



# Urban Operations and Computers

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R et D pour la défense  
Canada

Defence R&D  
Canada

Canada

# Ultima VI





# FULL STEAM AHEAD



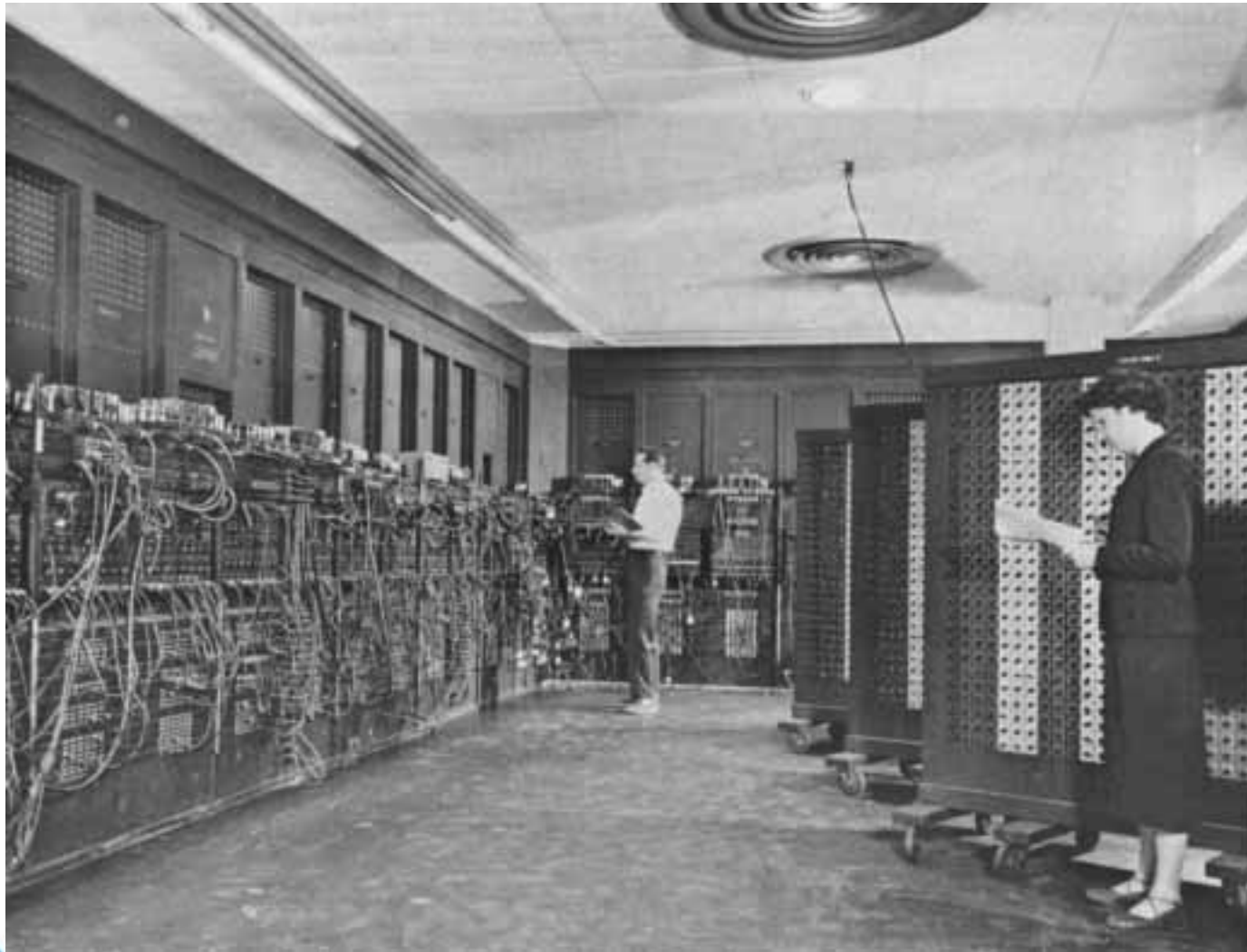


# FULL STEAM AHEAD





# THE GOOD OLD DAYS



U. S. Army Photo



## WORDS OF WISDOM

- I think there is a world market for maybe five computers

Thomas Watson, Chairman of IBM, 1943

- There is no reason anyone would want a computer in their home

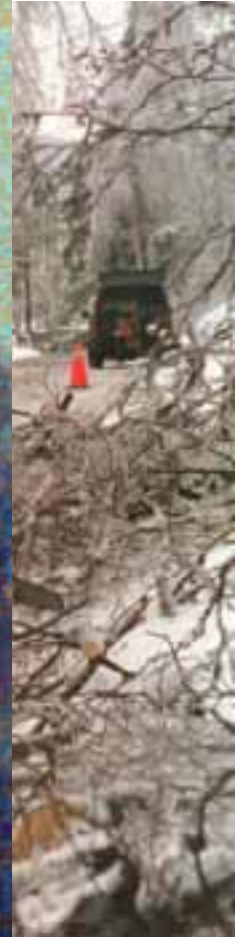
Ken Olson, President, Chairman and founder of Digital Equipment Corp., 1977

- 640K ought to be enough for anybody

