

everis

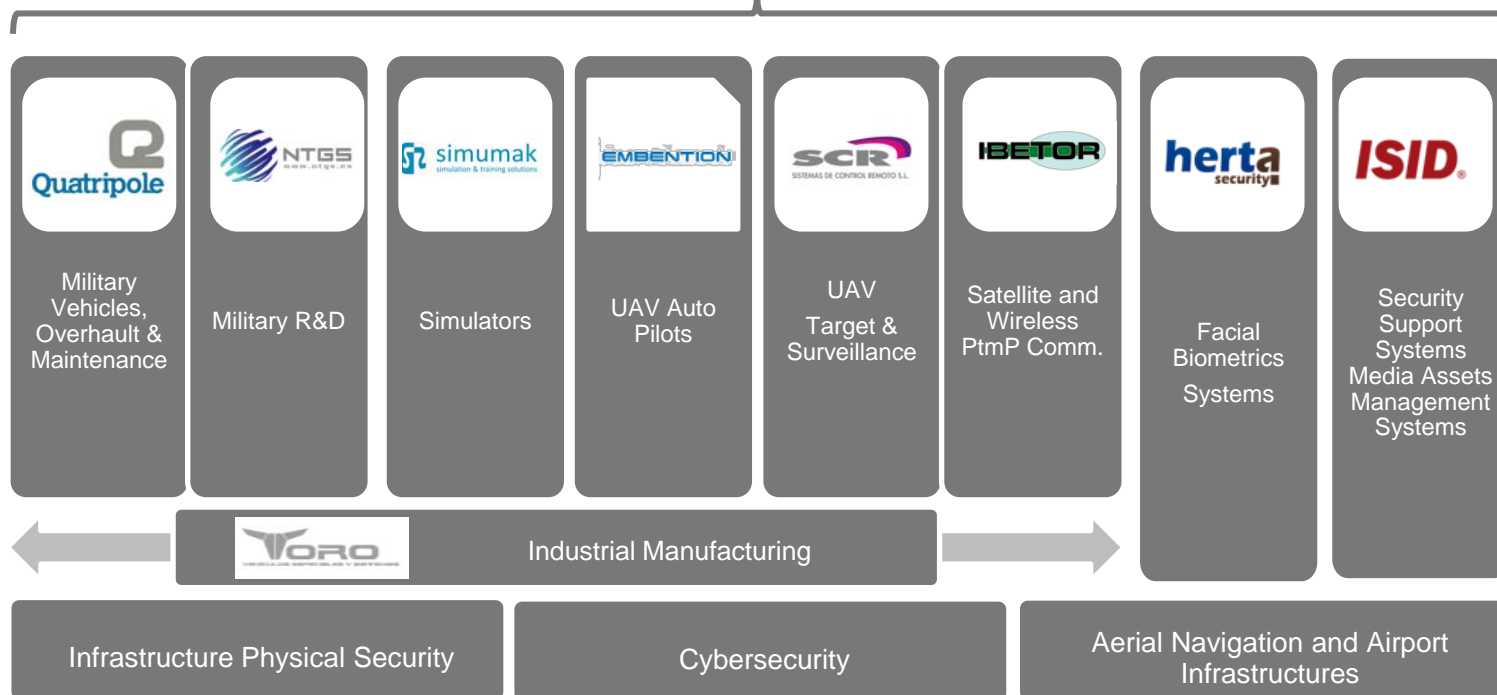
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# About everis Aerospace and Defense

