

Modern Technologies and Conflicts

AI and autonomy at war

Some basics

what is intelligence and consciousness?

unmanned/autonomy/AI?

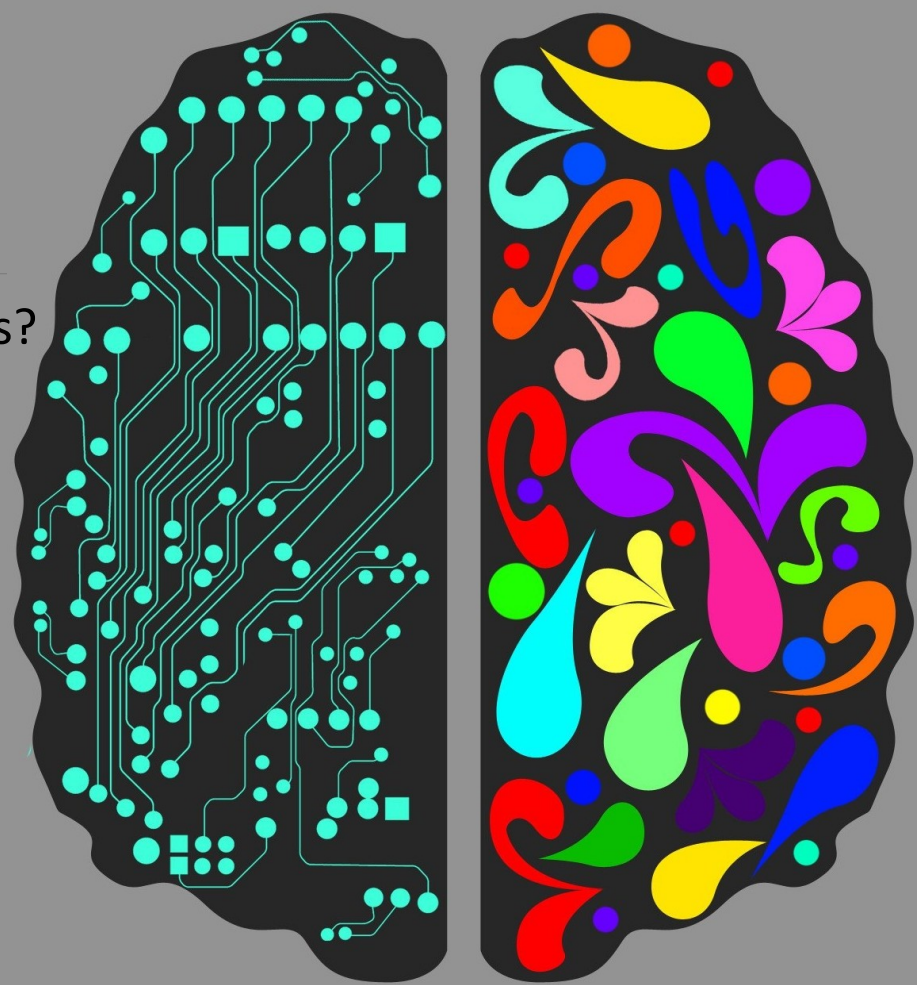
types of AI?

- strong/general AI

vs

weak/narrow AI

what about physical form?



History of autonomy

mechanical automata since middle ages

- Digesting Duck, Leonardo's mechanical knight, [Karakuri](#)

biological automata since 19th cent.

- Frankenstein, R.U.R.

accelerated progression after WW2

- Turing, von Neumann, Minsky, ...

exponential since 90s



History of autonomy in warfare

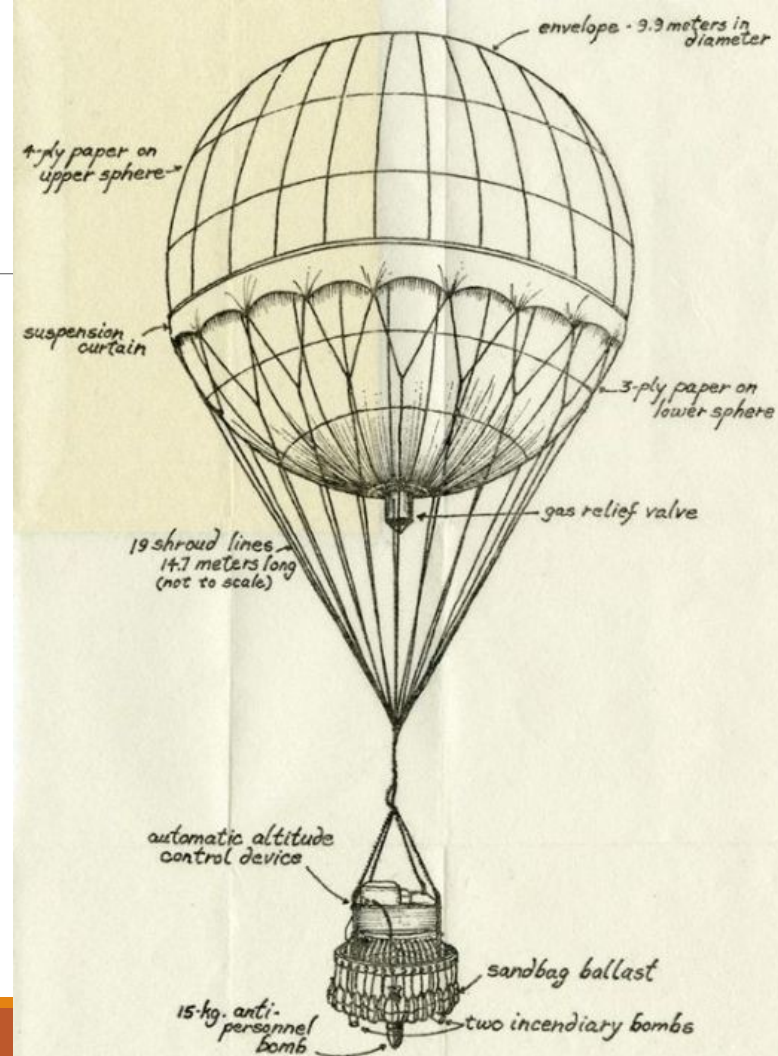
before WW1: hot-air balloons

- observation and bombing

interwar: aerial practice targets

during WW2: remote control of all types

- both wired and wireless
- air, land and sea -based
- V1 and V2?





