

Next Generation Call Protection: AI-Based Voice Analysis

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FIRST ORION

Delivering Secure & Trusted Communications

First Orion has proven solutions globally

- In-Network Scam, Spam, & Spoof Protection
- Device Applications/SDKs
- PROTECT+ Risk Detection
- SENTRY® Call Blocking
- AFFIRM™ Reputation Monitoring
- INFORM® Branded Calling
- INFORM® w/ Logo

Founded: 2008

Locations: HQ in North Little Rock, Arkansas.
Offices in Seattle, London, and Dubai

As a pioneer in industry leading call protection technologies and the inventor of branded calling, First Orion is on a mission to create transparent and trustworthy communication worldwide.

We continue to strive on stopping scam and spoofed calls, always staying ahead of the bad guys, while laser focused on creating transparent, secure, and trustworthy connections between legitimate businesses and each of their customers.





AI Can Power the Scam.

Can it Power the Defense?

Generative AI isn't coming; it's already in the call. It's changing how scams sound, how they spread, and how fast they happen.

Traditional phone scams cost victims about \$600. AI-generated deepfake scams are far more costly with many consumers reporting losses in the thousands!

While AI isn't yet behind *every* scam, it's shifting what's possible and raising the stakes.

CHALLENGES:

- Can detection evolve fast enough?
- Who's responsible for protecting the voice channel?
- What does real defense look like now?

What is the Next Generation of Call Protection?

Analyzing and Protecting The Voice Channel

One Stream, Many Possibilities

- AI Screening Assistant
- Real-time Sentiment & Emotion Analysis
- Voice Biometrics / Voice Fingerprinting
- Real-time Scam Detection
- Real-time Synthetic Voice / Deepfake Detection
- Call Transcription + Post-Call Review
- Liveness Detection

Just some of the options for voice analysis and protection available today...



Selecting the Right Solution Starts with Asking the Right Questions

- What is the problem to be solved?
- Who is the customer? Who are the stakeholders?
- Is protection a differentiator or table stakes?
- What are hard requirements vs nice-to-haves?
- What is the user experience?
- What are the measures of success?
- What tools are needed? AI is a tool, not a solution.
- Are there any interoperability considerations with existing services?
- What are budget and resource implications?
- Are there any risks to privacy, compliance, trust?

New capabilities are exciting, but alignment on the problem statement, user experience, and outcomes must come first!



Privacy, Policy, & Compliance Risks

In voice analytics, privacy isn't just about compliance.

- Privacy
Big Brother concerns
- User consent
Who owns it, how is it captured, and how is it honored?
- Call data
What is stored, how is it stored, for how long?
- Data storage policies can shape model evolution
- PII & CPNI
Exposure and potential risks
- Compliance
Regulations, local policies, telecom laws, geographies

**The solution is only successful if
all parties are protected.**





A Solution for the Real-World

- Adaption is crucial! Scammers ever evolving
- Network realities: noise, compression, distortion, degradation
- Production media path access
- Coverage: accents, dialects, emotions, slang, age, gender
- Data scarcity and gated access to real scam calls
- Precision vs recall trade-offs in production
- Real-time decisioning and user notification
- False negatives/positives: investigation, audit, remedy, future-proofing
- Model drift and retraining
- Total cost of ownership

Lab demos and prototypes are useful, but not necessarily indicators of production success!

Implementation

Analysis, Disposition, Notification

Potential Options

- In-Network Solution
- OEM Native
- Device Application
- CRM / Call Center/ Business
- REST APIs
- Cloud Hosted



Important Considerations

- Terms of Service, Permissions, Opt-In/Out
- Consistent User Experience
- Scalability
- Adoption Rates
- Addressing False Negatives/Positives
- Deployment & Support Efforts
- Data Science Involvement
- Control & Flexibility
- Originator & Called Party Experiences

Where is the voice analysis performed, and how are call disposition & notification delivered?



Takeaways & Lessons Learned

Summary

1

Exactly what is the problem you are trying to solve?

2

Voice analytics-based solutions are big investments so plan carefully.

3

Understand the privacy, legal, and regulatory landscape.

4

A successful production solution cannot be fire and forget.



THANK YOU
