Your Toaster Said *What* to Your Refrigerator

Legal Issues with the Internet of Things, the Connected Car, the Connected Home, and the Connected Self

Davis Wright Tremaine LLP
DEFINING SUCCESS TOGETHER

What in the World Am I Talking About?

Internet of Things

- Now:
  - Passport RFID Tags
  - Cash registers tied to real time inventory
- Soon:
  - Amazon drones;
  - Deep learning for product recommendations;
  - Pattern recognition in surveillance
  - Sensors on raw food products and plants to boost harvests and decrease waste

dwt.com

What in the World Am I Talking About (Part 2)

Connected Car

- Now:
  – Automated parking systems in cars
  – iPhone giving directions through your Nav System
  – EZ Pass
- Soon:
  – Road sensors routing your car to avoid traffic (like packet switching)
  – Autonomous cars
  – Cars that maintain themselves

dwt.com

What in the World Am I Talking About (Part 3)

Connected Home

- Now:
  – Nest Thermometer
  – Basic Energy Use and Monitoring Sensors and Applications
  – Remote Access to TiVo Device
- Soon:
  – Refrigerator connects to Amazon Fresh;
  – Sweater communicates washing instructions to Washer/Dryer
  – Single instruction changes system settings (e.g. FB post changes lighting, coffee maker status, televisions, etc.)

dwt.com

What in the World Am I Talking About (Part 4)

Connected Self

- Now:
  - FitBit;
  - GoogleGlass; GoogleNow;
- Soon:
  - Virtual reality meetings
  - Computers embedded in and on body parts
  - Your device will detect if you just had a stroke
  - Distance health care diagnosis
  - Consistent health care delivery for chronic conditions.

dwt.com

In Other Words…

The Networking of Everything

dwt.com

This is Just Science-Fiction, Right

- Machine to machine (M2M) communication sounds like science-fiction (and fodder for late night comedy hosts), but M2M, Artificial Intelligence, and Machine Learning is here and growing.

- The market for the Internet of Things is exploding. Analysts suggest this could be a $9 trillion dollar market by 2020 (and shares of companies in data storage, semiconductors, etc. have been going up in large part on this outlook)

- It's hitting the consumer market now. Volvo announced that they will be offering autonomous cars by 2017. Many people already have FitBits on their wrist, Nest thermometers in their homes, and GoodToGo in their cars.

- AI and machine learning are handling unforeseen tasks. For instance, this spring, the first article about an LA earthquake was written by a machine.

- The potential impact on how organizations do business is even more profound, e.g. sensors in large scale refrigeration systems, energy use and generation, traffic management, all sorts of pattern recognition, etc.

- The opportunities for new learning and increased efficiency are enormous in every area of an organization (i.e. this is *Moneyball* writ large).

dwt.com

Are There Any Legal Issues????

BUT OF COURSE

dwt.com

Ok, What Are They?

- Data Collection and Use (and Deletion), i.e. Privacy

- Data Ownership and Access Rules

- Security Issues

- Product Liability; Property Damage; Basic Slip and Fall Issues

- Allocation of Liability and Other Contractual Issues

- Employment Discrimination Issues

- IP Ownership Issues

- Defamation and Free Speech Issues

- Law Enforcement/Surveillance

- The Loss of the "It's Not Possible" Defense

dwt.com

Data Collection and Use (and Deletion), i.e. Privacy

- What are the general laws for collection and use? What will laws governing specific use cases be (because government will make them)?

- What will privacy advocates, regulators, and consumers view as highly sensitive data that businesses and organizations will not (like what happened with location data)

- What will consumers tolerate (e.g. the failure of InBloom; almost 50% distrust businesses to handle "Big Data" properly)

- Will you be able to rely on deidentification in a "Big Data" world?

- Data retention policies will become more important (you can't keep the data forever); "Privacy by design" and limited collection in the first instance becomes more important

- Geoblocking and geolimiting data collection and use will become more important, i.e. do you know where the data is coming from and where it is stored?

- How will things change as we move to a rubric focused more on transparency and "souveillance" (watching the watchers) than on restricting collection in the first place

dwt.com

Data Ownership and Data Access Rules

- Who owns what data and in what format?
  - Between businesses and consumers
  - Among businesses

- Who can access the data and under what circumstances?
  - E.g. when can an insurance company review data in an automobile's "black box"? What about a consumer's supermarket club card?
  - When can a hospital remotely monitor vital signs or deliver medicine?

- Who has what rights in a "Big Data" database that is aggregated and analyzed by one party, but which is collected and contributed by multiple other parties

- These aren't necessarily new issues; we deal with this, for instance, when one has rented content authenticated.

dwt.com

Security Issues

- Three Issues: Data Security, Network Security, and Physical Security

- Physical: The IoT involves "things." Therefore, devices that contain important data can be stolen.

