

# PANOPTICON: Global Surveillance Architecture: Life Of A Child 2014

Raj Goel, CISSP

[raj@brainlink.com](mailto:raj@brainlink.com)

917-685-7731

[www.RajGoel.com](http://www.RajGoel.com)

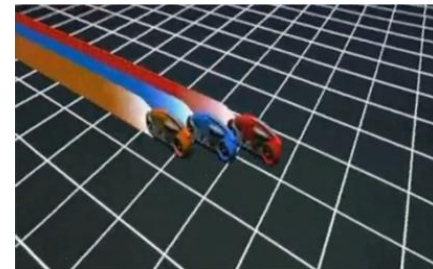
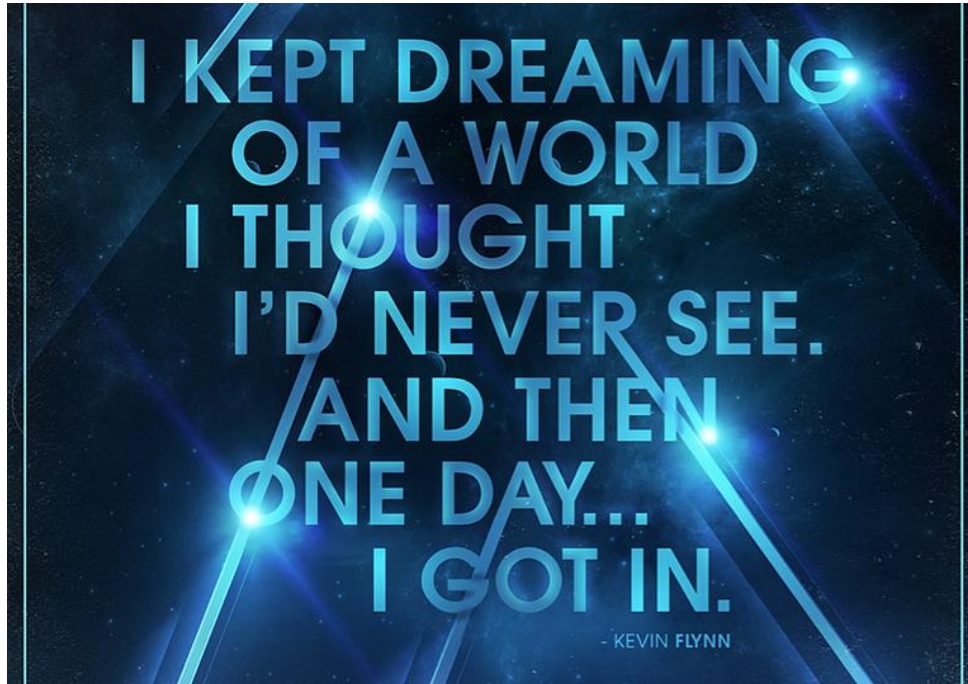
@rajgoel\_ny



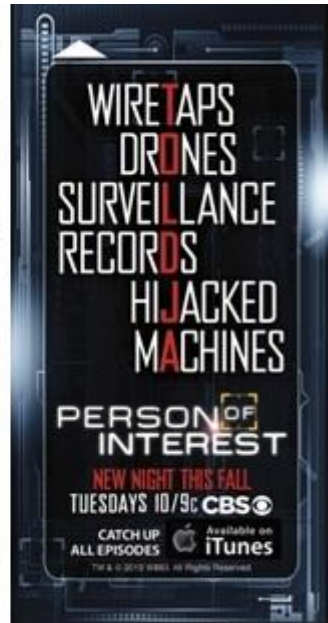
# ISSA

Information Systems Security Association

# Expectation



# Reality



Tweet Tip: Finch is my hero...



**ISSA**  
Information Systems Security Association

# Lifecycle Of A Child

- From Pre-birth Thru College



Image courtesy of Banksy

# Necessary Identifiers

- Mother's Maiden Name
- Date Of Birth
- City Of Birth
- Name
- Phone

# Mother's Maiden Name



GRACE DUNLAN &  
DALLON BOURJET

WERE UNITED AS ONE  
IN MARRIAGE  
IN A PRIVATE CEREMONY  
IN MAUI, HAWAII  
ON MAY 1ST, 2010.

