

The Ethical Implications of Drones



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Stakeholders

- Military
- Civilians in war zones
- Enemy combatants
 - ISIS, Al-Qaeda, etc.

Advantages For Each Stakeholder

- Military:
 - Less risk to soldiers
 - Cheaper than full scale deployment
- Enemy Combatants
 - Can hide among civilians
 - Civilian deaths may drive them to their cause
- Civilians
 - Communities aren't occupied by a foreign military

Disadvantages For Each Stakeholder

- Military
 - Drone operators are susceptible to PTSD
 - Potentially illegal
 - PR issues
- Enemy Combatants
 - Hard to avoid
- Civilians
 - Easy to be killed in a strike unrelated to you

Psychological Implications for Soldiers

- Soldiers drive into work, login and watch:
 - Torture
 - Murder
 - Rape
- Soldier finishes work and drives home to be with family
- Women/Children or Combatants
- Special Psychologists with High Security clearances needed
 - Higher reports of suicidal thoughts
 - Life and Death decisions

IT Improvements

- Changes in Video Technology
 - FMV
 - High Res
 - Narrow Focused when zoomed (Soda Straw)
 - @ 30fps
 - Gorgon Stare
 - 5 Cameras
 - Low Res
 - @ 2fps
 - Quilted Image
 - ARGUS-IS
 - High Res
 - @15fps

IT Implications

- Drowning in data
 - 100,000 frames per hour
 - > 400,000 hours
 - Rates are increasing
- It requires 185 personnel to support one drone
 - Pilots, Sensors, and Mission Coordinators
 - Launch and Recovery Personnel
 - Image Processing Personnel
 - Exploitation and Dissemination Personnel

Image Processing Algorithms

- Scan Archived Images
 - Filter “uneventful footage”
 - Normal activity vs Abnormal activity
 - Ideally Based on Cultural Knowledge
 - Image Bank too vast
 - Automation is being tested
 - Truthing
 - Annotating
 - Tagging and Retrieval
- Scan Live Feeds
 - Push time-critical info
 - Rush and intimate

Ethical Dilemmas

- What issues do the software developers face?
 - Technology you create will be used to kill
 - “Google employees outraged”
 - How accurate can your machine learning algorithms be while meeting deadlines
 - Will any of this technology be used domestically
 - Potentially used in illegal ways
- Applicable codes of ethics?
 - ACM
 - Engineers must act according to what is best for the public interest

Is this desensitizing war?

Yes:

- Video Game Mentality
- Thousands of Miles Away
- Distance overcomes resistance to kill

No:

- 18 inches from the battlefield
- You see everything
 - Not like typical bombers of past wars

Stances

- Drones should be used for combat
 - Drones are the future of war
 - Safe and effective for our soldiers
- Drones should be limited to a surveillance role
 - Technology is not at a sufficient place for combat roles
 - Mistaken Identities
 - Unfair advantage
 - Lowers the barrier for war

Sources

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