

15th INTERNATIONAL OPERATIONS & MAINTENANCE CONFERENCE IN THE ARAB

COUNTRIES

UNDER THE THEME: "SMART MAINTENANCE" CONICIDE WITH THE 15TH ARAB MAINTENANCE EXHIBITION

IOT USE CASES IN PUBLIC SAFETY

JAWAD FAKIH





HOW CONNECTED ARE WE?

Connected Homes

- Smart
 Thermostat
- Smart Appliances
- HVAC Systems
- Security
- Smart Lighting
- Entertainment Systems

Wearables

- Fitness Bands
- Smart Watches
- Smart Glasses
- Action Cameras

Industrial Internet

- Real-Time Analytics
- Factory Automation
- Robotics
- Supply Chain Efficiency

Connected Cities

- Smart Meter Technology
- Smart Traffic Lights
- Smart Parking Meters
- Electric Vehicle Charging

Connected Cars

- Safety
- Vehicle
 Diagnostics
- Infotainment and Navigation
- Fleet Management



How big is the Opportunity?

Solving world hunger?

If resources were allocated **based on people's needs**, perhaps poverty and hunger could be **significantly alleviated**.

Smart farming and connected agriculture

Smart farming and connected agriculture is on its way, with **irrigation becoming more efficient**, based on real-time data, tackling the major problem of the world's water overuse.



How big is the Opportunity?

Keeping More People Alive? Increasing Efficiency?

- Eliminate Parking Problems
- Reduce Urban Traffic
- Reducing Waste
- Faster & Smarter Management of street lighting, Emergency notifications and traffic lights
- Energy Optimization
- ...etc



How big is the Opportunity?

Enhancing The Quality of Life?

Onyx Beacon, a team of young entrepreneurs based in Hungary, is using IoT to help visually impaired people use public transport

iBeacons

help visually-impaired people get on the right bus when the vehicle arrives in the station, customize complicated routes, and not get lost on their way to a precise destination".





Public Safety in Action

Connected Safety Use Case



A ski bus is seen on its side off a road in Karuizawa, Nagano Prefecture, Friday morning. | KYODO

NATIONAL

Overnight bus crashes in Karuizawa, killing 14

KYODO

NAGANO - Fourteen people died and 26 were injured when a packed bus on an overnight journey crashed in the early hours on Friday. It was the worst toll from a bus accident in decades.

JAN 15, 2016

ARTICLE HISTORY

♣ PRINT ★ SHARE

VIDEO



SAFETY FACTORS

Multiple factors can put in danger a person or a group of person especially when we talk of public transportation. Below a list of these factors:

Physiology & Emotion

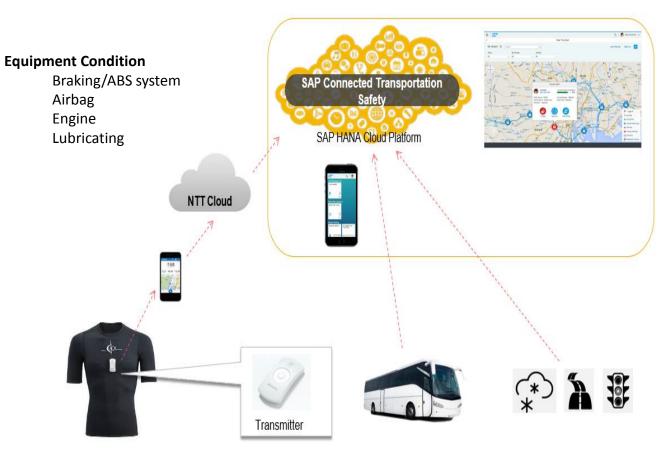
Sleepy / Drowsy driving Alcohol Drug Angry

Driving Behavior & Attitude

Speeding
Red-light running
Seatbelt
Cell phone use

Environment

Weather (Snow, Fog...)
Road Infrastructure
Traffic condition
In-vehicle (noise, vibration, temperature, CO2 gas)





How to correlate Smart Fleet and Smart safety



Maintain optimized route / schedule



Fleet

View analysis report

Detect accident prone location Manager



Check route and students' homes

Confirm when student get on / off bus

Monitor student safety

2. Analyze 3. Action SAP HANA Cloud Platform

Driver



Receive optimized route / schedule

Check health and vehicle condition

Receive real time notification

View performance report



Receive precise bus arrival time

Confirm when children get on/off bus

Parents

Monitor bus location, speed, video

1. Monitor

- Heart rate, fatique, nervous
- Posture
- Video

- Geographical data
- Engine data
- Driving data

- Seat belt usage
- Dangerous behavior
- Time when get on / off bus
- Video

- Environment condition
- Road condition
- Real-time traffic Info
- Video

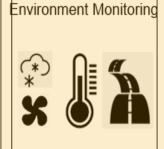
- Bus schedules
- Historical arrival time