Bill Gates, Microsoft founder, 1981



# MILITARY INTERVENTIONS





## WHAT IS SO URBAN TODAY?

- The enemy speaks in tongues and writes in runes and we have seen him
  - or have we?
- On a clear day, you can see for one city block
  - 3D
  - 4D
  - 5D
- Forget everything that you've learned
  - we're writing a new book
- Smile, you're on CNN!

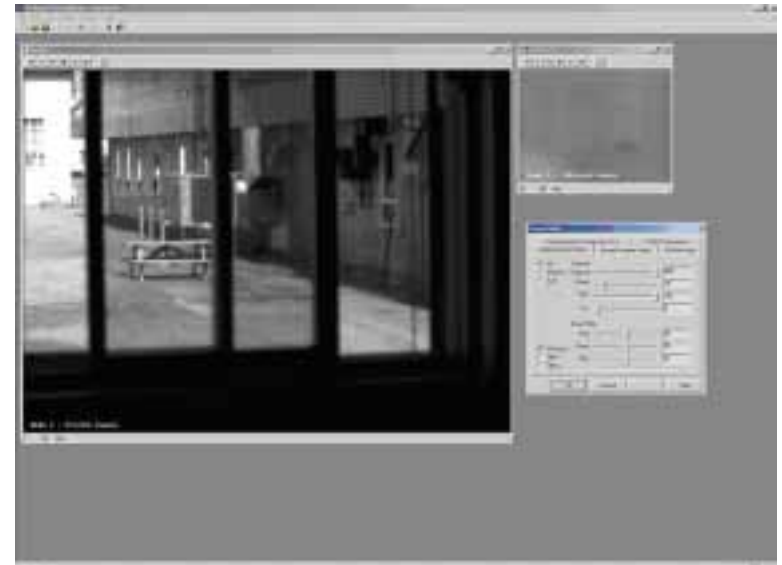




# MILITARY EVOLUTION

## Autonomous Perimeter Surveillance System

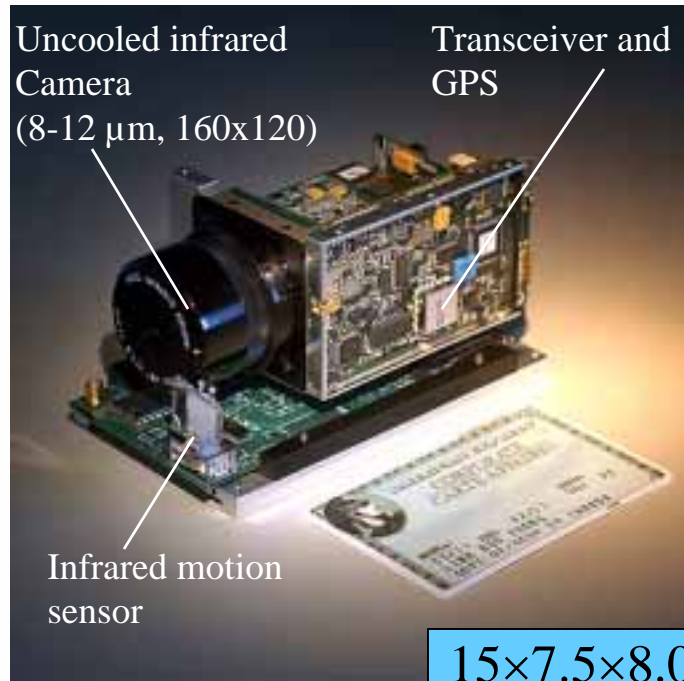
- Fast Deployment and Recovery Time
- Multiple Node Semi-Autonomous System
- GPS Positioning & Synchronization
- Windows™ Interface



