIMITED!**
- to understand and track the customer’s journey? **VERY LIMITED!**

... BUT THERE IS ADDITIONAL INFORMATION AVAILABLE.
RECORDING OF CUSTOMER-AGENT CONVERSATIONS
A KEY PILLAR OF QUALITY MANAGEMENT

CALL RECORDING
- Call audio
- Screen video

INTERACTION
- Quality monitoring
- Process analytics
- Voice analytics

CUSTOMER APPROVAL FOR RECORDING

- Understand customer behaviors
- Improve sales
- Reduced contact handling time
- First contact resolution
- Workflow optimization
- Ensure compliance

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A LOT OF INFORMATION HAS TO BE ANALYZED
SOME FACTS*

83 million operator-assisted customer contacts per year

70 m calls per year

13 m letters/ faxes/ emails per year

DT customers in Germany:

22.1 million customers in fixed line

36.6 million mobile customers

33 call center locations in Germany, more than 16,000 agents

*Germany only
VOICE ANALYTICS IN CUSTOMER SERVICE
ALREADY IN SERVICE

KEYWORD SPOTTING

Started in 2012 as part of DT’s process performance management for quality monitoring and process optimization.

Thousands* of recorded customer dialogues (voice and agent's screen) available.

Ensures a neutral analysis based on standard criteria.

*Due to data-protection considerations, recordings are stored for only a short period
VOICE ANALYTICS IN CUSTOMER SERVICE
PROCESS PERFORMANCE MANAGEMENT (EXAMPLE)

INDICATION FOR IRREGULARITIES!

Around 30,000 duplicates of invoices per month requested – but why?

ANALYSIS BASED ON ASSUMPTION’S DESCRIPTION

Several analysis jobs performed and voice of the customer analyzed.

CAUSE IDENTIFIED, SUBJECT SUCCESSFULLY COMPLETED

Forced migration to „Invoice Online“ identified as driver for re-order of paper invoices (Migration was only announced in an supplement to the invoice and ignored by the customer)
VOICE ANALYTICS IN CUSTOMER SERVICE
LESSONS LEARNED

DISADVANTAGES OF KEYWORD SPOTTING USE
Creating a keyword list requires detailed knowledge of terminology used by customers.
Parameter settings for analysis jobs are a potential source of error.
Analysis process (backward analysis) can take several hours (or even days).

BUT THE LARGEST DEFICIT, HOWEVER, IS ...
Analysis is always initiated by the user itself.
Always an indication is needed on processes whose analysis seems important.

"INTERESTING" TOPICS REMAIN UNDETECTED!
VOICE ANALYTICS IN CUSTOMER SERVICE
WHAT COMES NEXT?

SPEECH MINING

Content Analysis → Content Analysis
Content Categorization

SPEECH RECOGNITION

Keyword / Phrase Spotting
Phonetic Indexing
Transcription (Speech-to-Text)

SPEECH CLASSIFICATION

Mood Detection
Age / Gender Detection

PHONEME ANALYSIS

FURTHER SIGNAL ANALYSIS

Based on http://www.contactprofessional.com/solutions/speech-technology/81510-2270
VOICE ANALYTICS IN CUSTOMER SERVICE
IN PROCESS OF PLANNING

CONTENT ANALYSIS
Complete transcription (speech-to-text) of incoming service calls for instant content analysis.
Automated trend analysis to spot upcoming problems - take actions to reduce call volumes.
Content analysis to get customer and market insights promptly.
Usable as Backward-Analysis (already stored calls) and Forward-Analysis (immediately incoming calls).

Content analysis based on speech-to-text
Today’s mobile devices can gather sensor data during customer-agent conversation. Data may be associated with content of the conversation – or regardless of that:

A + B Helps to get a more comprehensive picture of the customer’s situation/requests.

A Enriches (only) the big data corpus – with little additional efforts.

“…getting low speed internet only”
LETS FACE THE FUTURE AND USE INNOVATIONS TO OUR ADVANTAGE

THANK YOU!