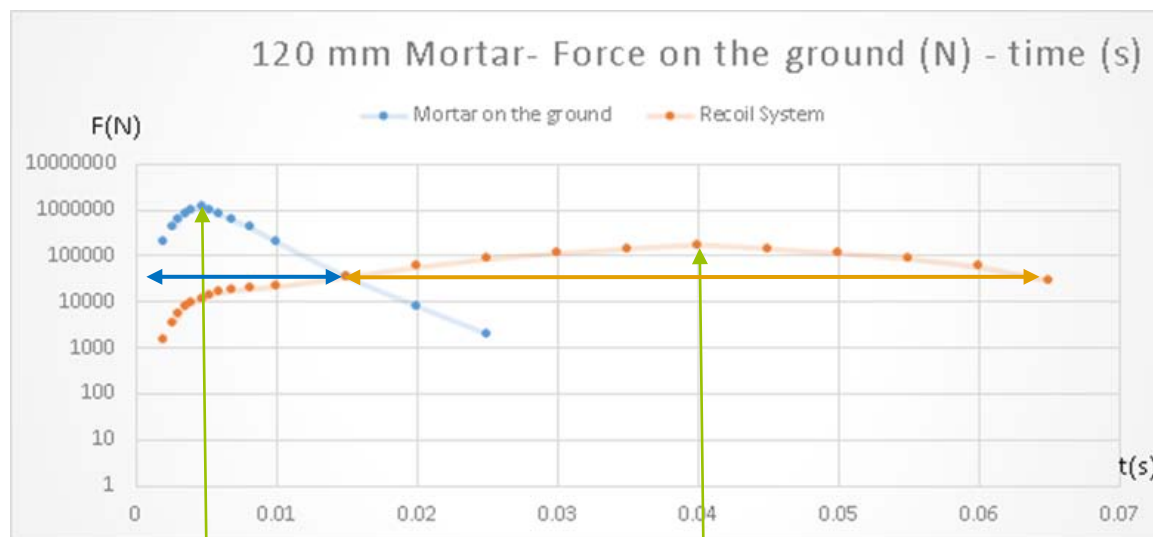


## everis Aerospace & Defense

Innovative and reliable technologies offering the best capabilities to our clients



# Mortar Carrier Challenge



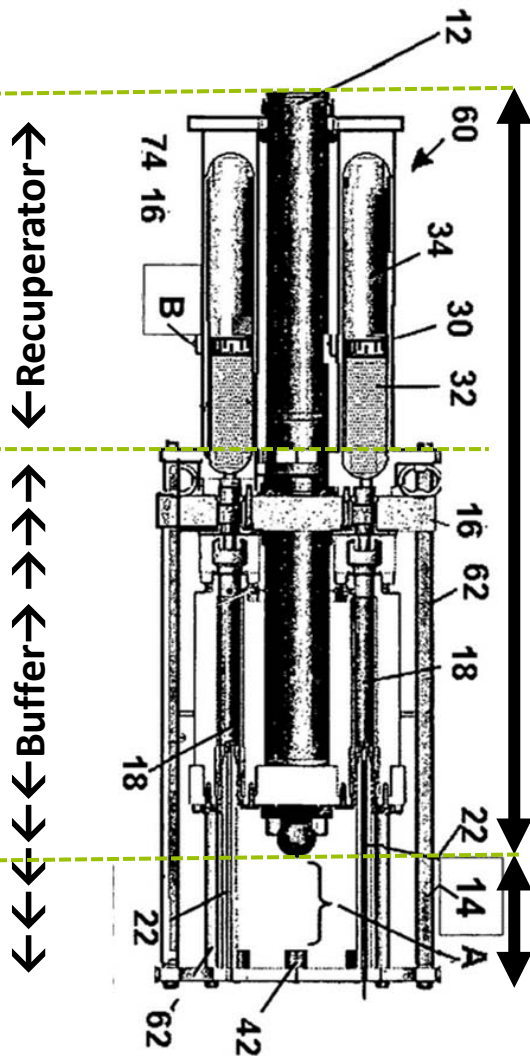
Peak Recoil Force 120 Tons during 0,001 sec.\*

Peak Recoil Force 30 Tons during 0.01 sec.\*\*

\* Measurement based 120 mm mortar from ECIA with 7 supplements (full charge)

\*\* Based on information about SRAMS (first to achieve only 30Tons recoil force)

# Mortar Carrier Challenge



Shooting energy ... approx. 500,000 Jules

- **Transmitted to the vehicle**  $\approx$  100,000 Jules
- **Absorbed**  $\approx$  400,000 Jules

But... “Energy can neither be created nor destroyed”

- **Absorbed**  $\approx$  400,000 Jules  $\approx$  100,000 Cal



Non dissipated energy, together with the absorber structure limit the system capability for iterative shooting (cook-off)