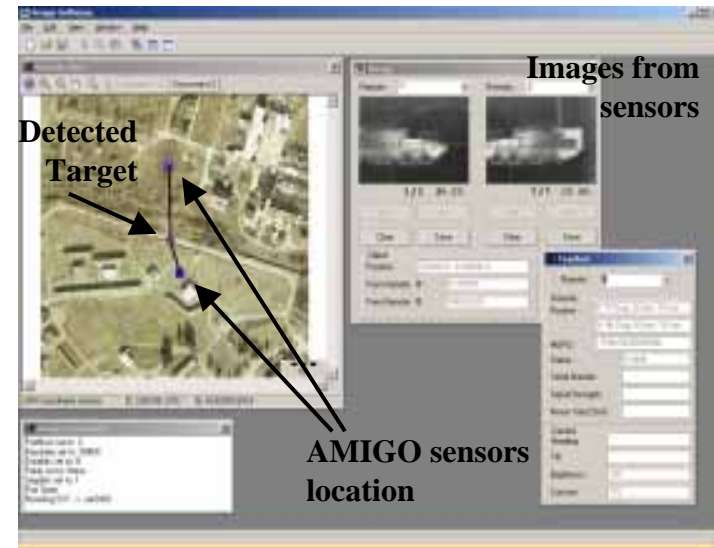


# MILITARY EVOLUTION

## Autonomous **M**icrosensor for **G**round **O**bservation



$15 \times 7.5 \times 8.0 \text{ cm}^3$   
~ 400 grams





# MILITARY EVOLUTION

## FERRET – Small Arms Detection and Localization

- ✚ Moving Coyote, tripod or dismounted soldier
- ✚ Azimuth, range, elevation, trajectory and calibre of the projectile
- ✚ Adopted by CF
- ✚ Commercialized by MDA





