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CENTER FOR DEMOCRACY
& TECHNOLOGY

Drones & Privacy

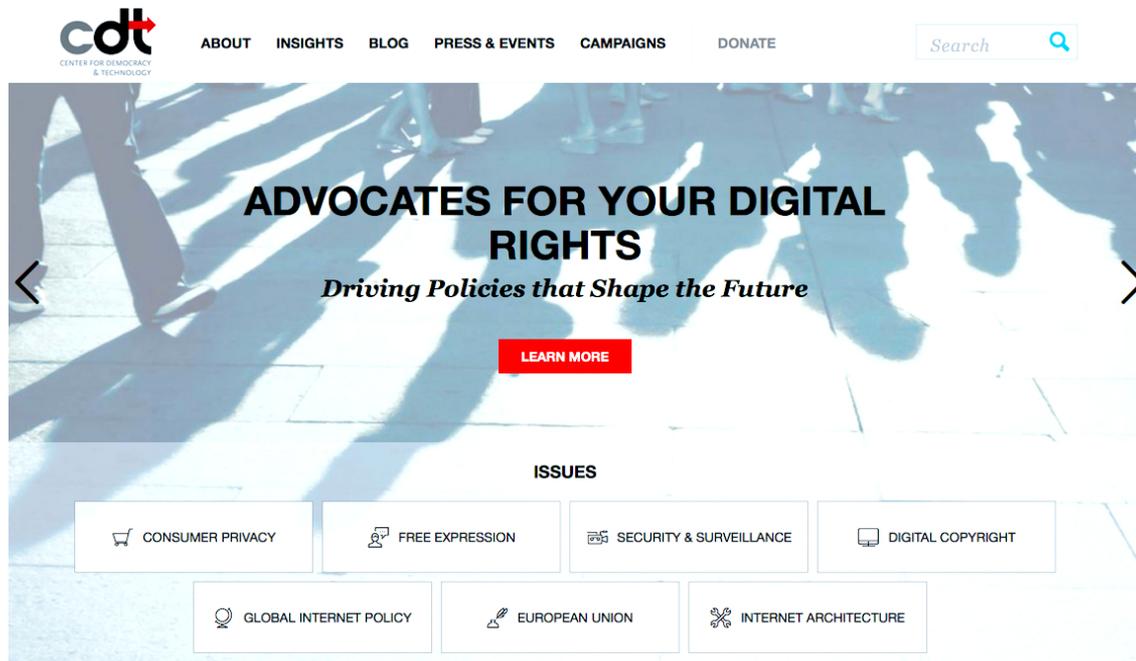
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CDT.org

- Global nonprofit focused on technology and civil liberties.
- Privacy, free expression, Internet governance, innovation, and human rights.





Presentation format

- Uses of Unmanned Aircraft Systems (UAS).
 - Privacy issues.
 - Implications for industry.
- Legal protections for privacy from aerial surveillance.
- Recommendations for privacy and transparency.



A valuable technology

- UAS have many positive uses with little threat to privacy.



Source: <https://www.youtube.com/watch?v=on4DRTUvst0>,
<http://smartplanet.com/blog/bulletin/will-drones-replace-the-pizza-delivery-guy>

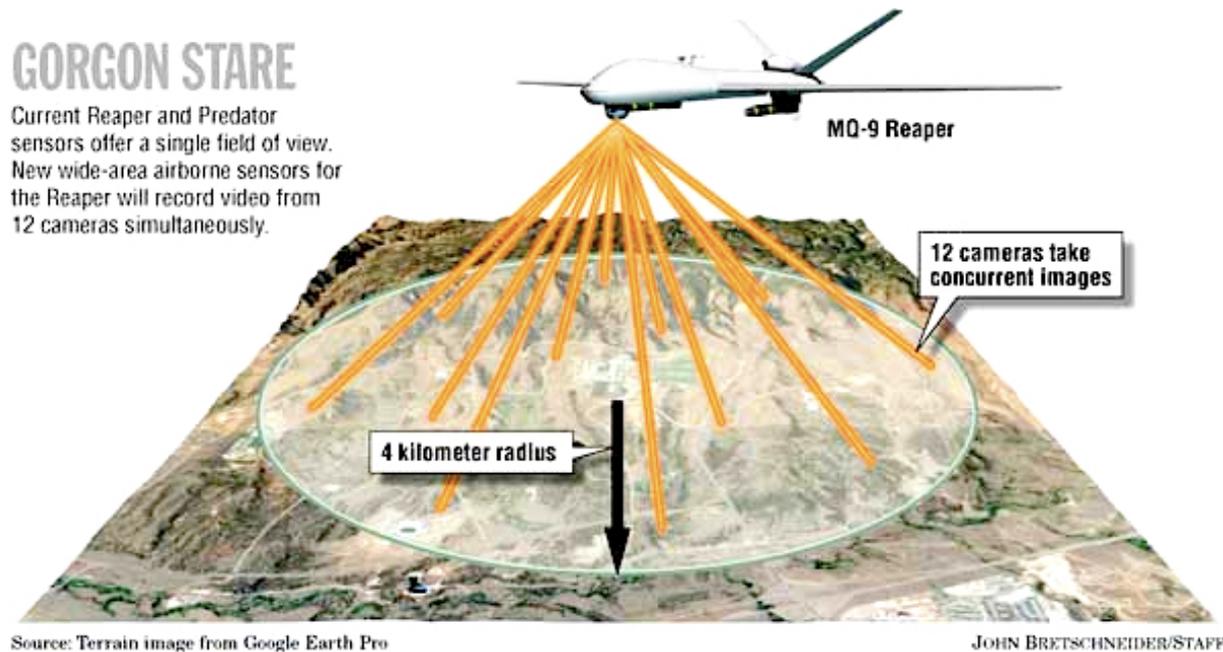


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Privacy issues

- Enables pervasive surveillance:
 - Inexpensive,
 - New vantage points,
 - Platform can be combined with intrusive technologies.