\* Recoil absorber. <http://www.google.com.tr/patents/EP2400255A2?cl=en>

# Mortar Carrier Challenge

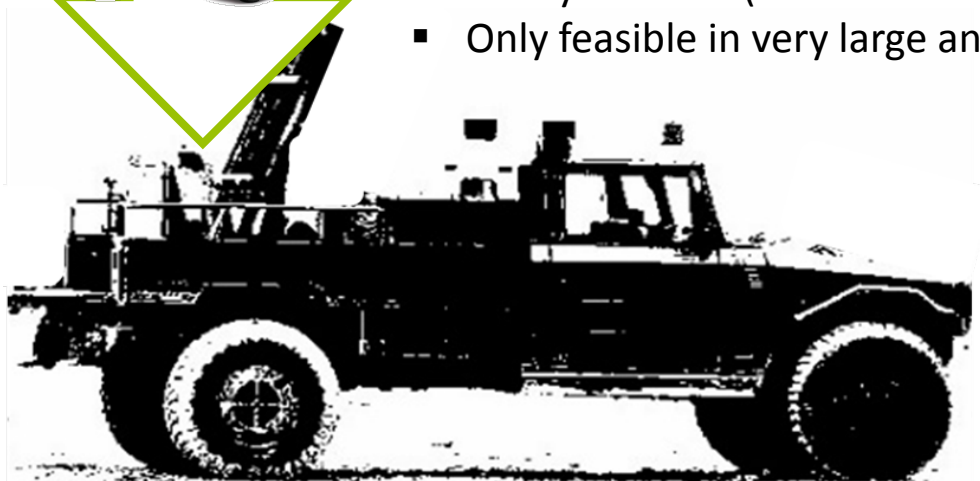
## Effect on the vehicle

Peak Recoil Force 30 Tons during 0.01 sec  
This is equivalent to 10 Humvees with their crew.



### Mortar Recoil Absorber Limitations

- Increase height (Difficult loading)
- Over heating and limited repetitive shooting (Cooking-off)
- Limited aiming capabilities ( $+30^\circ/-30^\circ$ )
- Limited operation space
- Requires structural reinforcement
- Requires hydraulic jacks
- Heavy solution (limited available payload for ammunition)
- Only feasible in very large and expensive vehicles.



# ALAKRAN MORTAR CARRIER

**ALAKRAN Mortar Carrier System** brings a different perspective to the standard recoil absorber approach.

- Simpler, Smarter and more common sense solution.

Shooting from the ground with an automatic control and aiming from the vehicle.



←←←←← 12 seconds to deliver fire power →→→→→/←←← 5 seconds out of action →→→

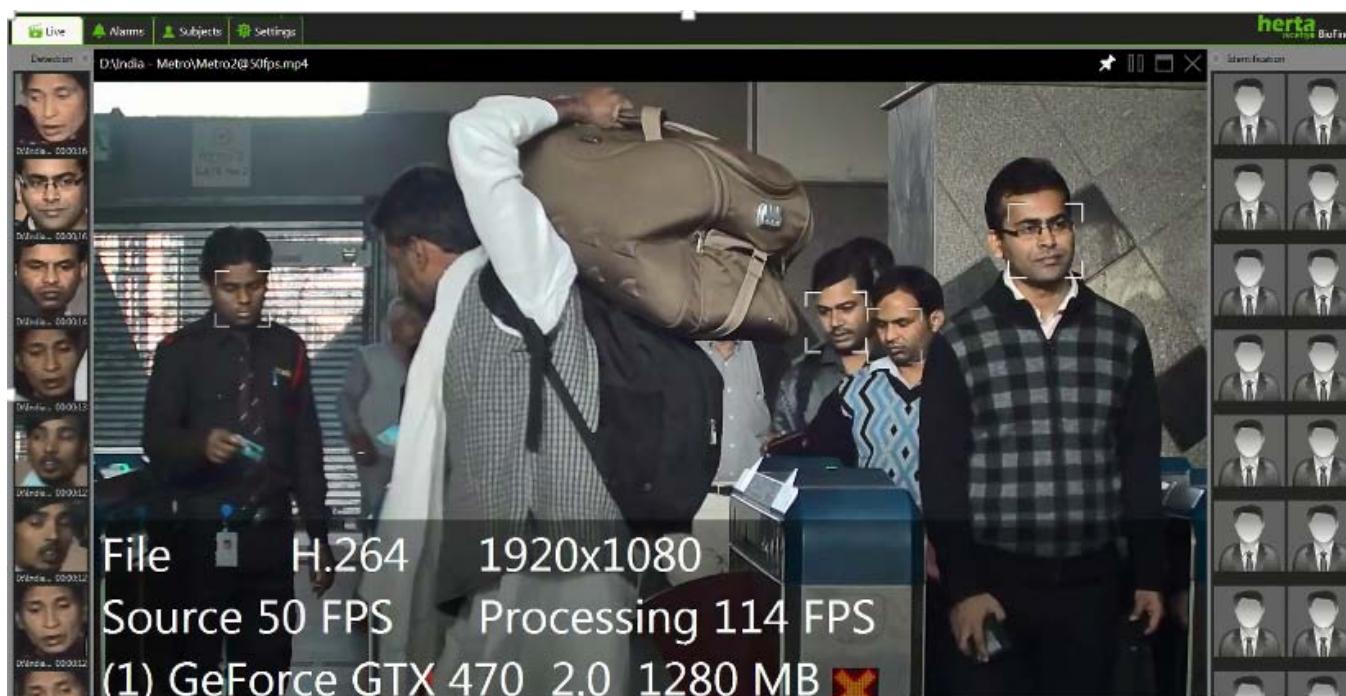
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herta  
security

## Some achievements

We have developed the world fastest and most rewarded facial recognition system.



