

# **RSA® Conference 2019** **Asia Pacific & Japan**

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**BETTER.**

SESSION ID: GPS-W02

## **Ring Ring: The Rise of Ubiquitous Consumer Surveillance Systems**

**Jeffrey Jay Blatt**

Of Counsel  
Tilleke & Gibbins International  
Bangkok, Thailand  
@techlawexpert

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## A little more about me...



- Pioneer Silicon Valley Tech/Telecom Lawyer (e.g. Apple, Intel, Broadcom)
- Key Member of Executive Team that built and launched Astro in Malaysia
- Board member of Sri Lanka Telecom (2008-2016): Chaired Risk Management Committee; Senior Tender Board. Drove cyber security initiatives
- Experienced U.S. Law Enforcement Officer/Palantir trained/certified by Calif DOJ to participate in electronic interception/surveillance
- Accused of Being a Data Privacy *Realist*:
  - One of first Tech Lawyers interviewed on live TV in the FBI v. Apple case
  - Frequent speaker/author on cyber security, data privacy/gov't access

# Our Objectives In This Session

- Understand what IOT driven/Cloud Based Private Consumer Surveillance Systems(PCSS) are and how they function
- Understand how platforms like ‘Neighbors’ work, how users can upload videos/images and how police using a portal can access posted data, provide crime reports and interact with participating users
- Explore the potential ramifications of allowing a user to classify a subject as ‘suspicious’ or as a ‘suspect’ in a PCSS without police involvement and if this differs from traditional Neighborhood Watch Programs
- Discuss what the societal effect may be of adding Facial Recognition and AI to these IOT PCSS systems
- Discuss how these systems narrow the distinction between private consumer surveillance systems and government law enforcement

## Our Objectives In This Session (con't)

- Discuss the possible end point evolutions of AI driven integrated private/public IOT surveillance systems
- Explore further into ‘blue water’ and discuss the evolution of Predictive Policing Systems with the addition of private IOT driven PCSS source inputs and All Source Data Collection
- Discuss the ethical issues – are there really any ethics relating to government deployment of technology...in China vs the West?



1984  
WAS  
NOT  
SUPPOSED  
TO BE AN  
INSTRUCTION  
MANUAL

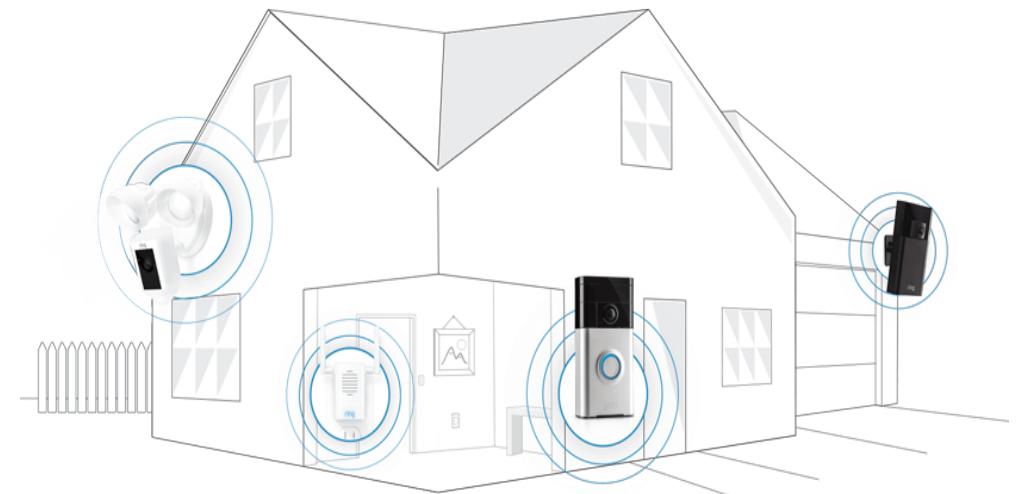


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# So What's a 'Ring' System?

