AI Interaction Analytics System

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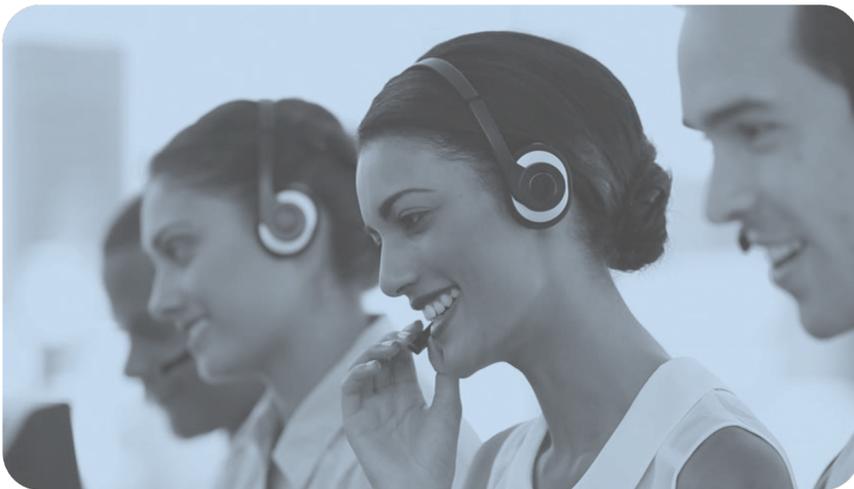
Fano Callinter
Whitepaper

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Overview

Callinter: AI Interactions Analytics System

Powered by advanced AI technologies, Fano offers Fano Callinter (Callinter), an intelligent Omni-Channel Interaction Analytics System, for enterprises to effectively monitor and leverage their interactions with customers.

Callinter automates manual efforts and analyzes every single phone call, live chat, and email; transcribes the calls to text; conducts quality assurance and compliance checks. By leveraging Callinter, enterprises can enhance their customer services and business development, gaining the following **key business benefits**:

Lower Cost

Reduce the time and operating costs of customer service and quality assurance.

Higher Efficiency

Increase work efficiency of customer service and improve performance of contact centers and other business operations.

Reduce Risks

Ensure better compliance checks and protect your business from fines or lawsuits due to compliance breach.

Increase Revenue

Increase sales revenue by extracting the up-sell and cross-sell opportunities in the calls.

Understand Customer Needs

Better understand why your customers are calling with root cause analysis.

Easy Management

Gain a holistic view of the operations of your contact centers and other business operations, and clearly assess your team's performance.

Better Experience

Increase user experience and customer satisfaction by enhanced service quality control.

Discover Business Insights

Understand your customers and the market better with customers' queries and feedback.

03
Use Case

Detect Mis-selling Practices for Sales Compliance

1 risk found !

C Certainly, let me search...
C Never lose money with...
C One second please...
C Thank you!
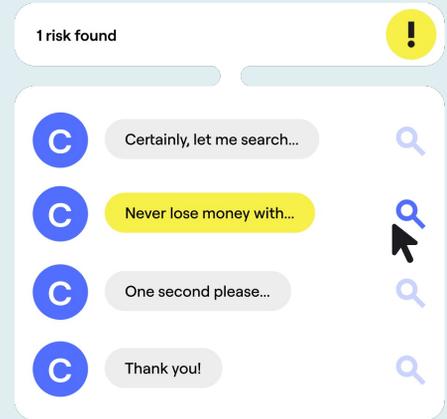
Banking and financial services institutions (FSIs) are strictly regulated by financial regulators to ensure all sales practices are compliant. The internal compliance officers (1st and 2nd lines of defense) must regularly monitor the phone calls between the relationship managers and customers, to ensure proper disclosure and due diligence processes are conducted.

However, this self-monitoring work requires sifting through hours of audio manually, which is costly and ineffective. Often, to save time, compliance officers only sample less than 5% of these calls for compliance checks. Failure on the part of risk control to detect improper practices could put these businesses at risk of heavy fines and lawsuits.

With Callinter, we have helped numerous banks and FSIs to fully transcribe customer interactions in their entirety and undergo compliance checks. In case of any compliance breach or mis-selling practices, Callinter can automatically flag the exact audio involved and alert the compliance team, so that further remedial actions can be taken. As a result, Callinter enhances operational efficiency for relationship managers and compliance officers and, more importantly, protects businesses from risks.

03
Use Case

Enhance Quality Assurance for Customer Service

One of the leading causes for customer churn in businesses is poor customer service experiences, for instance, long wait times, ineffective self-service options, incompetent service agents, and unresolved issues all contribute to customer dissatisfaction.