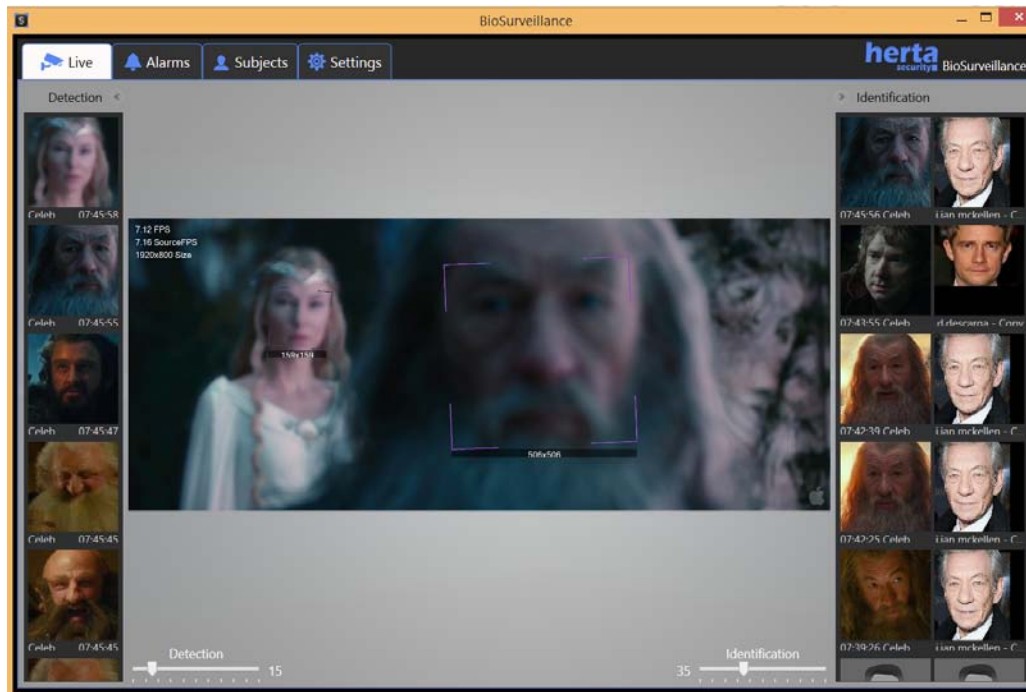
IFSEC's  
SECURITY & FIRE  
EXCELLENCE  
AWARDS 2014  
WINNER



ECS Award Winner 2015  
GPU Technology Conference



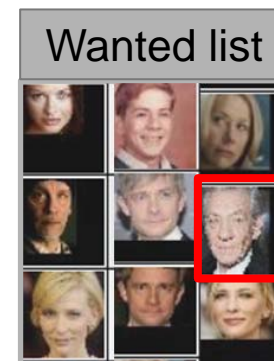
# Herta Technology Algorithms



Faces detection algorithm



Every face detected is sent to the identification algorithm



Identification algorithm



# Video Management vs Photo Management

## Accuracy

Video (approx. 24 frames per second)



Working with video will provide many identification chances. 3 second video will provide about 72 images to be compared.



