

05 November 2023

Radar @ Axis

Anders Mannesson

Senior Radar Signal Processing Engineer at Core Tech Radar

Ph.D. in Automatic Control

Axis at a glance

#1 Industry leader in video surveillance*



Network solutions in video surveillance, access control, intercom and audio systems



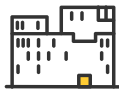
4500+ employees in 50+ countries**



1.6 B USD***



Committed to UN Global Compact



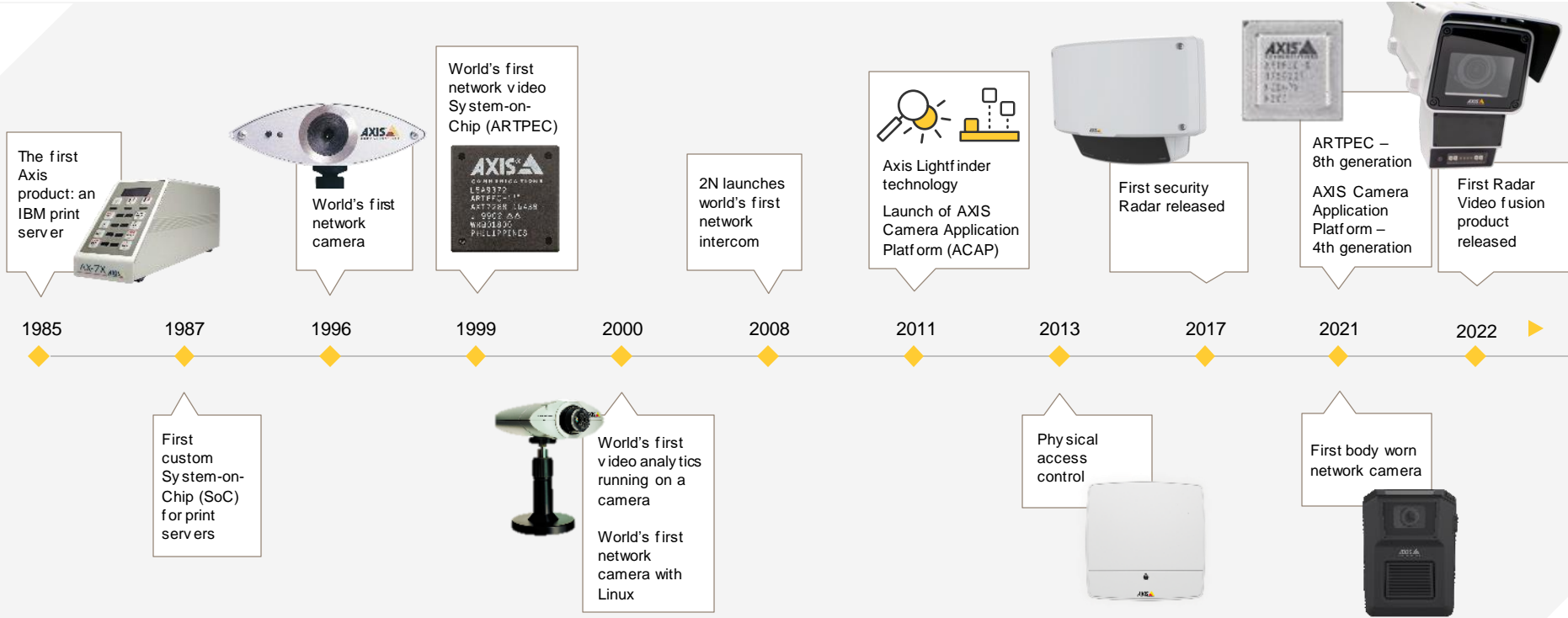
HQ and founded in Lund – in 1984

Part of Canon group

Axis Group companies: 2N



Market leadership built on innovation



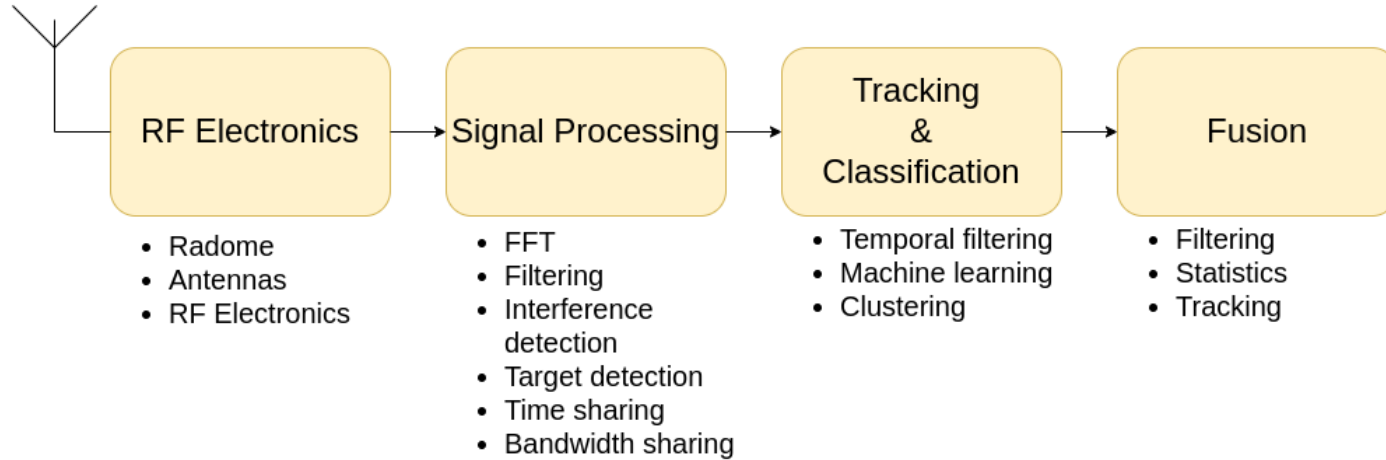
FMCW Radar Technology

- > Provides position, speed, and angle to objects in the scene.
- > Active Sensor
 - Works at night and independent of vision conditions (Fog, snow, sun and shadows)