YOU ARE INVITED TO ATTEND  
AN OPEN HOUSE RECEPTION  
HELD IN CELEBRATION OF THEIR UNION  
ON MAY 29TH, 2010 BETWEEN 4 - 7 P.M.  
GREAT OAKS PARK  
GLENDALE, CALIFORNIA

CARDCHIEF.COM

Tweet Tip: Victorian standards are good enough



**ISSA**  
Information Systems Security Association

# Date Of Birth (potential)



Tweet Tip: Bump dates bump off baby's privacy



**ISSA**  
Information Systems Security Association

# Facebook is (NOT!) your friend

facebook



Expecting a Baby

2012



Tweet Tip: Facebook is like ...<insert analogy>



**ISSA**  
Information Systems Security Association



# Date Of Birth (and siblings too!)

BACK



Tweet Tip: Women love to share their weight...



**ISSA**  
Information Systems Security Association

# City Of Birth

**St James Mercy**  
HEALTH SYSTEM  
"Our Community...  
Our Hospital"

Home Find a Doctor **Services & Clinics** Patients & Visitors Careers

**SERVICES & CLINICS**

- Ambulatory Day Surgery
- Behavioral Medicine & Addiction
- Cancer Services Program
- Cardiac Rehabilitation
- Clinics
- Diabetes Education
- Diagnostic Medical Imaging
- Dialysis Unit
- Discharge Planning
- Emergency Department
- Express Care Clinic
- General & Colorectal Surgery
- Hospice Mercy Suite

**Babies Online**

**Little Miracles at St. James Mercy Hospital**

[Augustus Gregory](#)  
[born to Elizabeth and Anthony March 24, 2014](#)

[Nora Marie](#)  
[born to Staci and Jared March 20, 2014](#)

[Anna Marie](#)  
[born to Katelvyne and Mark March 18, 2014](#)

[Kiera Lynn](#)  
[born to Janet and Cameron March 18, 2014](#)

## St. James Mercy Hospital

411 Canisteo Street  
Hornell, NY 14843

(607) 324-8000

[information@sjmh.org](mailto:information@sjmh.org)

[www.stjamesmercy.org](http://www.stjamesmercy.org)

Tweet Tip:HIPAA...what is it good for?



**ISSA**  
Information Systems Security Association

# Delivery Nurse?

## Baby Faces

CLICK ON THE BABY'S NAME FOR THE FULL PHOTO.

Search Results

< Previous | 1 2 3 4 5 | Next >



### Welcome Taylor Kay

Born to Mindy and John  
Gender: F  
Date of birth: April 15, 2014  
Time: 8:13 AM  
Length: 18 1/2 inches  
Weight: 7 pounds 3 ounces  
Delivered by Julie Huston, CNM



### Welcome Paisley Lynn

Born to Ashley and Greg  
Gender: F  
Date of birth: April 15, 2014  
Time: 6:58 AM  
Length: 20 inches  
Weight: 7 pounds 15 ounces  
Delivered by Julie Huston, CNM



### Welcome Alaina Anne

Born to Kelley and Brian  
Gender: F  
Date of birth: April 14, 2014  
Time: 11:37 PM  
Length: 21 inches  
Weight: 8 pound 7.5 ounces  
Delivered by Julie Huston, CNM



### Welcome Chase Matthew

Born to Amanda and Lonnie  
Gender: M  
Date of birth: April 14, 2014  
Time: 10:06 PM  
Length: 19 inches  
Weight: 7 pounds 3 ounces  
Delivered by Julie Huston, CNM



### Welcome Cole Stephen

Born to Alaina and Ryan  
Gender: M  
Date of birth: April 10, 2014  
Time: 5:36 PM  
Length: 20 inches  
Weight: 7 pounds 12.3 ounces  
Delivered by Dr. Charles Camacho



### Welcome It's a girl!

Born to Jamie  
Gender: F  
Date of birth: April 08, 2014  
Time: 1:40 PM  
Length: 18 inches  
Weight: 6 pounds 6 ounces  
Delivered by Julie Huston, CNM

< Previous | 1 2 3 4 5 | Next >

**SOMERSET**HOSPITAL  
IMPROVING YOUR HEALTH. AND YOUR LIFE.

Somerset Hospital  
225 South Center  
Avenue  
Somerset, PA 15501  
Phone: (814) 443-5000  
© Copyright 2012  
Somerset Hospital

<http://www.somersethospital.com/>

Tweet Tip:HIPAA...what is it good for?