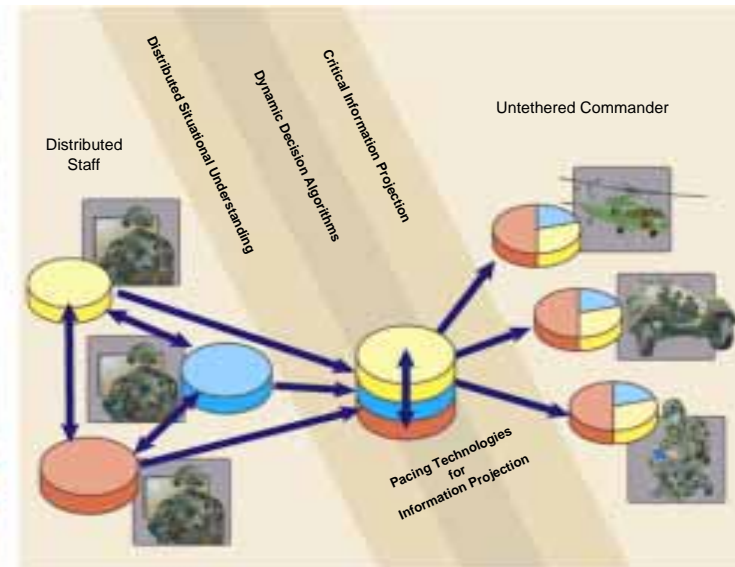
# MILITARY IN MOTION





# C2 in Complex & Urban Terrain Science and Technology Objective

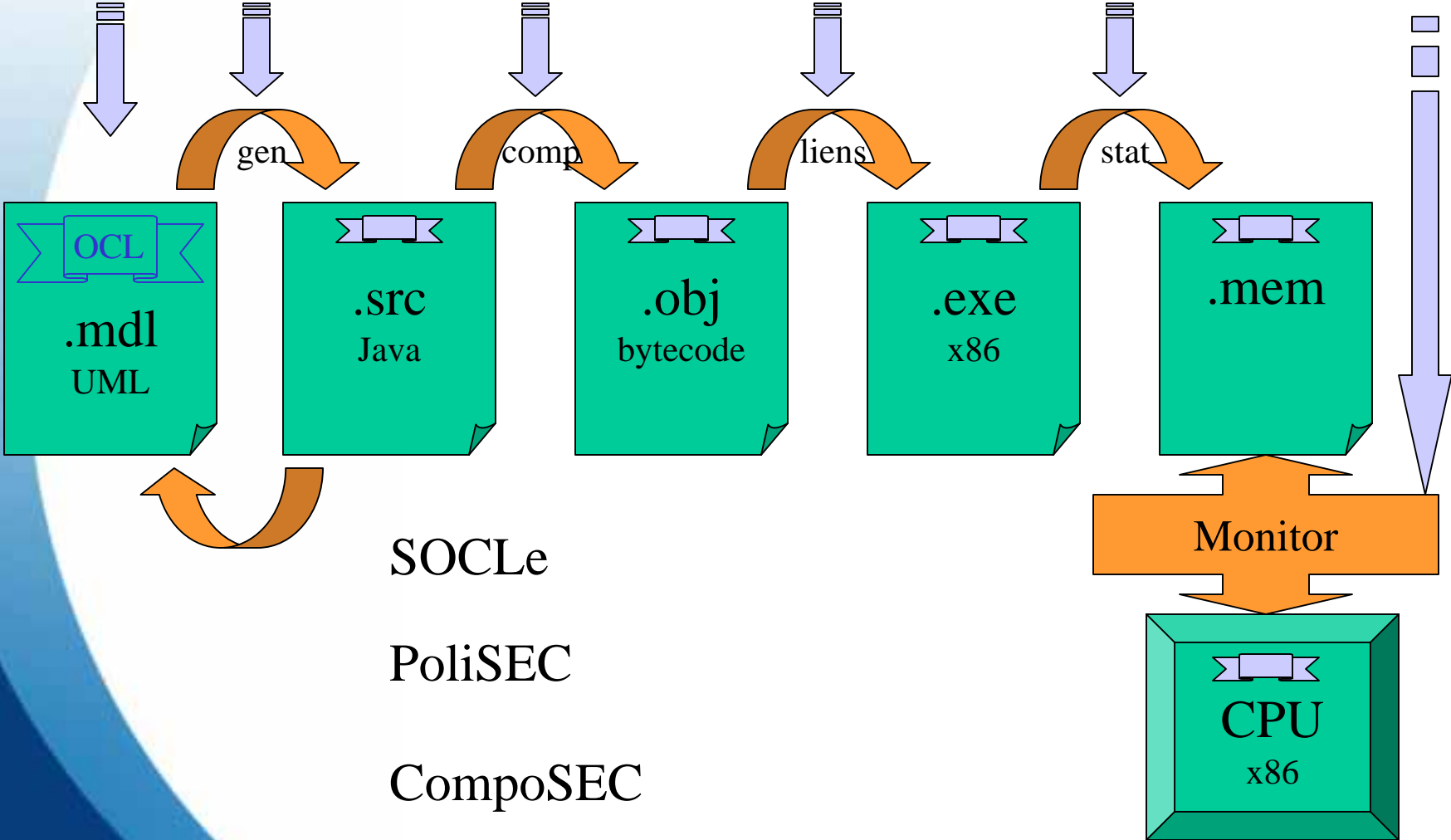
Gary Yerace





**Please suspend hostilities  
whilst we reboot**

Broad Spectrum ← Security and Trust Policy → Narrow Spectrum





# DO YOU C WHAT WE C? (In the US: Oh C can you C?)







# MILITARY VISIONS



**Optimal road selection**



# MILITARY FUTURE

CAN YOU SEE WHAT WE SEE?



# ACKNOWLEDGEMENTS

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# QUESTIONS?