VIDEO SEGMENT CBS MORNING NEWS  
Place Holder

# Typical RING or NEST STANDALONE CONFIGURATION



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## WHAT IF WE CONNECT IOT SURVEILLANCE DEVICES VIA A COMMON CLOUD PLATFORM?



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**'Neighbors'**  
**A Digital Neighborhood Watch?**





## Video Segment

RING Description of 'Neighbors' Platform  
Place Holder

North of Montana

**NEIGHBOR** 2 DAYS AGO • 1.4 MI

Suspicious

This guy has come around saying he is worried about the car parked on the street.. It might be legit...

5 likes, 3 comments, 751 views

**Helpful** **Comment** **Share**

**Los Angeles Residents: Do you recognize this man?**

On May 9, this man was caught on camera stealing a package from a Los Angeles home near Ocean Park ...

20 likes, 2 comments

**Helpful** **Comment** **Share**

North of Montana

**NEIGHBOR** 3 DAYS AGO • 2.7 MI

Stranger looking around.

Anyone else see this person? None of us in this unit know this person.

8 likes, 1 comment, 1,367 views

**Helpful** **Comment** **Share**

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North of Montana

**NEIGHBOR** 6 DAYS AGO • 1.8 MI

Did anyone have this man come to their door today?

Not sure what he wanted and was there for awhile. I wasn't expecting him

10 likes, 1,338 views

**Helpful** **Comment** **Share**

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# OK...So Now Let's Add a Police Portal to the Platform

Video Segment

US News Segment Regarding Police Joining and Participating in Neighbors Platform  
Place Holder

## Police Send Platform Users Crime Reports to Keep Neighborhood Informed

**7 Crimes**

Reported by law enforcement this week

[View Crime Map](#)