- > A complement to the camera as
 - a standalone device or
 - fusion with video stream
- > No integrity issues and no permits required



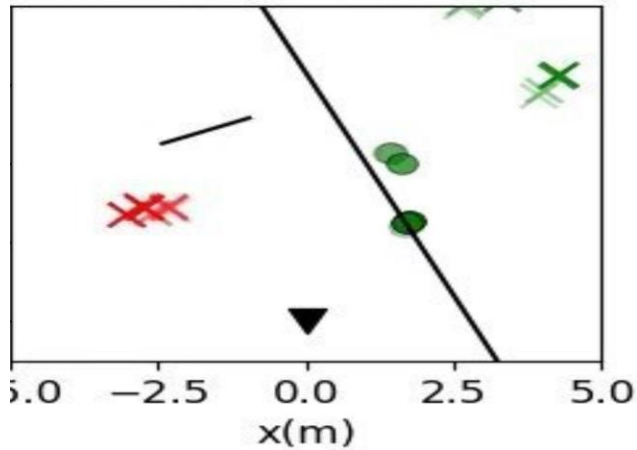
FMCW Radar Technology

TX/RX
Antenna



Some Examples: Finding walls with multipath information

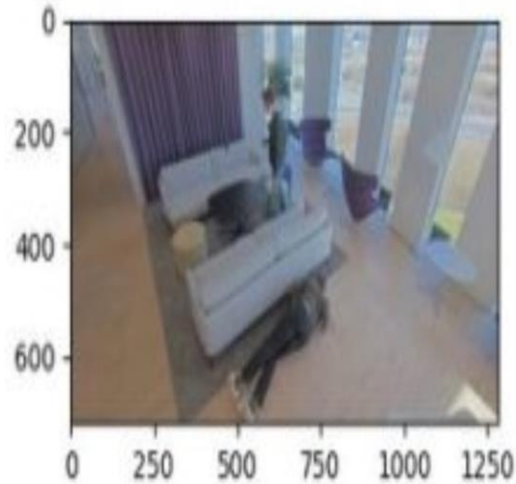
II Estimation(Frame 97)



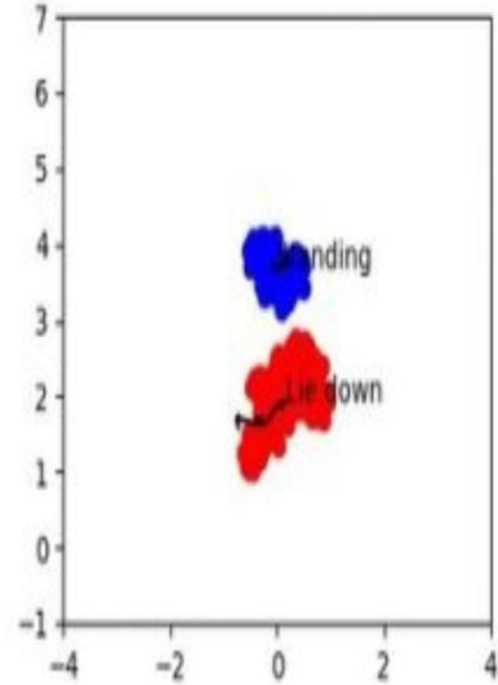
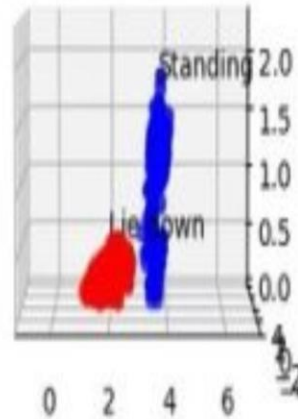
Camera



Some Examples: Pose classification with Radar



Frame: 255
Total points: 723
Target points: 409, 220



Topics and competences we think are important

- > Signal processing:
 - Filtering
 - Statistics and estimation
 - Sensor fusion
- > Hardware
 - RF Electronics
 - Antenna design
- > Embedded programming
- > Machine learning
- > **Feel free to contact me at anders.mannesson@axis.com**