- Network: The number of data streams are exploding, the number of people requiring access is exploding, all of which makes this incredibly complex and nearly impossible to do well

- Data: Have to secure data both "at rest" and "in motion" (i.e. it needs to be encrypted over the entire data path)

- If devices are hardened and the entire system is encrypted throughout, it lessens the chance that useful data can be extracted

- Of course if Target can't secure data and networks, what are the chances that Target's customers will be able adequately secure their devices

- And hackers become more diverse and get more sophisticated all the time (e.g. Stuxnet malware; hacking an autonomous car or medical device)

dwt.com

Product Liability; Property Damage; Basic Slip and Fall Issues

- Who is responsible for machines that fail? What will a manufacturer be able to disclaim?

- When do we allocate responsibility to a user who is not a user (e.g. the Google autonomous car prototype with two buttons – "start" and "emergency stop")

- What about machines that damage each other, especially if those machines have been given partial autonomy or have deep learning abilities

- Will machines and networks have rights of way, e.g. who owns the space over your house? Do homeowners have to trim trees so that Amazon drones can deliver packages to their neighbors?

dwt.com

Allocation of Liability and Other Contractual Issues

- Can a machine enter into an agreement?

- Do you know what you agreed to?
  - Nested Agreements
  - Non-Negotiable Agreements
  - Simple Execution Process

- Can the network perform as advertised?

- Will all of the "things" interoperate properly?

- Whose brand and user experience will define the interaction?

- Can you find a fair allocation of liability, especially when we're not sure how all of the laws will apply

dwt.com

Employment Discrimination Issues

- Ubiquitous data collection and data analysis may produce outcomes that are contrary to our norms or ideals, e.g. that a certain age, gender or race is better or worse at certain work duties.

- They may also offer a pretext for justifying conscious (or subconscious) discriminatory behavior in hiring, promotion, and firing decisions

- Do ubiquitous sensors create the possibility of an illegal work environment? What about on morale? (e.g. Planet Money story on UPS)

- When can an employer access data collected from an employee? Can the employer require access to my FitBit results to review my participation in the wellness program?

dwt.com

Intellectual Property Ownership and Licensing

- Who owns the copyright created by a machine?
    - Input created by Author #1
    - Software created by Author #2
    - Selection order and arrangement of input to software (i.e. the algorithms and parameters) created by Author #3
    - Output by Computer by Computer (Author #4?)

- Does a machine show sufficient orginality/creativity to be copyrightable?

- Can a machine be an inventor? Is the invention "non-obvious" if it's created by a machine?

- Can you draft a scope of license sufficiently broad to cover unforeseen discoveries and uses made by machines (or your desire to use machines)

- Managing IP rights in a 3D printing and devolved manufacturing age (what The Economist calls the next Industrial Revolution).

dwt.com

Defamation and Free Speech Issues

- Can a machine have a right to free speech?
  - Does affording machines free speech accomplish the purposes of the First Amendment?
  - Will a machine self-censor itself without free speech ?

- Can a machine show the requisite intent to defame someone, i.e. "reckless disregard", "calculated falsity", or "ill-will or spite"?

- Having machines generate content is designed to minimize human interaction. How will that impact prepublication review, fact checking, and other basic journalistic techniques?

dwt.com

Law Enforcement and Surveillance

- This isn't just the NSA and Snowden (although under what circumstances the government should monitor behavior just because it can is important)

- Red Light Cameras, for instance, are part of the Internet of Things

- Will "stop and frisk" evolve to "pause and sniff" or "pause and snarf"?

- How will law enforcement cope with being under surveillance themselves?

- Does IoT threaten a lot of low level illegal behavior because monitoring and enforcement can be made more efficient (e.g. overstaying parking spots; speeding tickets)

dwt.com

The Loss of the "It's Not Possible" Defense

- Many compliance obligations have exceptions because of the cost or complexity of implementing the systems necessary

- As systems become cheaper and more ubiquitous, a number of obligations that previously did not trigger compliance obligations could now. For instance:

  - Ensuring that the disabled have full access to facilities, websites, technology, etc.

  - Energy conservation and environmental compliance

  - Production of detailed data logs in response to regulatory investigations

dwt.com

Watch This Space

- Business analysts have said that the Internet of Things is a paradigm shift and its influence is limited only by the creativity of entrepreneurs…

- Hyperbole? Sure. But also code for lots of legal issues, some foreseen, but many unforeseen.

dwt.com

Kraig L. Marini Baker
206.757.8007
kraigbaker@dwt.com
@bakek

Davis Wright
Tremaine LLP
DEFINING SUCCESS TOGETHER