Arrival Time Prediction







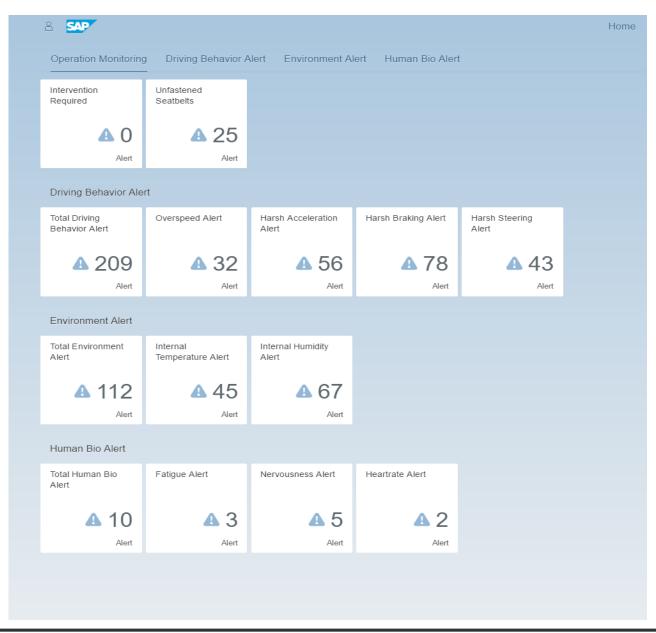




		Arrival Time
	Stop 1	21:35
	Stop 2	22:10
	Stop n	6:20

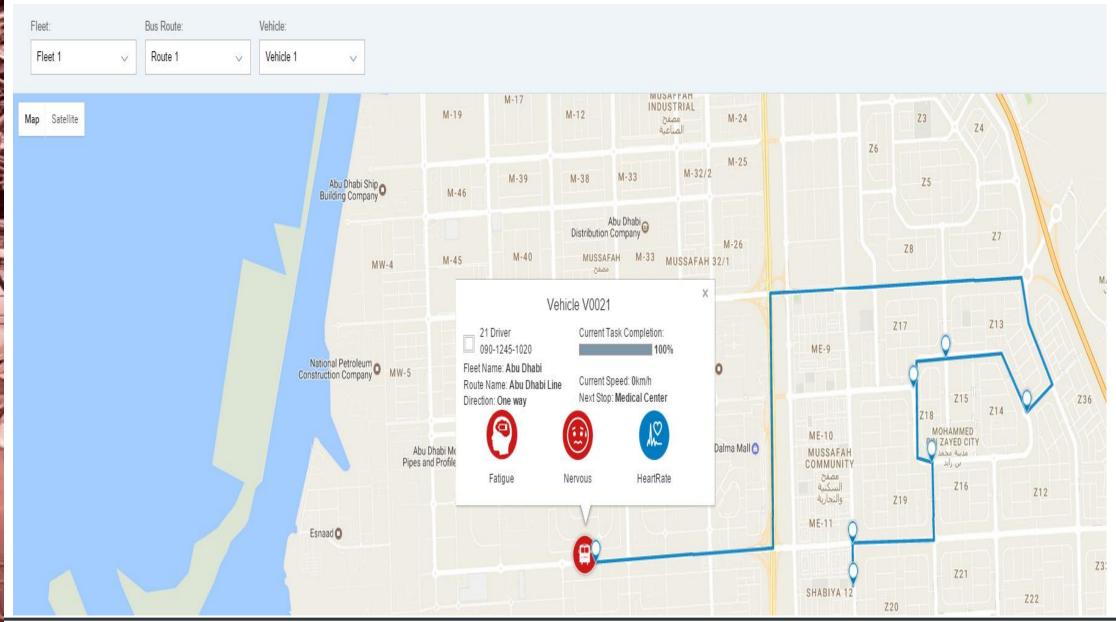


USER EXPERIENCE





USER EXPERIENCE





Real Time Analytics





The Dark Side

How safe are we in the IOT Era?