Callinter empowers contact centers to improve service quality and operational efficiency in various ways:

- **First Call Resolution (FCR):** Identify how likely the calls are resolved on the first attempt and provide a general view on how to reduce recurring calls.

- **Root Cause Analysis (RCA):** Better understand the root cause of the calls so that the contact center can know what and how to improve their service.

- **Long Calls Analysis and Average Handling Time (AHT):** Analyze the reasons for long calls to effectively reduce AHT and transfer rate of calls.

- **Agent Performance Assessment:** Analyze and generate ratings and reports on agents' performance.

03
Use Case

Sustain Customer Base by Predicting Customer Churn

Churn prediction means detecting which customers are likely to leave or cancel a subscription to a service. It is a critical prediction for many subscription businesses because acquiring new clients often costs more than retaining existing ones.

Telecommunications companies now adopt Callinter to **predict and identify potential customer churn**, and their various reasons for leaving. Once you can identify those customers at risk of cancelling, you should know exactly what retention strategies to take for each individual customer to maximize their chances of remaining.

Every time a client leaves, it represents a significant investment loss. Both time and effort need to be channeled into replacing them. Therefore, with Callinter being able to predict when a client is likely to leave and offer them incentives to stay, **businesses can achieve significant savings**.

Discover Hidden Business Insights to Increase Revenue

With the right tool, your contact center can be at the forefront of your customer and the market. Fano's interaction analytics system Callinter analyzes 100% of your customer interactions and **automatically identifies potential up-sell and cross-sell opportunities**, which can then be **passed to tele-sales** to follow up. As different customers exhibit different preferences, a proactive follow-up sales call that tailors to meet the customers' needs is proven to be much more effective than cold calls.

Through a scorecard system, Callinter can also identify the outstanding performers and their best practices in selling, for instance, which products, services or offers are more popular. Enterprises can further **fine-tune their sales strategies** and training based on these business insights.

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Technology

Backed by decades of research, Fano has developed state-of-the-art language AI and speech technologies in-house with several patents obtained. These technologies include:

Automatic Speech Recognition (Speech-to-Text)

Our speech recognition technology is the powerhouse that drives all our speech-to-text AI solutions. We support recognition of multiple major languages including Cantonese, English, Mandarin; as well as various dialects and minority languages.

Speaker Diarization

Identify multiple speakers and overlapping voices, even in single-channel (mono) audio recordings.

LLM-powered Natural Language Processing (NLP)

Leveraging generative AI and large language model (LLM) technology, we provide targeted NLP models for tasks such as summarization and translation, offering various types of information extracted from the text for a wider range of use cases.

Natural Language Processing (NLP) - Intent [#]

We use Deep Learning technology to enable machines to analyze human languages and understand their intentions. Our NLP can cluster a set of related objects and uncover their hidden characteristics. The clusters will be further analyzed for self-training and enable the system to learn new knowledge through machine learning.

Voice Biometrics [#]

An identity verification method via analyzing the characteristics of a voice. Our Text-Independent Voice ID feature allows users to simply enroll and verify with any phrases, which prevents replay attacks by fraudsters.

Sentiment Analysis [#]

Analyze the voice and speech of both clients and agents and detect their changes in emotions, to evaluate the service quality and agent performance, and the level of customer satisfaction

[#]Callinter Premium feature

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Differentiation

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Automatic Language Detection

Our unique feature that detects audio languages and recognizes language switches within the same sentence, particularly useful for multilingual environments.

In-house R&D Team

Our in-house R&D team enables us to quickly adapt to clients' needs, customize our products accordingly and keep improving our technologies.

Customizable ASR Model

Our ASR model can be customized for different domain and industry to fit customers' needs.

Multi-Dimension Sentiment Analysis

Industry-first sentiment analysis which evaluates both the abnormalities of the speech and context based on NLP.

Highest Accuracy

Developed by our R&D team and local speech recognition experts, our ASR engine has the highest accuracy in local languages in the industry.

On-prem or Cloud Deployment

Callinter can be installed either on clients' premise, or on a Cloud platform, based on client requirements.

LLM-powered & NLP-based Analysis

Compared to other rule-based solutions, our analysis is backed by NLP technologies that understands human natural language and intentions.

Data Sanitization

For privacy and data protection, this technology can detect and replace all the sensitive personal data in the calls with silence or a beep.