**ISSA**  
Information Systems Security Association

# Home Is Your Castle

- **Stranger Hacks Into Baby Monitor and Screams at Child**
- According to Heather Schreck, the stranger was yelling at her 10-month-old daughter Emma, “Wake up baby. Wake up baby.’ Then just screaming at her trying to wake her up.” Then Adam Schreck, the baby’s father, said when he ran into the room, the camera turned and started shouting at him.
- <http://time.com/79170/stranger-hacks-into-baby-monitor-and-screams-at-child/>

Tweet Tip:Dumb people live in SMART houses



**ISSA**  
Information Systems Security Association

# Castle Breach

- In August 2013, [NewsFeed](#) reported via [ABC13](#) that in Houston, a stranger saw a two-year-old girl's name written on her bedroom wall via the Internet-connected cam and started making abusive comments like ““Wake up you little sl#t.””
- <http://time.com/79170/stranger-hacks-into-baby-monitor-and-screams-at-child/>



# How do we get phone #?



Tweet Tip: Children are future customers. FLEECE THEM!



**ISSA**  
Information Systems Security Association

# We don't need no education...

- **New York parents furious at program, inBloom (\$100M, funded by Gates, Murdoch, etc), that compiles private student information for companies that contract with it to create teaching tools**

Read more: <http://www.nydailynews.com/new-york/student-data-compiling-system-outrages-article-1.1287990#ixzz32HxtpQ1h>

Tweet Tip: Gates...leave those kids alone!



**ISSA**  
Information Systems Security Association

# In Loco Parentis? HAH!

- **School pays \$70K to student forced to give up Facebook password**

<http://www.nydailynews.com/news/national/school-pays-70-000-forcing-student-reveal-facebook-password-article-1.1736528>

- **Principal creates fake account to spy on students**

<http://www.cnet.com/news/principal-resigns-amid-accusations-of-facebook-spying/>

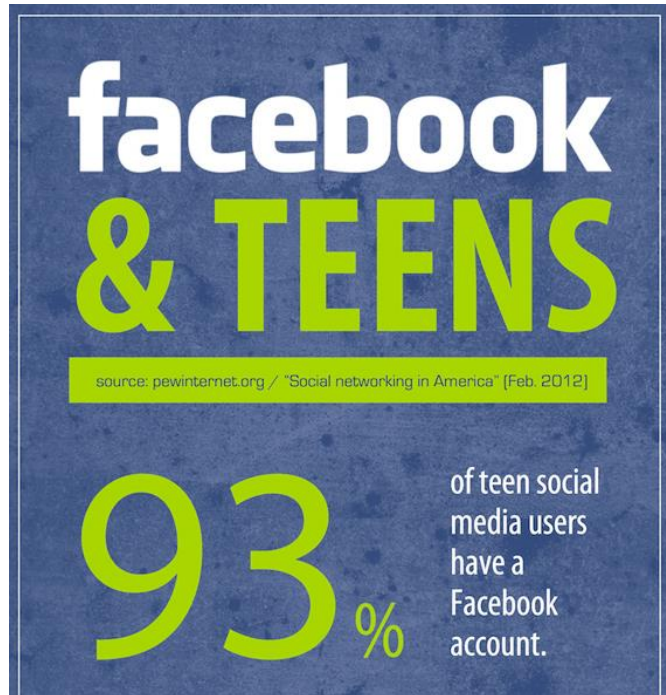
Tweet Tip: Principal...leave those kids alone!



**ISSA**  
Information Systems Security Association



# Teenage Goldmine



Tweet Tip: Money, Money, Money!!

