Speech Technology Center

New Generation

IKAR Lab 3

Hardware and Software Suite for forensic media analysis

New Audio & Video Functionality

Detection of encoding traces in PCM audio

Detect fragments of PCM audio with traces of lossy codecs (A, μ, MP3, WMA, AAC, OGG), identify their exact boundaries and locate removed fragments

Automatic text transcription in 17 languages

The number of languages supported by the automatic speech recognition module has been increased to 17: Bengali, Urdu, Chinese, Filipino, German, Russian, Arabic, Spanish, Persian, French, Portuguese, Kazakh, Turkish, English, Uzbek, Ukrainian, and Vietnamese

Super Magnifier

Quickly process video frames with 28 unique filters to make objects more recognizable: text, license plates, faces, and much more

Deepfake and Spoofing Detectors

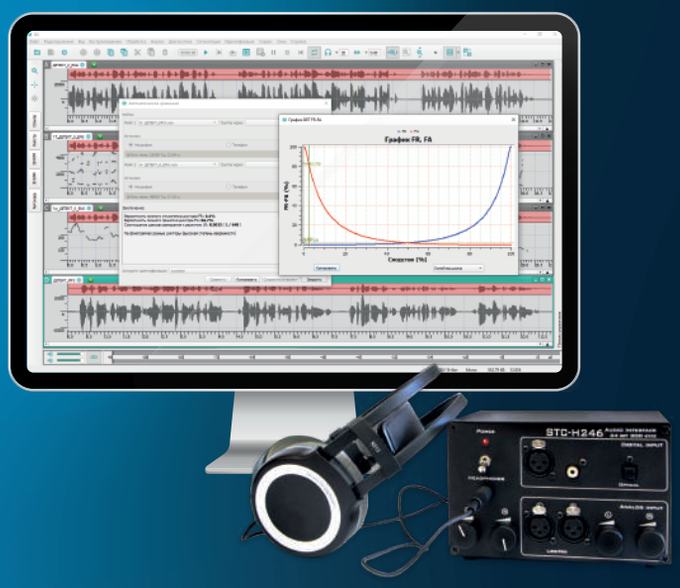
The video deepfake detector determines the probability of a face being replaced in a video frame. The audio spoofing detector evaluates the probability of voice synthesis/conversion and replay. It displays probability distribution graphs throughout the audio recording and identifies the vendor of the synthesis technology

End-to-end processing channel

This mode in Sound Cleaner enables appreciating the effects of the user-created filtering sequence on-the-fly and thus process the audio signal faster

FFS – Face Forensics System

Expert facial comparison to identify and match human faces in different photographs



450+ implementations

75 countries

IKAR Lab 3 Forensic System complies with global forensic standards, ensuring the reliability of evidence and maximum process automation. This allows experts to focus on decision-making and quickly provide conclusion

Forensic Examination Tasks

- Perform noise reduction on audio recordings and determine their suitability for identification. Improve the quality of video data
- Retrieve the verbatim content of audio recordings with speaker diarization. Identify texts, objects, and other elements in video frames
- Check the audio & video material for authenticity violations: probability of deepfakes, spoofing, traces of codecs, repeated inserts, as well as audio and video edits
- Identify speakers based on voice samples using automatic and expert methods
- Establish the similarity or difference of persons in photographs

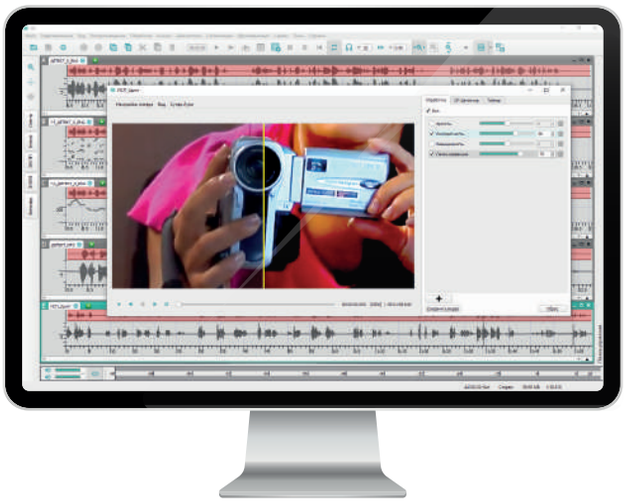
Main Components of IKAR Lab 3

SIS
Sound Editor

Sound Cleaner
Speech Signal Noise Reduction Software

STC-H246
Sound I/O device

FFS
Face forensics software for facial comparison



Advantages

Perfect combination of automated and expert methods

State-of-the-art technologies provide for both automated and expert methods. The former deliver fast and reliable answers, while the latter confirm and substantiate them with concrete evidence.

Fast comprehensive processing of audio & video materials, including noise reduction, restoration, and facial feature comparison

A variety of filters and advanced algorithms significantly improve the intelligibility of speech signals recorded under challenging acoustic conditions. The image quality enhancement techniques makes it easier to identify texts, signs, faces, etc. The image quality can be significantly enhanced ensuring the possibility of face comparison and visual object recognition (texts, signs, and more).

Automatic speech-to-text conversion

The automatic speech recognition functionality is your reliable assistant for instantly turning audio recordings into text. As a result, you obtain a clear and structured content within seconds, with accurate attribution to each speaker.

Reliable detection of authenticity violations with a comprehensive array of methods

Detect video deepfakes and audio spoofing, find digital preprocessing traces, identify phase anomalies, uneven background noise, constant components, evidence of fragment copying, and spot different encoding types.

Experience the capabilities of industry-leading technologies

Speech Technology Center is a global developer of products and solutions based on AI-enabled biometrics, machine learning and computer vision technologies. With decades of expertise and thousands of deployments worldwide, our technologies consistently rank among the leaders in international benchmarks and scientific competitions – delivering trusted results at scale.

30+
years on
the AI technology market

5000+
projects worldwide,
including national-scale deployments

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