and https://www.youtube.com/watch?v=l_dr0arBlU

Cold War

target practice, decoys and reconnaissance

- with jet engines too

modern era of drones/UAVs began during the 80s, in the Middle East



Present

remote control is commonplace

growing autonomy

- locomotion a sensors

„human in the loop“ principle

fire-and-forget systems

still not true intelligence





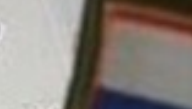
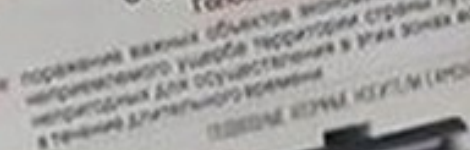


Сочи

ОКЕАНСКАЯ МНОГОЦЕЛЕВАЯ СИСТЕМА «СТАТУС-6»

Главной задачей системы в районе побережья и ведения гарантированного непрерывного слежения за территорией страны путем создания зон обширного радиолокационного зондирования, в т.ч. для осуществления в этих зонах военных, хозяйственно-экономической и иной деятельности

Назначение:



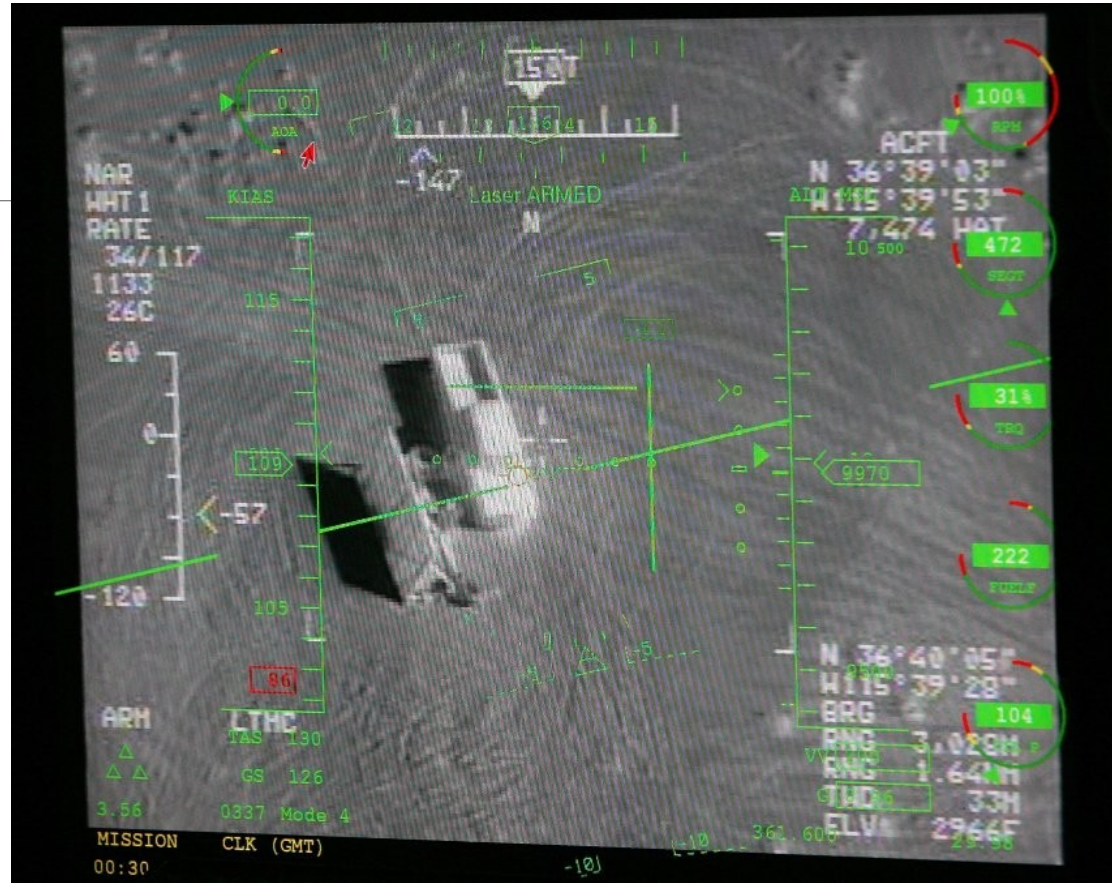
Система в эксплуатации находится в ОФ «Статус-6» № 1018

Участник Восточного Форума



Problems?

- lower conflict-threshold
- collateral damage
- „gamification“
- dehumanization
- psychological impacts
- political and cultural fallout



Non-state actors

terrorists, guerillas etc.

- reconnaissance, targeting, smuggling
- direct attacks

commercial drones are cheap,
available and easily modified

perfect example of horizontal
proliferation of dual-use tech



<http://www.mirror.co.uk/news/world-news/isis-using-increasingly-unconventional-weapons-9928395>



Near future

growing autonomy across the board

- <https://www.youtube.com/watch?v=h449oljg2kY>

closer integration and mixed units

autonomous swarms

first autonomous kill?

arrival of true AI?



<https://www.youtube.com/watch?v=HTPIED6jUdU>