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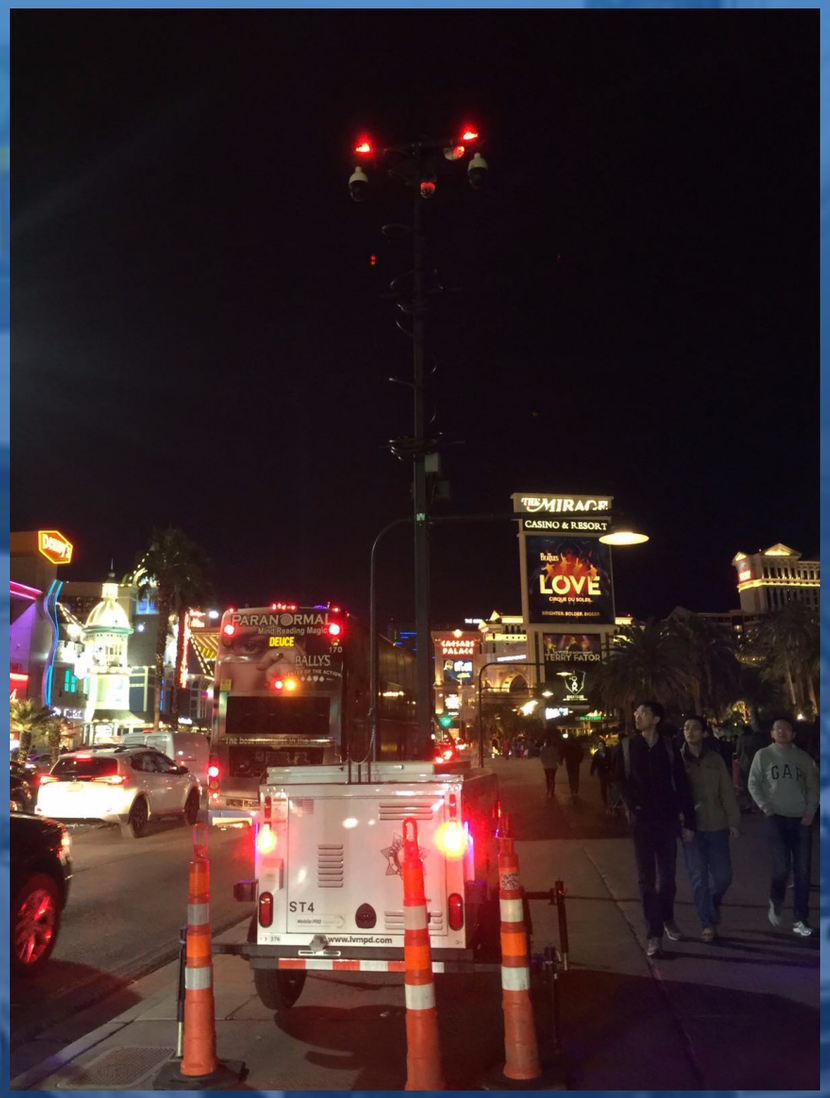
CES SMART CITIES HACKATHON 2017



THE PROBLEM OF THE DAY

Cities around the world lack an easy and consistent way for security services or law enforcement to get a 'situational report' of the place.

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WHAT IS A SITUATIONAL REPORT?

A recurring report filed by security/police to describe events or occurrences.

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WHY DO THE REPORTS MATTER?

Reports filed capture on-the-ground incidents as they happened.
This is important for the city in order to maintain law and order.

What makes these reports difficult are a few things –

1. *Too many areas, not many policepersons – not all areas covered.*
2. *Inconsistent use of language to report.*
3. *Lack of actionable data and a centralized log of occurrences.*

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WHAT WE PROVIDE

A machine vision approach to make reporting easier and actionable.