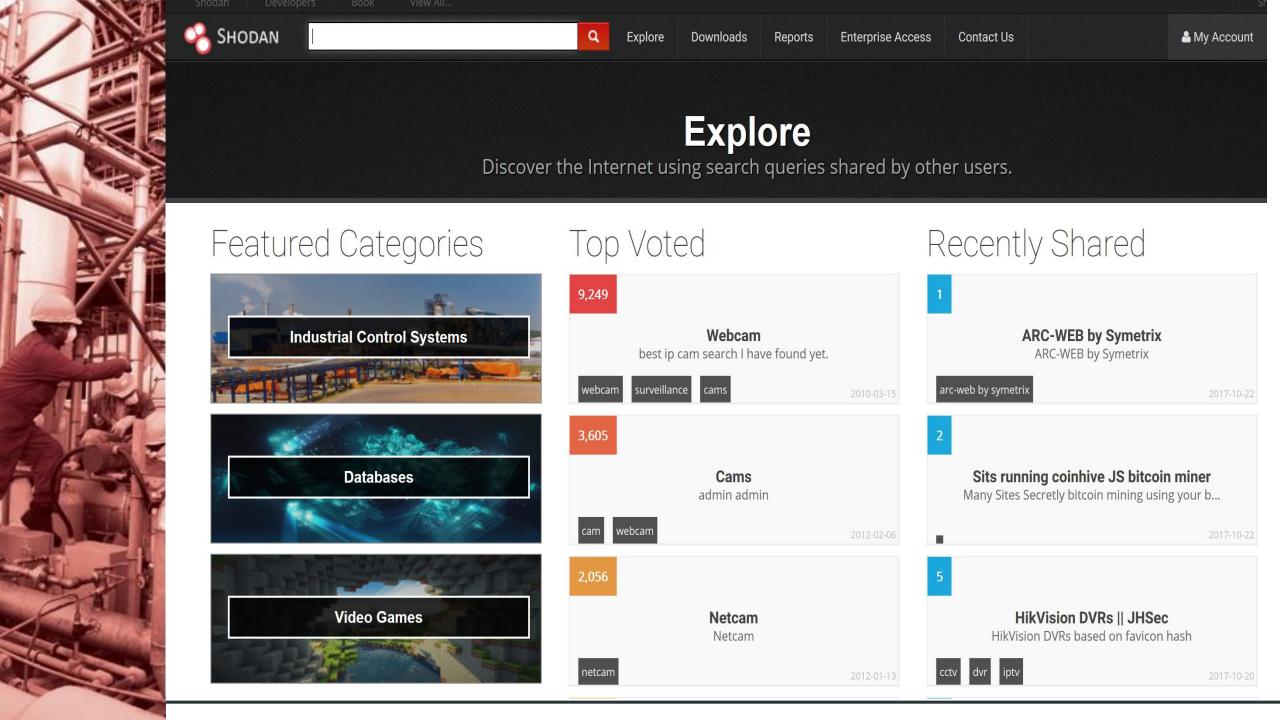
As smart products proliferate with the Internet of Things, so do the risks of attack via this new connectivity.

- Suppose a criminal were using your nanny cam to keep an eye on your house.
- Or your refrigerator sent out your shopping and eating habits to people you don't even know.
- Now imagine someone hacked into your toaster and got access to your entire network.



SHODAN

https://www.shodan.io





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Popularity	
Recently Added	
▶ POPULAR TAGS	
webcam	138
cam	100
camera	98
scada	76
router	73
ftp	62
test	48
ip	46
server	43
http	39

cam D-Link
Web Cams de marque d-link

camera cam surveillance

9,249

Webcam
best ip cam search I have found yet.

12

Webcam Pictures

surveillance

Very good at finding pictures of open webcams without a lot of RDP/VNC screenshots in the results.

webcam

cam

surveillance

2016-12-07

2014-08-24

1

Open Webcams v2

More webcams than other queries. Better organization when "200" is used instead of "OK" in HTTP header for some reason.

webcam

surveillanc



2016-05-18

TOTAL RESULTS

3,643

TOP COUNTRIES

United States

Russian Federation

TOP SERVICES

Japan

Germany

Poland

554

HTTP

HTTP (8080)

HTTP (83)

HTTP (81)

ASAHI Net,Inc.

Comcast Cable

FreeBit Co.,Ltd.

Telmex

TOP ORGANIZATIONS

Deutsche Telekom AG

RELATED TAGS:

webcam

surveillance

'+tm01+'

72.54.9.190 72-54-9-190.customerip.birch.net

Cbeyond Communications

Added on 2017-10-23 15:37:28 GMT

United States, Atlanta

Details

682

341

204

1,015

800

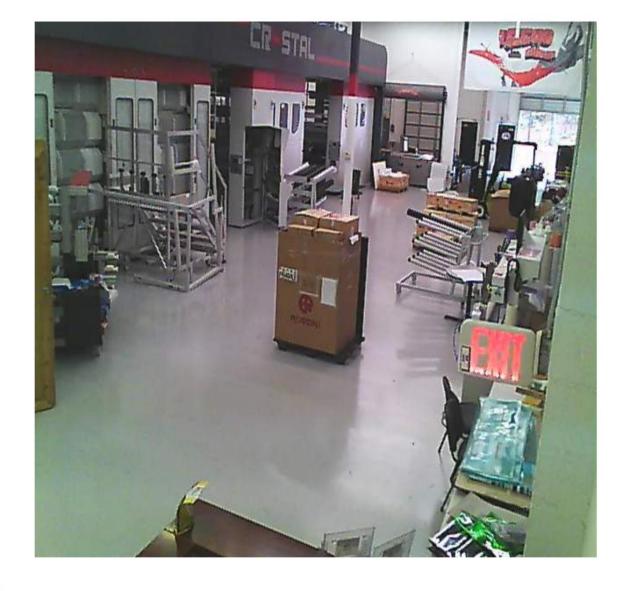
412 352

313

381

221

102



HTTP/1.1 200 OK

Server: thttpd/2.25b 29dec2003

Content-Type: text/html; charset=iso-8859-1

Date: Mon, 23 Oct 2017 11:35:34 GMT

Last-Modified: Tue, 11 Aug 2009 10:09:05 GMT



THANK YOU!

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