Legal Concepts in Privacy and Security for Innovative Emerging Technologies (Smart Robots, Advanced Ambient Experiences and Our AI Digital Self)

Dr. Raj Sachdev

Legal Futurist

raj@legalfuturist.com

41st IEEE Symposium on Security and Privacy 2020

ABSTRACT

Legal issues in privacy and security for three emerging technologies are discussed in 5 minutes. Smart Robots are here and more are coming. They will provide substantial consumer benefits and personal services. Also, businesses will be engaging consumers more with Ambient Experiences for advanced immersive experiences which can provide much value. Soon, we will also use our AI Digital Self to conduct some of our interactions. As these interact within an IoT/IoE environment, security and privacy legal issues are raised. This presentation will cover some of the key privacy and security legal issues as well as brief strategies on dealing with these.

Bio

Dr. Raj is a Legal Futurist, Academic, Marketer, Privacy and Security Strategist, and Lawyer. A graduate of Oxford University, former visiting researcher at UC Berkeley and Stanford Instructor he serves as Dean at Columbia College and is a member of a working group with the CSA. A Tedx speaker, he has spoken internationally on topics relating to Privacy/Security, Law and Marketing, and Futuristic Technologies.
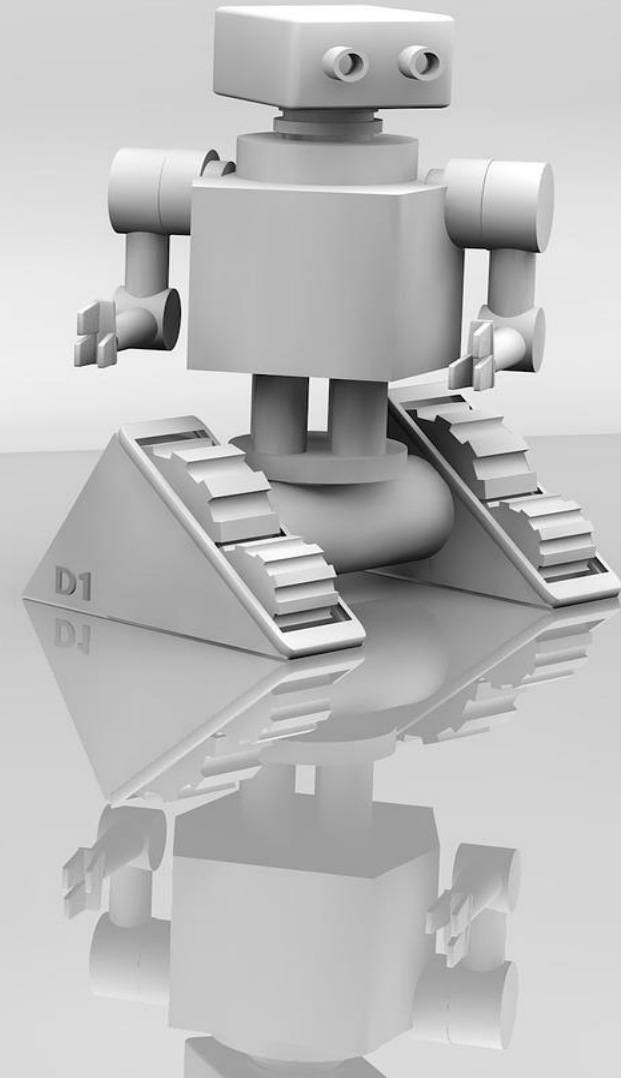
Smart robots will conduct activities, recommend products/services, order things for us and even 3D print our food. [3, 4, 5, 6, 11]

Privacy/Security Legal Considerations

- **Personal data** [12]
- **Continuous Tracking** [12]
- **Data in the wrong hands, DDoS, Availability, MITM, Insider Threat, Impersonation etc.** [14]
- **Potential for life threatening situation**

Potential Strategies

- **Clear legal agreements**
- **Consent** [12]
- **Privacy policies** [15]
- **Legal related security/privacy controls**
- **Reasonable security and privacy** [12]
- **Privacy and security by design** [12]
- **Standards** [9]

Consistent interaction with a combination of AR, VR, MR, AI, ML, Cloud, Edge, Sensors, Devices etc. to provide an exceptional ongoing immersive customer and user experience (CX and UX). [1, 2, 11, 19]