# Prevent your kids from becoming accidental porn stars

- Children and young people are posting thousands of sexually explicit images of themselves and their peers online, which are then being stolen by porn websites, according to a leading internet safety organisation.
- A study by the Internet Watch Foundation (IWF) reveals that 88% of self-made sexual or suggestive images and videos posted by young people, often on social networking sites, are taken from their original online location and uploaded on to other websites.
- Reams of sexually explicit images and videos are being uploaded by children and young people, the study found. During 47 hours, over a four-week period, a total of 12,224 images and videos were analysed and logged. The majority of these were then mined by “parasite websites” created for the sole purpose of displaying sexually explicit images and videos of young people.
- - <http://www.guardian.co.uk/technology/2012/oct/22/parasite-porn-websites-images-videos>

Tweet Tip: Girls Gone Wild!



# Facebook outs most personal secrets

- Bobbi Duncan desperately wanted her father not to know she is lesbian. Facebook told him anyway.
- One evening last fall, the president of the Queer Chorus, a choir group she had recently joined, inadvertently exposed Ms. Duncan's sexuality to her nearly 200 Facebook friends, including her father, by adding her to a Facebook Inc. discussion group. That night, Ms. Duncan's father left vitriolic messages on her phone, demanding she renounce same-sex relationships, she says, and threatening to sever family ties. The 22-year-old cried all night on a friend's couch. "I felt like someone had hit me in the stomach ...

- <http://online.wsj.com/article/SB10000872396390444165804578008740578200224.html>

Tweet Tip: I need facebook like I need .....



# Surveillance Nations



Strengthening

Image courtesy of Banksy

#ISC2Congress

# What to teach your Kids, Employees & Interns About Social Media



**“Everything You Say Can And Will Be Used Against You, By Anybody, Now Or Decades Into The Future.” – Falkvinge**

<http://www.brainlink.com/free-stuff/webinars/what-to-teach-your-kids-employees-and-interns-about-social-media/>

Tweet Tip: There's no 5<sup>th</sup> amendment on the internet



**ISSA**  
Information Systems Security Association

# PRISM – How & What



<http://fr.slideshare.net/EmilandDC/dear-nsa-let-me-take-care-ou>

Tweet Tip: NSA IS my backup solution

# PRISM – The Players



<http://fr.slideshare.net/EmilandDC/dear-nsa-let-me-take-care-ou>

Tweet Tip: NSA IS my backup solution

# SEC, DOJ, ECPA

- for a long time, **the Department of Justice DOJ argued ECPA allowed it to circumvent the Fourth Amendment and access much of your email without a warrant..**
- **Securities and Exchange Commission SEC, may be doing the same exact thing: it is trying to use ECPA to force service providers to hand over email without a warrant, in direct violation of the Fourth Amendment.**
- ECPA has been used to argue that emails older than 180 days may be accessed without a warrant based on probable cause. Instead, the agencies send a mere subpoena, which means that the agency does not have to involve a judge or show that the emails will provide evidence of a crime.
- <https://www.eff.org/deeplinks/2014/04/sec-obtaining-emails-without-warrant-or-not>

Tweet Tip: There's no 4<sup>th</sup> Amendment on the internet



# Utah Cops, Warrantless Search

- Utah law enforcement officials searched, **without a warrant, the prescription drug records of 480 public paramedics, firefighters and other personnel to try to figure out who was stealing morphine from emergency vehicles.**
- **The warrantless search of Utah's database chronicling every controlled substance dispensed by a pharmacist resulted in charges against one paramedic that have nothing to do with the original investigation.** Instead, the authorities discovered an employee whose records exhibited "the appearance of Opioid dependence" and lodged prescription fraud charges against paramedic Ryan Pyle. Now Pyle faces a maximum five-year prison sentence if convicted of the felony.