**Crime Breakdown**

Number of crimes committed in each category

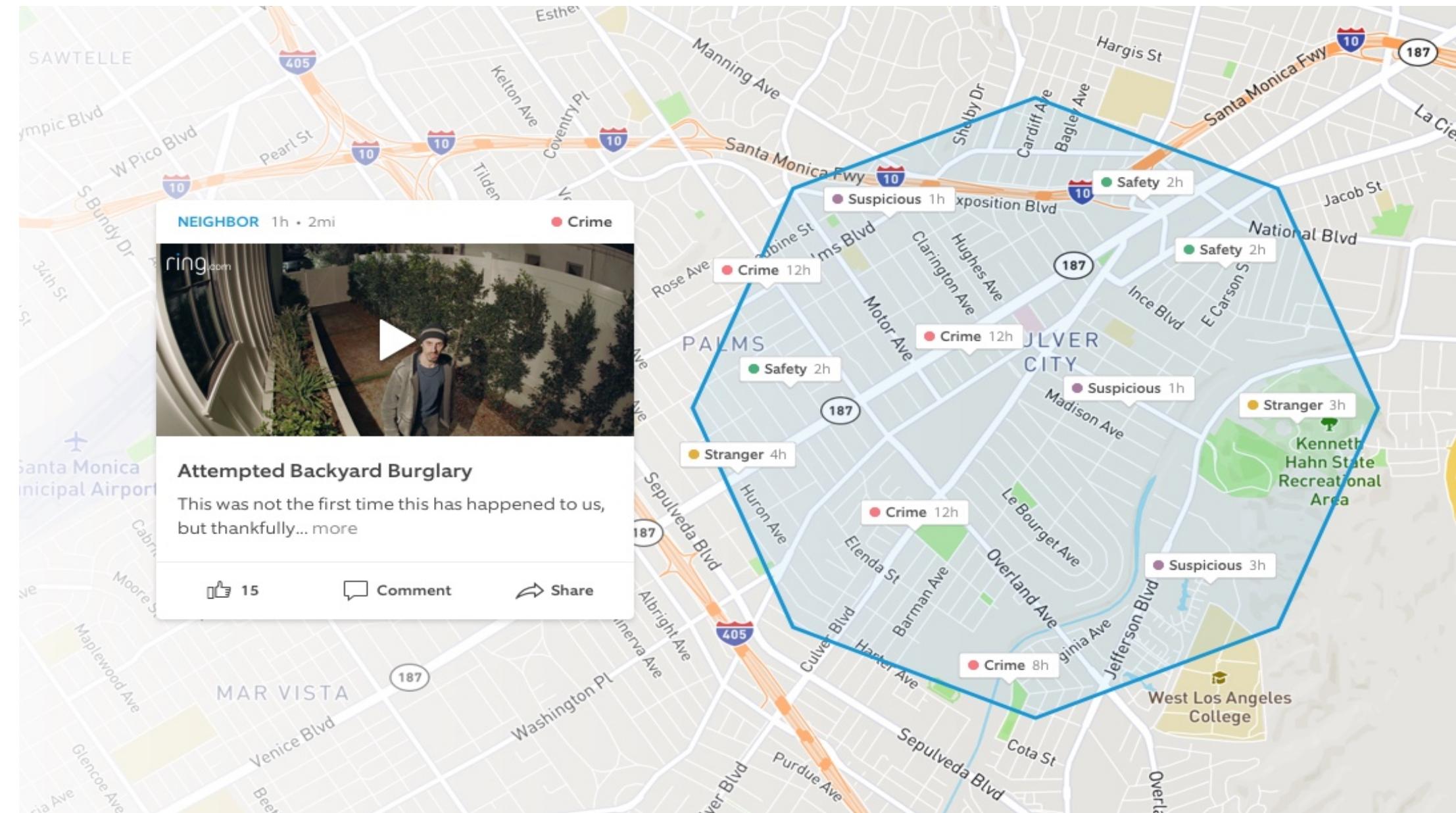
Shooting	1
Theft	5
Vandalism	1

**Crime Details**

Details for 7 crimes in your area

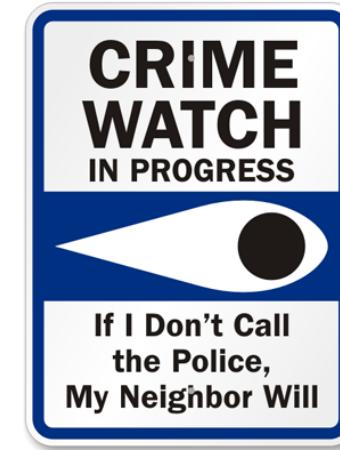
<b>Shooting</b>	0.56mi
Fri 5/10 • 07:00	
Shooting: Report Of Shots Fired.	
Disposition: Checks Okay	
<hr/>	
<b>Theft</b>	0.86mi
Fri 5/10 • 07:00	
Theft: Petty Theft Report.	
Disposition: Advisal	
<hr/>	
<b>Vandalism</b>	0.39mi
Fri 5/10 • 07:00	
Vandalism: Malicious Mischief Report.	
Disposition: Cancelled	
<hr/>	
<b>Theft</b>	0.49mi
Wed 5/8 • 07:00	
Theft: Identity Theft. Disposition: Report	

[SHARE CRIME REPORT](#)



# So...are Private Consumer Surveillance Systems Just A Fancy Neighborhood Watch?

- Before IOT Video Doorbells human neighbors worked together and reported suspicious activities to police
- Proponents argue the ‘Neighbors’ platform is a 2019 digital version of Neighborhood Watch where videos, chats and observations and comments are shared with neighbors and the police