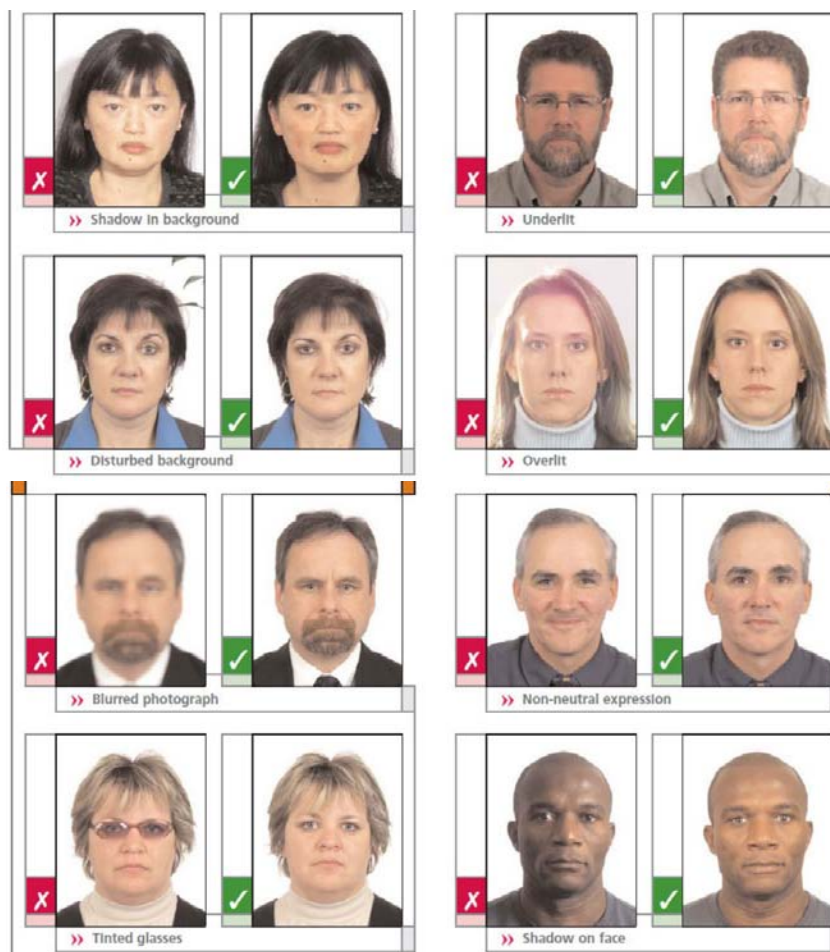
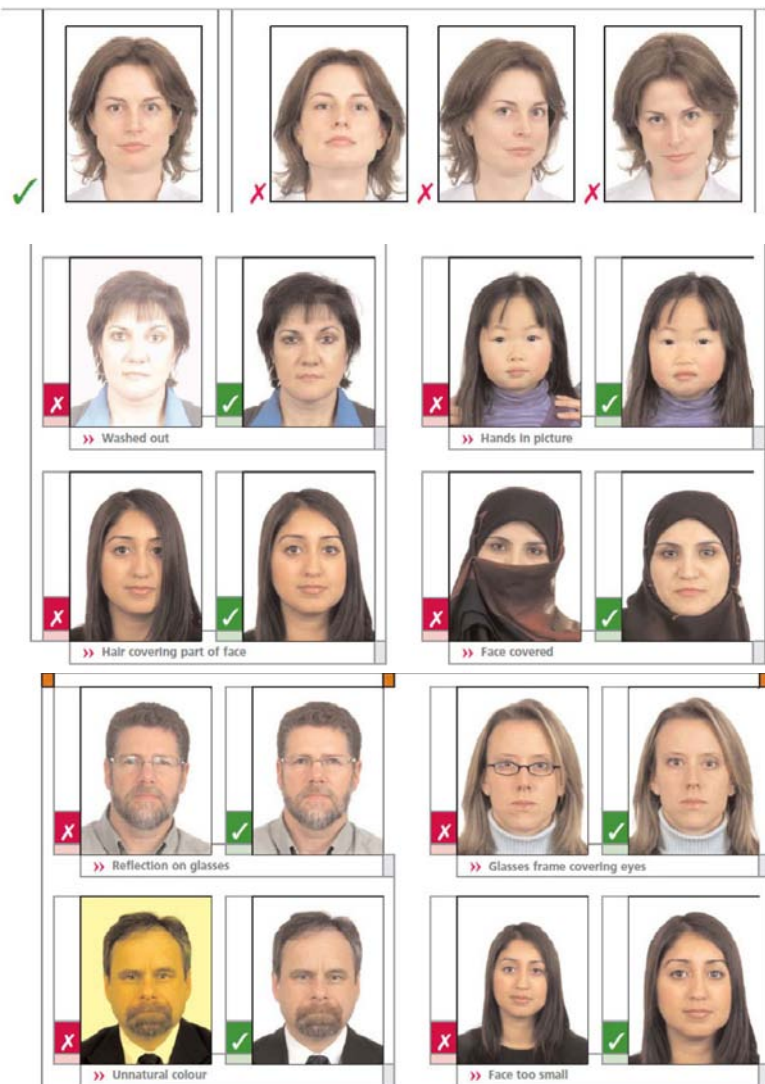
Meanwhile working with photos will give us only 1 identification chance.

To be successful in photos identification we need to work with really high quality photos in the “wanted list photo set” and the “analysis photo set”.



# Video Management vs Photo Management

## Good quality photo –passport photo



Good quality photos will provide good identification results.  
Bad quality photos will provide false positives or non-identification



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