- <http://arstechnica.com/tech-policy/2014/04/utah-cops-warrantlessly-search-drug-records-of-480-emergency-personnel/>



# Domestic Surveillance

- Once upon a time, when it came to hi-tech phone surveillance, the NSA used to be the only game in town.
- And while some of the capabilities exposed by former contractor Edward Snowden are indeed mind-blowing, these days anyone – from your best friend, to your worst enemy — now has the ability to listen into your most intimate conversations, and it's only a few smartphone clicks away.
- One of the newest apps that puts that kind of once formidable processing power – in the palm of your hands is called Crowd Pilot.
- <http://www.rajgoel.com/2014/02/the-age-of-personal-surveillance-is-here/>

Tweet Tip: There's no 5<sup>th</sup> Amendment on the internet



**ISSA**  
Information Systems Security Association

# Prince George, The Panopticon Kid

- **Charlie Stross**, “This prince is going to find things a little different because he’s going to be the first designated future British monarch to grow up in a hothouse panopticon, with ubiquitous surveillance and life-logging ...I expect there to be Facebook account-hacking attacks on his friends, teachers, and associates—and that’s just in the near term. He’s going to be the first royal in the line of succession to grow up with the internet: his father, Prince William, was born in 1982 and, judging by his A-level coursework, is unlikely to have had much to do with computer networking in the late 1990s. This kid is going to grow up surrounded by smartphones, smart glasses (think in terms of the ten-years-hence descendants of Google Glass), and everything he does in public can be expected to go viral despite the best efforts of the House of Windsor’s spin doctors.”
- <http://www.antipope.org/charlie/blog-static/2013/07/monarchy-versus-the-panopticon.html>



## What will the royal baby look like?

A genetic counsellor's predictions to what the royal baby could look like as a toddler...



...and as a young adult



Tweet Tip: Soon everyone will have 15gb of fame



**ISSA**  
Information Systems Security Association

# What Does Facebook Sell About You To Corporations, Governments, etc?

Facebook  
Gender

Get access to the following for users that authenticate with Facebook:

**Basic Profile** Enterprise Pro Plus Basic  
Read access to the users' profile data. Returned by the [auth\\_info](#) API call.

Address	Birthday	Email	Profile Photo
Verified Email	Display Name	Gender	Homepage
Identifier	Name	Preferred Username	UTC Offset

**Extended Profile** Enterprise Pro Plus  
Read access to the users' extended profile data. Returned by the [auth\\_info](#) API call.

About Me	Activities	Addresses	Albums
Books	Current Location	Emails	Games
Groups	Interested In M...	Interests	Languages Spoken
Movies	Music	Organizations	Page Likes
Photos	Political Views	Quotes	Relationship St...
Religion	Status	TV Shows	Videos
Friends List	Heroes	Id	Last Updated
Name	Profile URL	Sports	URLs

**Contacts** Enterprise Pro  
Read access to the users' friends. Returned by the [get\\_contacts](#) API call.

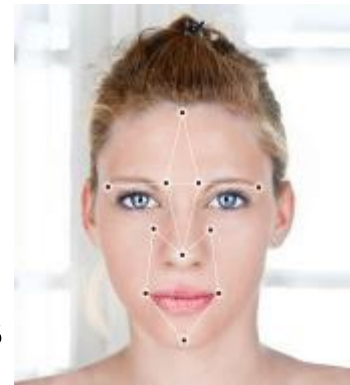
About Me	Activities	Addresses	Birthday
Books	Current Location	Interested In M...	Interests
Languages Spoken	Movies	Music	Organizations
Photos	Political Views	Quotes	Relationship St...
Religion	Status	TV Shows	Display Name
Gender	Heroes	Id	Last Updated
Name	Preferred Username	Profile URL	Sports
URLs			

<https://twitter.com/TheBakeryLDN/status/427531934294880256/photo/1>

Tweet Tip: I AM the product

# Minority Report

- Technology giant NEC's Hong Kong branch is promoting a small, "easy to install" appliance which will enable businesses to monitor their customers based on facial recognition.
- From a recent NEC press release:
- The new Mobile Facial Recognition Appliance enables organizations in any industry to offer an ultra-personalized customer experience by recognizing the face of each and every customer as soon as they set foot on the premises.
- <http://nakedsecurity.sophos.com/2014/04/21/facial-recognition-coming-soon-to-a-shopping-mall-near-you/>