# Quick Legal Aside...Who Owns PCSS Captured Images? (a US Law Perspective-Your Jurisdiction May Differ)

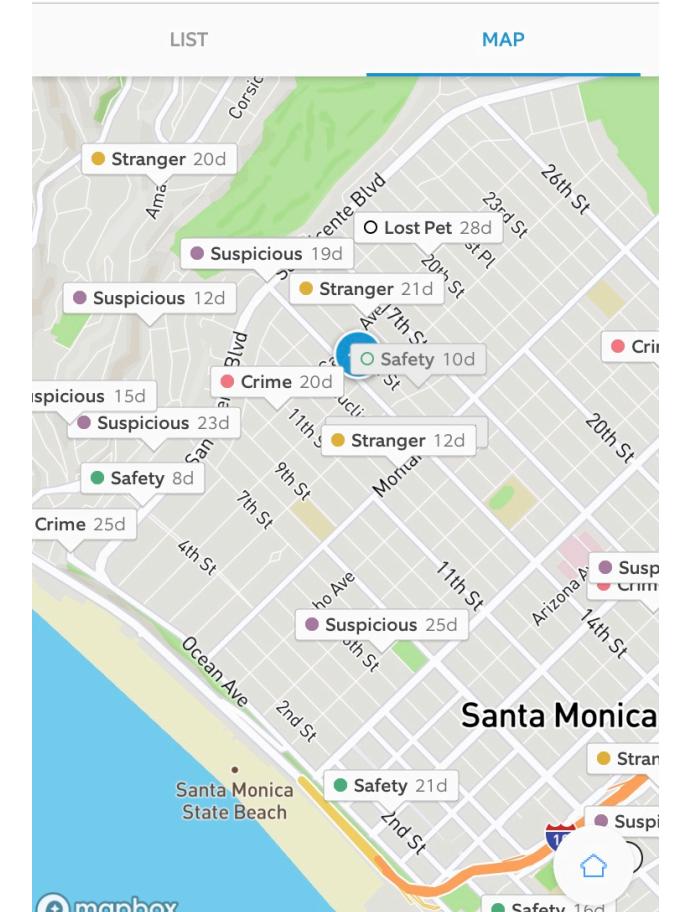
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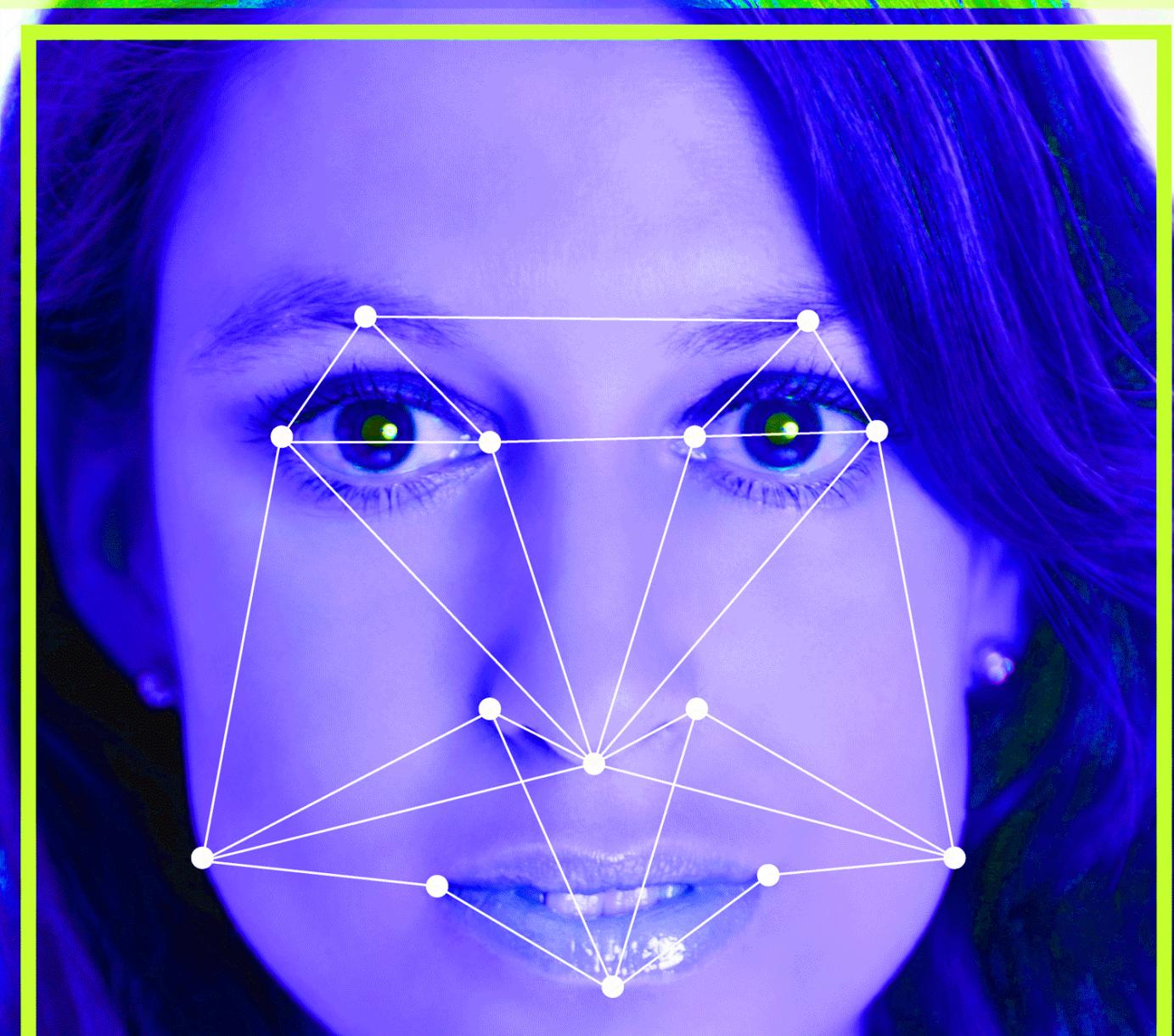
- Right to View/Copy Images: A person captured by a PCSS has no right to view or copy the image (can get copy if there is litigation)
- Obligation to Keep Images: An IOT device user/Service Provider has no obligation to keep an image/video for any period of time (unless notice of litigation)
- Who Owns the Images Stored in the Cloud?: In general the service provider (e.g. Ring) owns the data but has contractual limitations on how the images can be used (read your contract)
- Can Police Compel Access to Images Without Consent: Yes through lawful process police can get access