Key Features

Callinter Standard offers the following features:

Auto-Language Switch
Detect audio languages and recognize any language switches on the fly. Capable to handle customer inquiries in English, Traditional Chinese and Simplified Chinese, as well as mixed languages.

Entity
Recognize the entity or specific keywords that are relevant to your business.

Pattern
Define the speech patterns that should be followed by the agents in a customer service process, and track whether they are speaking the correct scripts.

Business Logic
Develop compliance check logics that best suits your business.

Scorecard
Analyze every call of the agents and rate the service quality with a universal, pre-defined evaluation pattern. Businesses with more complex compliance processes will require the use of a Graphical Scorecard[#].

Classification
Categorize calls into different topics based on the content and business interests.

Risk Item
Detect any high-risk items mentioned in the calls that require extra attention, such as complaints, threats, churn, or compliance breach.

Summarization
Summarize lengthy dialogues to help you quickly grasp the content.

Translation
Translate audio content into a language that meets your needs.

Advanced Query Capabilities
Conduct a text-based search to find the exact wording mentioned in your audio content.

Audio Management
Import, export, review and manage the recordings with the provided graphic user interface.

Word Cloud
Detect and analyze the business keywords in the calls and provide a word cloud for the users to uncover more business values.

Data Panel – Reports & Dashboard
Assist you in understanding your data by displaying them in graphs and readily available reports, for instance, the number of calls, average call duration, key words, high-risk items and more.
You can also group these graphs into dashboards and share them easily with your team.

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Premium Features

Callinter Premium offers all the features in Callinter Standard, plus the following additional features:

Intent Classification

The NLP capability customization service that supports one-stop data management, model training to model deployment. Users only need to upload and manage basic data process on the platform and receive customized AI models.

These customized AI models can automatically recognize the intents in the calls.

Multi-Dimension Sentiment Analysis

Analyze the changes of voice signals (e.g. amplitude, speed, speech ratio), and the speech content, to determine the sentiment of different speakers. These elements are configurable to accommodate all scenarios.

Graphical Scorecard

Designed for more advanced quality assurance, compliance and analytics scenarios. Based on metadata-driven logic, users can set dynamic logics that are adaptable for more complex business flow.
For example, relationship managers need to go through due diligence processes that are unique to different customers' risk tolerance level, age, investment profile and desired investment products. Graphical scorecard allows more complex compliance checks according to customers' dynamic responses.

Voiceprint

Build database that extract and analyze the voice characteristics of your agents, that can be used to identify them in the calls.

Comparison Table

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		Callinter Standard	Callinter Premium
Data	**Dashboard**	✓	✓
	Project	✓	✓
	Analysis Result	✓	✓
Tools	**Entity**	✓	✓
	Pattern	✓	✓
	Speaker Role	✓	✓
	Business Logic	✓	✓
	Classification	✓	✓
	Scorecard	✓	✓
	Risk Item	✓	✓
	Intent	✕	✓
	Graphical Scorecard	✕	✓
	Voiceprint	✕	✓
	Sentiment Analysis	✕	✓
Admin	**Event Log**	✓	✓

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FAQ

Can the system be deployed on-prem or Cloud?

Yes, the full ownership of the AI engines and system components allow the system to be deployed either on premise or on Cloud, depending on the requirements of different projects.

How can the system accurately recognize and understand the recordings?

We build speech recognition and natural languages processing engines and connect them with Callinter system to facilitate call analysis. Before the roll-out of the system, customization and fine-tuning on the models will be conducted with data from real use cases, followed by continuous improvement when it goes online, to ensure a satisfying performance of the speech analytics system.

How does the system protect data security?

There are several data processing stages where measures are taken to protect data security. We provide data sanitization tool which can locate and remove any personal information in the recordings, such as credit card numbers, phone numbers, birth date and more. The tool can be adopted to pre-process the data before it is imported to Callinter for further analysis.

What kind of analysis result can be generated by the system?

The system provides comprehensive statistics of frequent intents, keywords, and high-risk items among others, as well as out-of-box reports such as call driver reports. We also offer professional services to customize analytics reports, uncovering more business insights for our clients.

About Fano

Founded in 2015, Fano is a spin-off from the University of Hong Kong specializing in developing speech recognition, speaker diarization, speaker verification, and natural language processing technologies for multilingual environments. Fano is headquartered in Hong Kong Science Park with offices in Singapore, Taiwan and Shenzhen.

From analysis to automation, our language AI solutions empower enterprises to drive operational efficiency in customer service, compliance, and various lines of business. Our solutions have been widely adopted in banks and FSIs, telecom, utilities, government and public sectors.

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