# 100x Better, 1M Faster, Dirt Cheap

- As [Lesley Stahl reported on "60 Minutes"](#), "the ability of computers to identify faces has gotten 100 times better, a million times faster, and exponentially cheaper."
- The "60 Minutes" segment gives an in-depth account of all the scary advancements in the field – highlighting the technology's ability to track your whereabouts, mine your personal data, and even predict your social security number.
- <http://www.businessinsider.com/advertisers-using-facial-recognition-technology-2013-5>

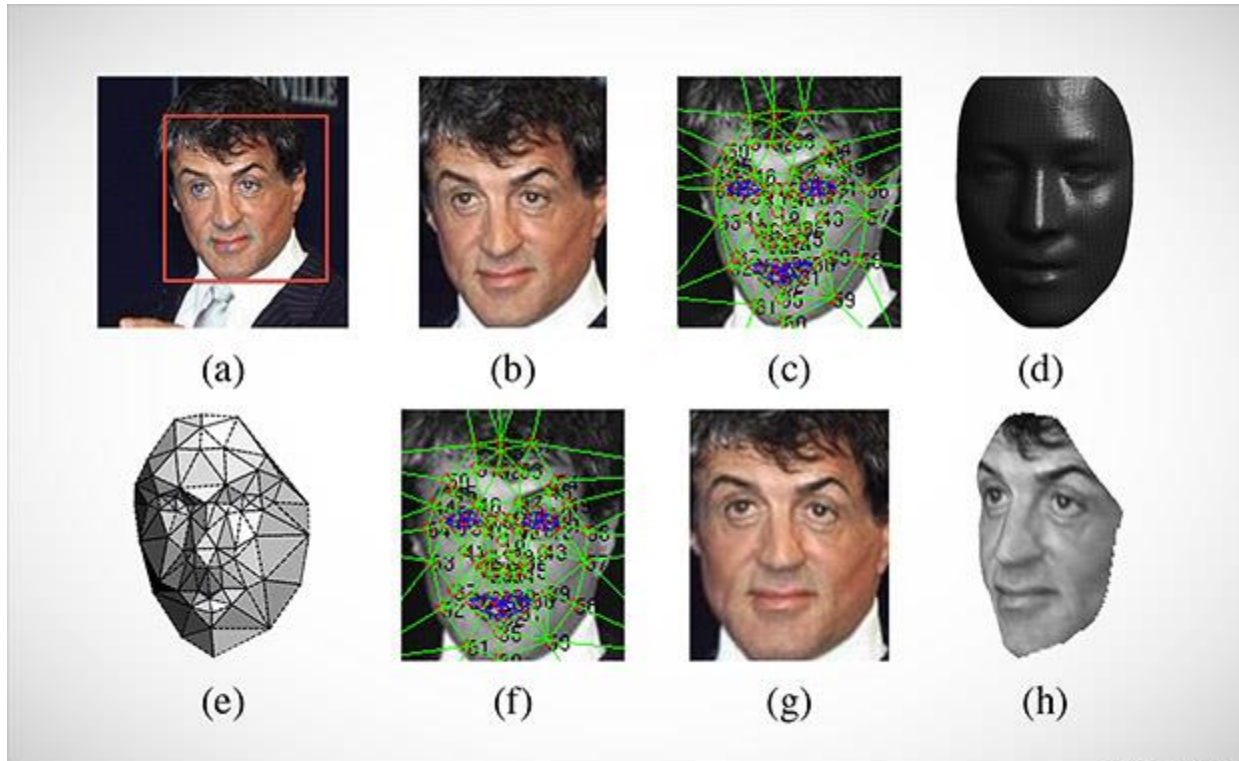


Tweet Tip: Arnold Schwarzneger was prophetic



**ISSA**  
Information Systems Security Association

# Facebook Side Profiling



<http://money.cnn.com/2014/04/04/technology/innovation/facebook-facial-recognition/>

Tweet Tip: Privacy is EXPENDABLE



**ISSA**  
Information Systems Security Association

# Computers Beat Humans

- **The Face Recognition Algorithm That Finally Outperforms Humans**
- **Computer scientists have developed the first algorithm that recognises people's faces better than you do**
- Humans: 97.53%
- Machine: 98.52%
- <https://medium.com/the-physics-arxiv-blog/2c567adbf7fc>

Tweet Tip: Would you like to play a game?