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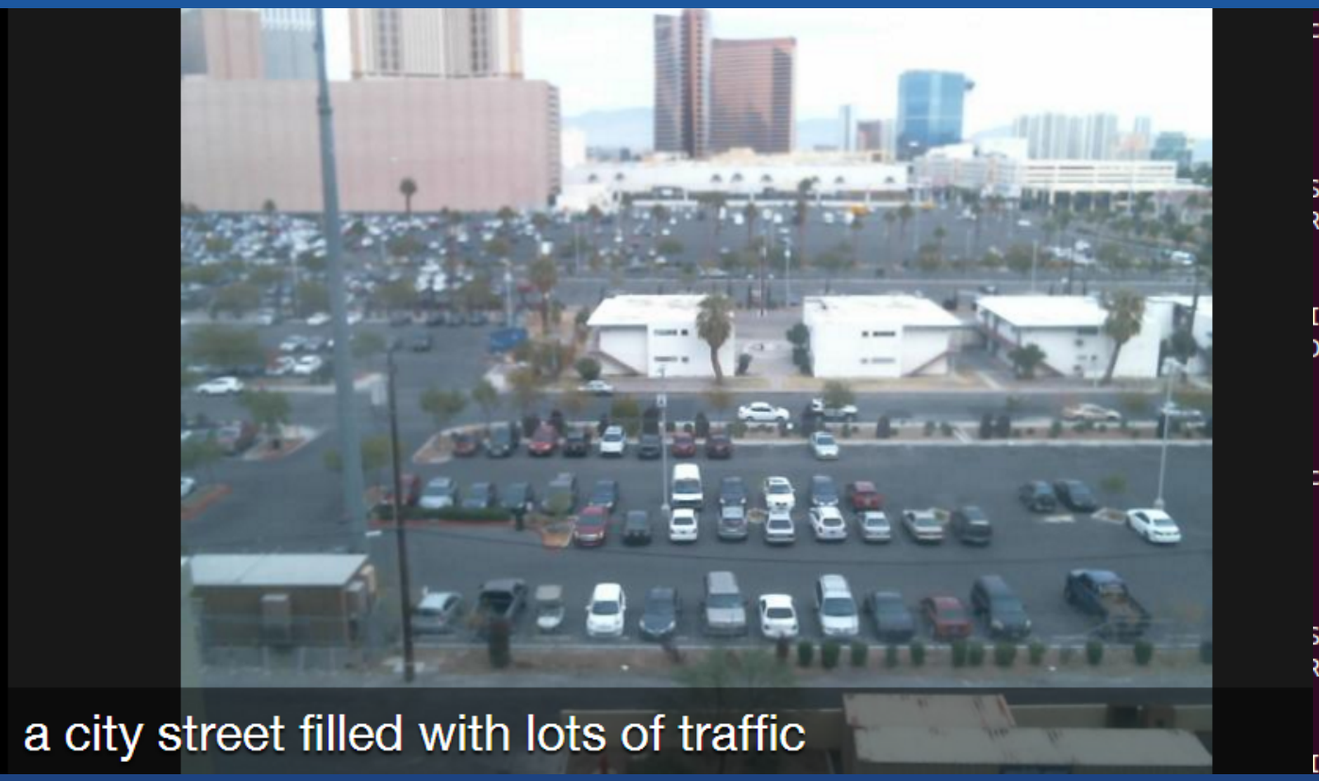


```
convo.mp3:

 File Size: 13.8k     Bit Rate: 32.0k
  Encoding: MPEG audio
  Channels: 1 @ 16-bit
Samplerate: 24000Hz
Replaygain: off
  Duration: 00:00:03.46

In:99.3% 00:00:03.43 [00:00:00.02] Out:165k  [      |      ] Hd:5.0 Clip:0
Done.
 a city street filled with lots of traffic


convo.mp3:

 File Size: 12.2k     Bit Rate: 32.0k
  Encoding: MPEG audio
  Channels: 1 @ 16-bit
Samplerate: 24000Hz
Replaygain: off
  Duration: 00:00:03.05

In:89.6% 00:00:02.73 [00:00:00.32] Out:106k  [ =====|===== ] Hd:4.4 Clip:0
```

Log of events described textually

Natural Language Explanation of scenarios
Data geotagged and logged centrally from all sources

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WHY IS THIS AWESOME

Consistency of law enforcement

Effectiveness of law enforcement, especially where police cannot be/is not physically present

Logged data actionable with relevant information captured.

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MEASURING POLICY OUTCOMES

Using actionable data to manage security deployment.

Managing expectations and scenarios automatically.
- Situations of security, unrest, medical attention, crowds.

Data as a Service

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THE TECHNICAL DETAILS

Custom machine learning/NLP and computer vision algorithms for auto-captioning live video streams.

IBM BlueMix Text-to-Speech to describe scenes.

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GREAT TIMES ARE WAITING

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THANK YOU

CHALLENGES ENTERED – UL, IBM BLUEMIX