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# 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>

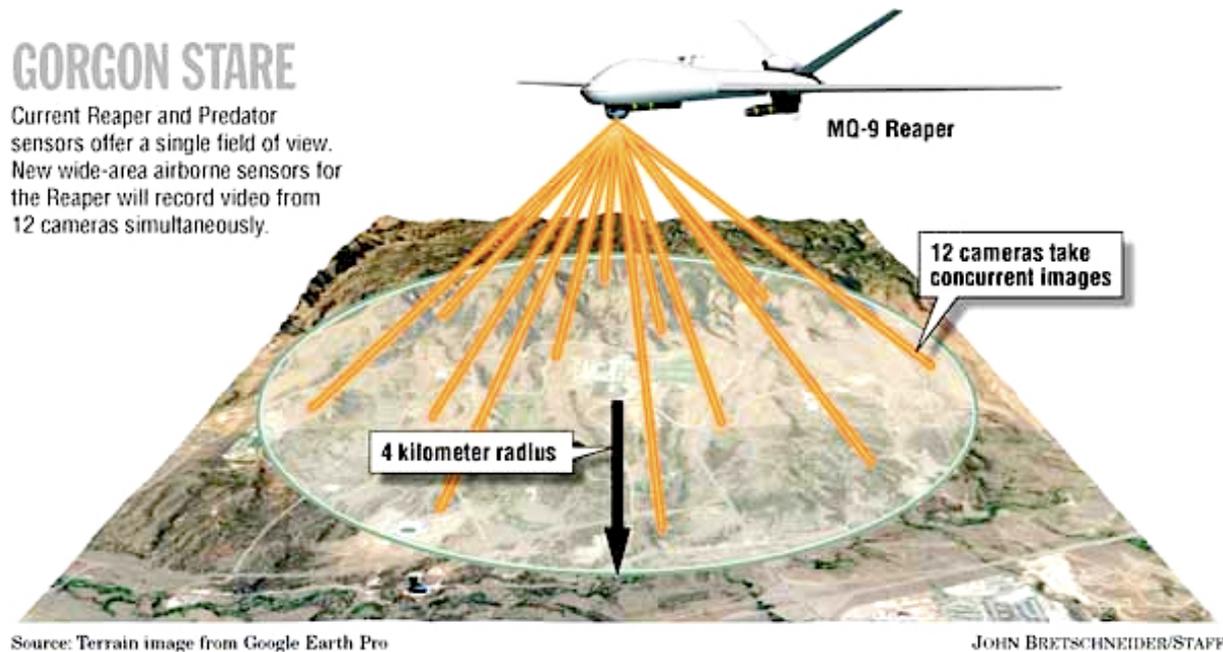


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# Privacy issues

- 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](http://seattletimes.com/html/localnews/2018090173_drones28m.html)

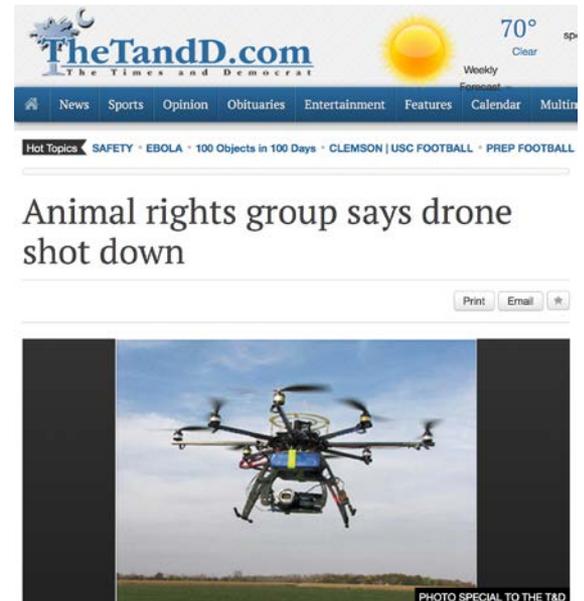


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# Public trust

- 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](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.**



## 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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