**ISSA**  
Information Systems Security Association





## TARGET

- Target has figured out how to data-mine its way into your womb, to figure out whether you have a baby on the way long before you need to start buying diapers.
- Lots of people buy lotion, but one of Pole's colleagues noticed that women on the baby registry were buying larger quantities of unscented lotion around the beginning of their second trimester. Another analyst noted that sometime in the first 20 weeks, pregnant women loaded up on supplements like calcium, magnesium and zinc. Many shoppers purchase soap and cotton balls, but when someone suddenly starts buying lots of scent-free soap and extra-big bags of cotton balls, in addition to hand sanitizers and washcloths, it signals they could be getting close to their delivery date.
- <http://www.nytimes.com/2012/02/19/magazine/shopping-habits.html>

# The Fugitive?

- For the past nine months, Janet Vertesi, assistant professor of sociology at Princeton University, tried to hide from the Internet the fact that she's pregnant — and it wasn't easy.
- Pregnant women are incredibly valuable to marketers. According to Vertesi, the average person's marketing data is worth 10 cents; a pregnant woman's data skyrockets to \$1.50. And once targeted advertising finds a pregnant woman, it won't let up.
- **“I used [Tor] for BabyCenter.com.”**
- When her husband tried to buy \$500 worth of Amazon gift cards with cash in order to get a stroller, a notice at the Rite Aid counter said the company had a legal obligation to report excessive transactions to the authorities.
- "Those kinds of activities, when you take them in the aggregate ... are exactly the kinds of things that tag you as likely engaging in criminal activity,”
- <http://mashable.com/2014/04/26/big-data-pregnancy/>

# FBI, Next Gen Ident (NGI)

## FBI Plans to Have 52 Million Photos in its NGI Face Recognition Database by Next Year

- NGI builds on the FBI's legacy fingerprint database—which already contains well over 100 million individual records—and has been designed to include multiple forms of biometric data, including palm prints and iris scans in addition to fingerprints and face recognition data. NGI combines all these forms of data in each individual's file, linking them to personal and biographic data like name, home address, ID number, immigration status, age, race, etc. This immense database is shared with other federal agencies and with the approximately 18,000 tribal, state and local law enforcement agencies across the United States.
- <https://www.eff.org/deeplinks/2014/04/fbi-plans-have-52-million-photos-its-ngi-face-recognition-database-next-year>

# Drones Outta Compton!

- “In a secret test of mass surveillance technology, the Los Angeles County Sheriff's Department sent a civilian aircraft\* over Compton, California, capturing high-resolution video of everything that happened inside that 10-square-mile municipality.
- Compton residents weren't told about the spying, which happened in 2012. **"We literally watched all of Compton during the times that we were flying, so we could zoom in anywhere within the city of Compton and follow cars and see people,"** Ross McNutt of Persistence Surveillance Systems told the Center for Investigative Reporting
- <http://www.theatlantic.com/national/archive/2014/04/sheriffs-deputy-compares-drone-surveillance-of-compton-to-big-brother/360954/>

# Putin On The SORM

Russian law gives Russia's security service, the FSB, the authority to use **SORM "System for Operative Investigative Activities"** to collect, analyze and store all data that transmitted or received on Russian networks, **including calls, email, website visits and credit card transactions.**

- SORM has been in use since 1990 and collects both metadata and content.
- SORM-1 collects mobile and landline telephone calls.
- SORM-2 collects internet traffic.
- **SORM-3 collects from all media including Wi-Fi and social networks and stores data for three years.**

**SORM is routinely used against political opponents and human rights activists** to monitor them and to collect information to use against them in "dirty tricks" campaigns. Russian courts have upheld the FSB's authority to surveil political opponents even if they have committed no crime.

**Russia used SORM during the Olympics to monitor athletes, coaches, journalists, spectators, and the Olympic Committee**, publicly explaining this was necessary to protect against terrorism. The system was an improved version of SORM that can combine video surveillance with communications intercepts.