2. Advanced Ambient Experiences

Privacy/Security Legal Considerations
- Device tracking
- Preferences collection
- Availability concerns due to consumer reliance, DDoS, attacks can disrupt experience, data theft, privacy violations etc. [16]

Potential Strategies
- Consumer consent across touchpoints [12]
- Reasonable security and privacy [12]
- Consumer awareness of privacy/security measures
- Consumer choice for certain individual interactions [12]

Our virtual persona (digital twin) will act and respond on our behalf and provide automated decision making. [17]

Privacy/Security Legal Considerations
- **Processing of a host of personal data**
- **Security of interactions and decisions**
- **Impersonation** [17]

Potential Strategies
- **Consent** [12]
- **Reasonable privacy and security** [12]
- **Data deletion options/consumer control** [10, 12]
- **Human rights and gender considerations** [18]
- **Security to prevent bias and prejudicial actions by AI self** [18]

Conclusion

© Raj Sachdev 2020. No legal advice provided.

References

Partially based on dissertation completed by author at Oxford University

[1] Gartner Top 10 Strategic Technology Trends for 2020, https://www.gartner.com/smarterwithgartner/gartner-top-10-strategic-technology-trends-for-2020/

[2] https://www.forbes.com/sites/bernardmarr/2019/01/29/the-worlds-most-watched-tv-show-will-be-hosted-by-artificial-intelligences/#50a6fd5468de

[3] Ben Goertzel, How long until robots rule the world?, Web Summit, 2018, https://www.youtube.com/watch?v=XReaTqdY0fo

[4] CNET, Meet Cozmo, the AI robot with emotions, 2016, https://www.youtube.com/watch?v=DHY5kpGTsDE

[5] Leanna Garfield, This robot can 3D-print and bake a pizza in six minutes, 2017, https://www.businessinsider.com/beehex-pizza-3d-printer-2017-3

[6] Best 3 robots 2018, You will intend to buy in future., Inventions World, 2018, https://www.youtube.com/watch?v=Y23TR34n618

[7] Ann Cavoukian, Privacy by Design The 7 Foundational Principles Implementation and Mapping of Fair Information Practices, https://collections.ola.org/mon/24005/301946.pdf

[8] SDXCentral, What Are the Top 5G Security Challenges?, https://www.sdxcentral.com/5g/definitions/top-5g-security-challenges/

[9] https://www.iso.org/

[10] https://www.ftc.gov

[11] Raj Sachdev, Value Creating our way to the Smart Home of 2050, Tedx Talk, https://www.ted.com/talks/raj_sachdev_value_creating_our_way_to_the_smart_home_of_2050

[12] https://securitypapers.eu/confidentiality-of-personal-data/ ; https://gdpr-info.eu/issues/personal-data/ ; https://oag.ca.gov/privacy/ccpa

[13] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB327

[14] https://www.csoonline.com/article/3187765/robots-lots-of-features-not-much-security.html ; https://www.nytimes.com/2017/03/01/technology/that-cool-robot-may-be-a-security-risk.html

[15] https://cltc.berkeley.edu/wp-content/uploads/2018/06/CLTC_Privacy_of_the_IoT-1.pdf

[16] https://software.intel.com/en-us/articles/success-story-privacy-rights-in-the-ambient-computing-era

[17] https://medium.com/predict/evil-digital-twins-98ec59c2404b; https://mashable.com/video/zoombot-artificial-intelligence-zoom-call-video/

[18] https://carrcenter.hks.harvard.edu/files/cchr/files/humanrightsai_designed.pdf

[19] https://www.vrbo.com/vacation-ideas/travel-guides/staycations/stuck-at-home-virtual-vacation; https://www.accuweather.com/en/travel/top-10-virtual-vacations-you-can-enjoy-from-home/720983 ; https://www.smartertravel.com/virtual-vacations-you-can-take-from-home/

© Raj Sachdev 2020. No legal advice provided.

Legal Concepts in Privacy and Security for Innovative Emerging Technologies (Smart Robots, Advanced Ambient Experiences and Our AI Digital Self)

Dr. Raj Sachdev

Legal Futurist

raj@legalfuturist.com

41st IEEE Symposium on Security and Privacy 2020