yobe

Solution Brief

YOBE solution brief

Enable a next generation human machine interface for your product, service and brand.

Designed for real life, Yobe performs in the real world, not just in the lab. Our platform is purpose-built for software that is deployed in crowded and noisy environments.

Finally, voice that just works, no matter the scenario or surroundings.

Yobe's mission is to advance Human-to-Machine Interaction for voice enabled products. Our **Voice Information Extraction and Speaker Tracking (VIEST)** solution enables our customers' voice systems to work **"in the wild".** i.e. in complex, real-world enviroments that include competing talkers and high noise levels.

Our technology was developed to address the problem of extracting voice data (biological, linguistic, and acoustic) in dynamic noise environments (including cross talk) that interfere with the accuracy and effectiveness of voice interfaces. Yobe's ability to filter out specific voices in a sea of human or other background noise and accurately interpret and identify the user ensures reliable and accurate voice interaction no matter the environment. **Yobe makes voice "simply work".**

- **Runs on the edge**
- **Hardware agnostic**
- **Cross talk resistant**
- **Low MIPS**
- **On-device, personalized voice commands**
- **Real-time User Identification**
- **Works in dynamic noise environments (human, wind, animals, machines)**
- **Barge-in with no reference signal**

Yobe's VIEST solution gives device manufacturers, application developers, brands, and speech partners the ability to deliver better business outcomes and customer experiences across a wide range of industries and use cases, including mobile phones, smart appliances, in-cabin use in cars and other vehicles, retail kiosks, industrial applications, wearables, and other applications.

How it Works

Your voice is unique, much like your fingerprint. Yobe technology is able to listen and extract all biological and linguistic markers needed to identify a voice even in the most challenging real-world situations where there may be dynamic auditory and physical factors.

Yobe Active Identification allows you to listen to a voice of interest and lock on to the unique biomarkers to execute accurate voice interactions with enhanced speech signals while keeping all other auditory intrusions from barging in.

Go from building an amazing product or service to building an amazing experience!

The advantage needed for your voice platform to operate effectively in the real world

Robust

Remove the caveats surrounding the use of your voice interface. Allow your current applications and products to go one step further and adapt to the dynamic situations human-to-machine voice interaction can face.

Accurate

Ensure your voice interface and your brand correctly understands your users no matter the environment they are in.

Unlock

Unlock the full potential of voice interfaces. We focus on voice so you can focus on building a magical experience and brand for your clients! We can also provide you with voice metadata so you can understand and enrich the user experience even further.

Versatile

Build the voice interface you want on the platform you want. We run on the edge, are hardware agnostic, and are also agnostic to ASR and other voice providers that can be embedded or in the cloud. We won't force you to pick our friends, we work with everyone.

Use cases include:

Mobile Apps
Our technology can improve the accurate use of your voice-enabled application and also augment user experience through voice personalization and data capture.

Brands
Build voice-enabled applications that work in the real world and that your customer can trust. Help increase revenue and loyalty while reducing costs.

OEMs
Your Voice Enabled Product needs to come out with voice enablement that will guarantee quality and security. Whether it is a home device, an outdoor security camera or even a conversational robot, our platform will support all your human speech-to-machine interaction needs.

Hospitality, Retail, and Other Commercial Use Cases
Whether on the floor, in the store, in-cabin, or otherwise, allow your customers to interact through voice accurately while improving business outcomes.

Building with outputs from our SDKs

- **ASR Listening:** Optimized signals for machine consumption
- **Identification Listening:** Speaker-specific signals ideal for managing human crosstalk or scenarios where only a specific/known speaker(s) voice input is wanted.
- **Identification Indexing:** Real-time (frame by frame) Speaker Identification

Requirements*	
Data Memory	50 kbytes
Library Size	75 kbytes
1-CPU Usage	15%
Platform	Linux, Windows, ARM (32-bit, 64-bit)

Metric	Results
Processing Latency	less than 50 ms
Voice/Speaker ID	Down to -20 db SNR
Noise up to 4x louder than voice of interest	ASR/STT accuracy of 95%+
Noise up to 8x louder than voice of interest	Keyword recognition accuracy of 95%+

*core VIEST solution

Next Steps
Learn how Yobe can make your voice interface robust to the real world! Visit **www.yobeinc.com** or contact us at **contact.us@yobeinc.com**