- [https://www.schneier.com/blog/archives/2014/04/info\\_on\\_russian.html](https://www.schneier.com/blog/archives/2014/04/info_on_russian.html)

Tweet Tip: 1984 shouldn't be a HOWTO

# Chinese Democracy

- All important foreign sites are cloned for the Chinese audience
- Servers **MUST** be located in China
- Companies are required to self-censor **AND** pay for censors
- 50-cent Army publishes government narrative
- Regions can be isolated from the internet without users being aware
  - Developed by Cisco, Blue Coat Systems, etc.
  - Refined by China

Tweet Tip: We live in a Chinese Democracy

# Most Surveilled Place On Earth



Is making a camera in the shape of a friendly animal a subtle form of propaganda?

Tweet Tip: Mickey is my Big Brother

# Mouse-veillance



A crucial part of the system: “MagicBands” — bracelets equipped with Radio Frequency Identification (RFID) chips that “will function as room key, park ticket, FastPass and credit card.”

Did you buy a balloon? What attractions did you ride and when? Did you shake Goofy’s hand, but snub Snow White? If you fully use MyMagic+, databases will be watching, allowing Disney to refine its offerings and customize its marketing messages.

- <http://www.alternet.org/disneys-creepy-new-surveillance-tool>



# Mouse-veillance



- Eric Haseltine, who left his post as executive vice president of research and development at Walt Disney Imagineering in 2002 to become associate director for research at the NSA and then became National Intelligence Director John Negroponte's assistant director for science and technology.
- • Bran Ferren, who served on advisory boards for the Senate Intelligence Committee and offered his technological expertise to the NSA and the DHS.
- If Mickey does it at "the most wonderful place on Earth" – and willingly shares his biometrics secrets with the government

Read more: <http://www.businessinsider.com/this-is-how-we-know-that-the-shocking-revelations-about-trapwire-spying-are-true-2012-8#ixzz3GyZqGHk3>

Tweet Tip: Mickey is my Big Brother

# Next Steps

1. EDUCATE yourself and the young people in your life on the REALITY of privacy
2. LOBBY your elected officials and others to DEFEND your 1<sup>st</sup>, 4<sup>th</sup> & 5<sup>th</sup> Amendment rights (US) or EU Human Rights
3. Review your foreign travel technology plans
4. JOIN the EFF
5. Adopt the Canadian/PIPEDA Approach
6. Demand a LEMON LAW for Software

Tweet Tip: dammit @rajgoel\_ny I'm a CISO not an educator

# Final Thoughts

In every generation, a new King John; a new Khrushchev and a new Solzhenitsyn is born. It's OUR job as citizens to DEFEND the rights given to us by our respective constitutions and DEMAND that they be conferred on our WEAKEST citizens, not just the strongest or the wealthiest.

**Privacy is a human right....not a luxury**

# Contact Information

## Raj Goel, CISSP

Chief Technology Officer  
Brainlink International, Inc.

C: 917-685-7731

raj@brainlink.com

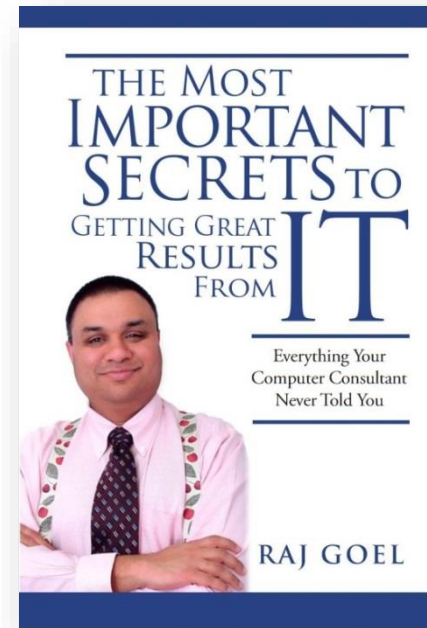
www.RajGoel.com

www.linkedin.com/in/rajgoel

@rajgoel\_ny

Author of **“The Most Important Secrets To Getting Great Results From IT”**

<http://www.amazon.com/gp/product/0984424814>



Tweet Tip: Ask Raj to speak at your conference