# Back to Neighbors...What issues (if any) do you see?

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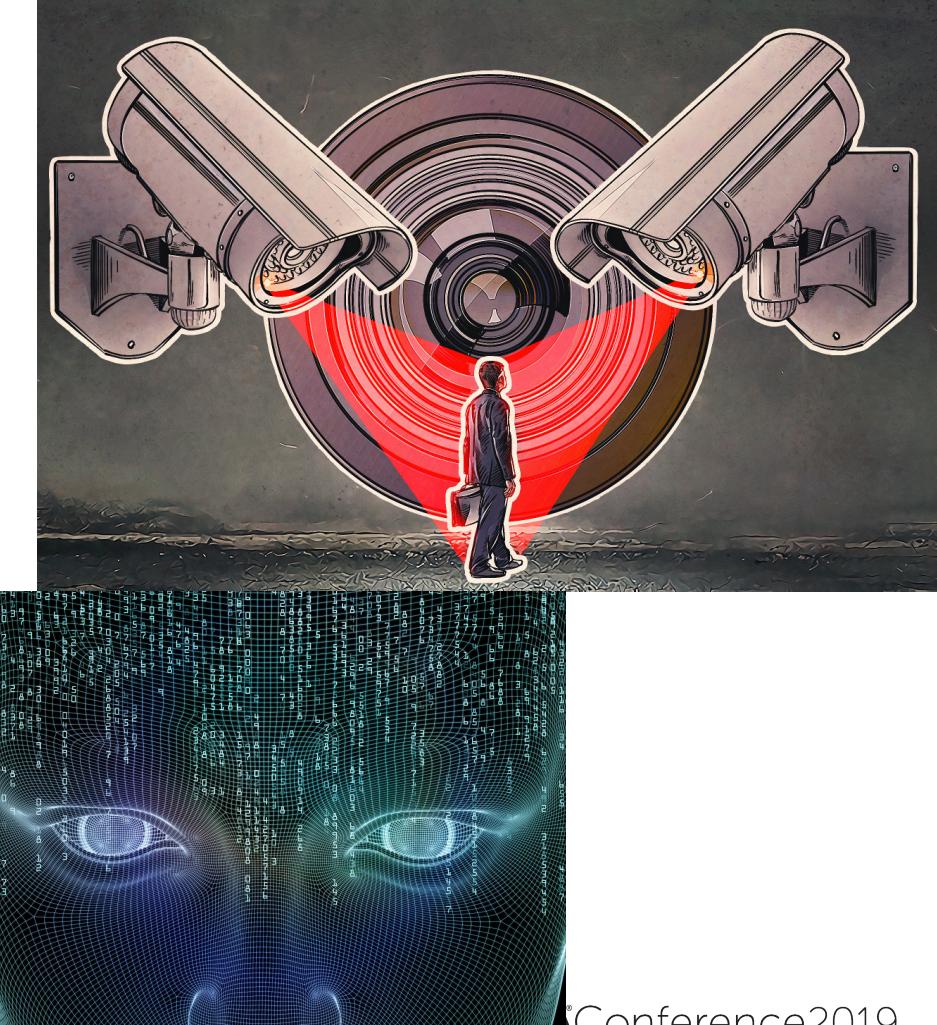
- A user can identify any subject as 'suspicious' and upload IOT captured images to the system
- Police have access to all posts including comments of users on the system
- Police can request video/photos from users of IOT devices via the platform. If a user refuses and has relevant data police can compel disclosure through legal process (virtually all users consent to share with police)
- Subjects captured by user IOT devices in public areas (e.g. on public sidewalk) have no way to 'opt-out'
- What rights do subjects identified as 'suspicious' uploaded to the portal have, if any?
- Do these issues outweigh the high social utility and success of the system? What is your view?





# Facial Recognition and AI -

- An Amazon US patent filing adds Facial Recognition (FR) and AI to the Neighbors system
- Rather than relying on humans to view PCSS images and compare to other subject images captured by other IOT devices FR and AI will do the heavy lifting
- ‘Garbage in/Garbage Out’ and false positive issues –
- But...humans (police) still make final decisions
- But what about ‘social stigma’ effects?

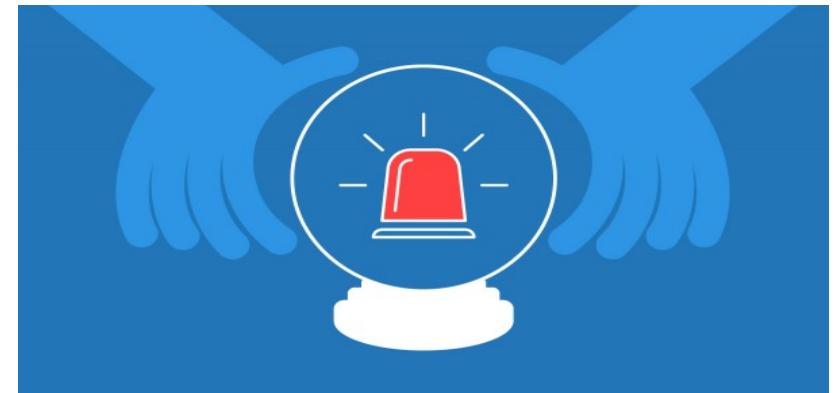


# In the Future: AI Driven PCSS as an Input to ‘All Source’ Predictive Policing Systems....let’s imagine the power

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Suppose for a moment...

