





CEVA TECHNOLOGY SYMPOSIUM SERIES

Deep learning sound classifiers making smart devices listen

Presented by Erez Lugashi, CEO

















SENSORS



TRENDS TODAY





WE UNDERSTAND SOUNDS

Every 5

seconds someone dies from injury



HOUSEHOLD ACCIDENTS



FIRE HAZARDS



TERRORISM AND WAR



ACTS OF VIOLENCE



ROAD ACCIDENTS

A new breed of AI sound recognition

analyzes 'big data' generated by IoT devices

in order to predict and alert in lifethreatening situations











Phase 1

Microphone

Phase 2

Pre-processing

Phase 3

Classification

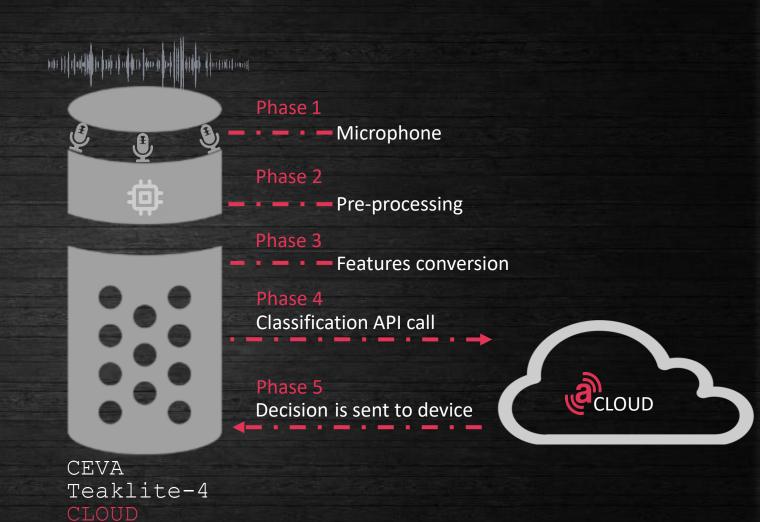
Phase 4

Decision

CEVA-X2

EDGE DEVICE

ANALYSIS



ANALYSIS







Live Feed - Moscow 16:00 - 22.1.18

VANDALISM - 12:25 (1)

GUN SHOT - 10:11 (3)

SCREAMS - 09:22 (1)

DOG BARK - 08:50 (5)



COMPONENTS OF THE SOLUTION





CROSS-PLATFORM SDK OR API

REAL-TIME LOCAL OR CLOUD

PROCESSING

UNIVERSAL CLASSIFIER

AUDIO TO HASH



OPERATION RESULTS PHASE TWO

DASHBOARDS

NOTIFICATION DISTRIBUTION

IOT CONNECTION AND TRIGGERING

CLASSIFIER UPDATES



BUSINESS MODEL

SDK
LICENSING

SUBSCRIPTION

Or

- HW vendors: CCTV, smart speakers, mobile device, ATM vendors
- VARs: app developers, IoT platform providers, security service providers

FORM FACTORS



SMART SPEAKERS

50M units



MOBILE DEVICES

1.9B units



105M units

Thank you CEVA Cabilisense



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