Source: <http://wired.com/2009/02/gorgon-stare>



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We Come In Peace



Source: http://seattletimes.com/html/localnews/2018090173_drones28m.html



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Public trust

- Needed for UAS industry acceptance.
 - Pew 2014 poll: 63% of Americans against personal & commercial UAS.
 - Monmouth 2013 poll: 76% of Americans say government should get a warrant to use UAS.
- Extreme reactions show depth of concern:





Hawk trust



Source: https://www.youtube.com/watch?v=AhDG_WBIQgc
<http://www.adafruit.com/blog/2014/10/13/hawk-attacks-drone-drone-droneday/>



Distrust is costly

- Industry has strong interest in gaining public trust.
- Patchwork of state UAS laws:
 - Alaska, Florida, Idaho, Illinois, Indiana, Iowa, Louisiana, Montana, North Carolina, Ohio, Oregon, Tennessee, Texas, Utah, Virginia, Wisconsin.
 - Most directed at law enforcement (i.e., Idaho, Illinois, Montana, Utah, etc.)
 - More bills introduced (i.e., Alabama, California, etc.)
- PR alone will not suffice. Meaningful rules are needed.
- Do current federal laws adequately protect privacy?



Do federal laws adequately
protect privacy from drone
surveillance?

no.



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Law enforcement use of UAS

- Few clear nationwide restrictions.
 - No statutory due process protections.
 - Limited Fourth Amendment protection - “reasonable expectation of privacy.”
- *California v. Ciraolo* (1986): Warrantless police airplane surveillance from 1000ft of private backyard protected from ground observation by two tall fences.
- *Dow Chemical v. U.S.* (1986): EPA’s aerial photographs of private facility not visible from ground level doesn’t require administrative search warrant.
- *Florida v. Riley* (1989): Warrantless police helicopter surveillance from 400ft of private building interior through a hole in the ceiling.





Law enforcement use of UAS

- *Kyllo v. U.S.* (2001): Fourth Amendment violated by warrantless police use of thermal imaging camera to pick up information regarding interior of home.
 - Only applies to interior of constitutionally protected area, the home. Court noted: technology in question is not in public use.
- *U.S. v. Jones*, SCOTUS (2012): Fourth Amendment violated by warrantless installation of GPS unit subject's vehicle (physical trespass).
 - Unanswered: What if there was no physical trespass?
 - "...even assuming that [...] traditional surveillance of Jones for a 4-week period would have required a large team of agents, multiple vehicles, and perhaps aerial assistance [...] our cases suggest that such visual observation is constitutionally permissible."



Which is it more like?

- No warrant needed
 - Airplane - naked eye
 - Airplane - camera
 - Helicopter

- Warrant needed
 - Thermal imager looking through walls
 - GPS tracker installed on subject's vehicle



Private use of UAS

- Americans enjoy few clear protections from private UAS out of the home.
 - First Amendment
 - State voyeurism and peeping tom laws (structure interior)
 - Anti-paparazzi laws (reasonable expectation of privacy)
 - State UAS laws...
 - Louisiana, Tennessee, Texas
 - Constitutional?



Recommendations

- Federal legislation
 - Light touch for non-law enforcement uses: emergency, scientific, farming, asset monitoring, etc.
 - Due process requirements for law enforcement UAS
 - Transparency requirements for government UAS
 - Minimum privacy threshold for commercial UAS
 - Ban lethal weapons from domestic UAS
- Model code of conduct for commercial use
 - Privacy
 - Transparency
 - Technical specifications



Government UAS

- Government UAS must submit data collection statement to DOT
 - DOT makes government licenses and statements publicly available (similar to existing private aircraft database)
- Prohibit UAS for law enforcement purposes *except*:
 - Targeted investigation: pursuant to a warrant
 - General safety: court order, public notice, limited duration
 - Emergency situations
- Evidence suppression
- Ban “firearms” from domestic non-military UAS



Private UAS

- Legislative baseline: Forbid capturing images and sound recordings in offensive manner to reasonable person engaged in personal activity with reasonable expectation of privacy.
 - Modeled on Cal. Civ. Code 1708.8.
- Commercial code of conduct:
 - Privacy policy
 - Transparency



Technical protections

- License plate
 - Long-range RFID “beacon” with identifier?
- “Do Not Track”
 - Color or pattern triggers image retention instructions?



Conclusion

- UAS have positive benefit, potential for abuse.
- Without public trust, industry will struggle.
- Current laws do not adequately protect privacy.
- Goal is to protect privacy and enhance transparency while preserving essential law enforcement use, emergency, scientific, etc.



Conclusion

- Legislation
 - Due process for law enforcement use
 - Transparency for government use
 - Light baseline for commercial use
 - Restriction on lethal weapons
- Commercial code of conduct
 - Privacy
 - Transparency
- Technical standards
 - License plate
 - "Do Not Track"



Thank you!

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