- An AI driven Predictive Policing system has access to AI driven PCSS platform data (historic and live)
- The Predictive Policing system uses PCSS, government controlled video surveillance systems, live feed police body cameras, Automated License Plate Readers (ALPR) and other public/non-public data source inputs to scan for specific subjects and
- Deploys police resources likely area when system predicts specific crime will likely occur...



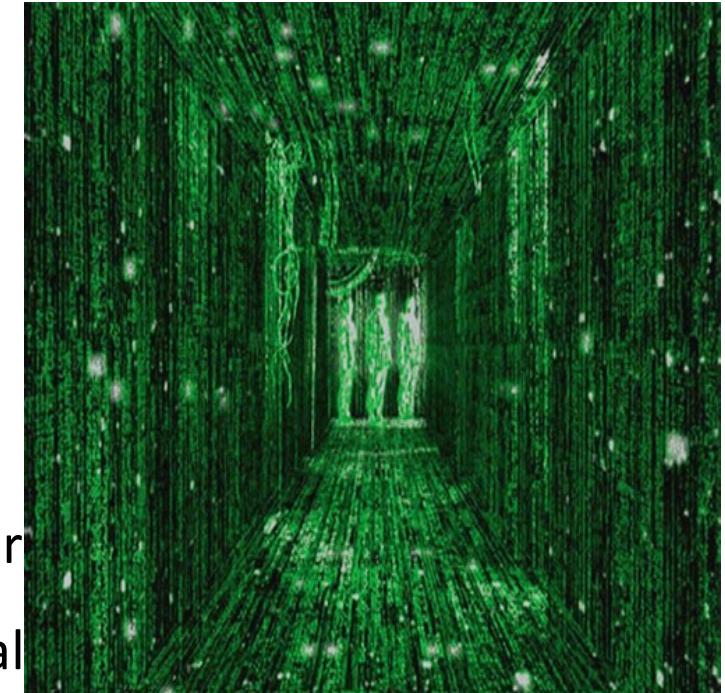
# In the Future: AI Driven PCSS as an Input to ‘All Source’ Predictive Policing Systems....let’s imagine the power

- Crimes are prevented and/or intercepted in progress
- High Social Utility?
- Creepy? Far Fetched?
- What are your views....?



## Some Key Takeaways...My Crystal Ball Predictions...

- IOT Cloud based Private Consumer Surveillance Systems are here to stay and FR and AI will be added (unless limited by local law)
- PCSS will be data inputs into AI driven Predictive Policing Systems as part of an All Source Data Collection design to identify in real time subjects alleged (and in the future predicted) to commit a crime
- These technologies are too compelling (and useful) for governments not to deploy regardless of data privacy and social utility concerns that may curtail commercial use applications



## My Crystal Ball Predictions...(Con't)

- Governments have legitimate state interests in providing safety and security for citizens, but...
- Insufficient safeguards exist for data integrity, fairness and bias of algorithms, misuse, data security/breach protection including legal/civilian checks and balances. More discussion needed before deployment
- Many countries will ultimately deploy this technology –
  - China: yes
  - US: yes but perhaps with some local LE and/or commercial use limitations
  - EU: yes for LE/National Security but commercial limitations (GDPR)
  - SG, TH, MY: yes by government but perhaps commercial limitations (?)



# Apply What You Have Learned Today

- Next Week:
  - Identify what IOT PCSS are available in your area, the functionality, whether a police portal is included, the relevant data privacy and use agreements and costs
- Next Month:
  - Evaluate whether deploying a PCSS makes sense for you as an enterprise and/or individual, decide which system to deploy and if so deploy the system
- At the Six Month Mark After Deployment:
  - Evaluate the utility of the PCSS deployed, positives and negatives and re-evaluate (if necessary) the decision to deploy



# Q&A ANSWERS



Jeffrey J. Blatt  
Of Counsel

Tilleke & Gibbins International Ltd.  
Bankgok, Thailand  
E: jeffrey.b@tilleke.com



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