

6TH ASTROS SYSTEM WORKSHOP – TARGET ACQUISITION



EXÉRCITO BRASILEIRO



Background – 21st century battlefield



Asymmetric Battlefield



Who is the enemy?

Where are they, how do they look? (Insurgents, guerillas and civilian fighters in civil environment)



"Empty Battlefield":

low signature and short exposure of targets (e.g. 2006 Lebanon war: Hezbollah was hiding rocket launchers in caves and civil buildings)



No "enemy lines" or borders

Unorganized enemy forces: targets are located in different ranges and locations



High-tech guerilla creates extremely hostile environment for reconnaissance and forward observer units



Political and legal aspects



High sensitivity to collateral damage – no more statistic fire



High sensitivity to casualties
On both sides



Commander
The criminal court in the Hague is waiting for you ...?



21st century artillery characteristics



Extremely long range of tactical artillery up to 150 km



High mobility



Short exposure



Advanced fire control generates high autonomy



21st century artillery characteristics



High rate of fire



Precision fire



**20th century
forward observer
Vs. 21st century
forward observer**



Traditional forward observer



Limited equipment



Cannot walk or drive to long distanced targets



Very difficult to maneuver and hide



Moves slowly



Traditional forward observer



Limited mission coverage



**Deep special operations
require significant support
/effort**



Orbiter 3 - based forward observer



Operates at a **variety of ranges:**
up to 150 km



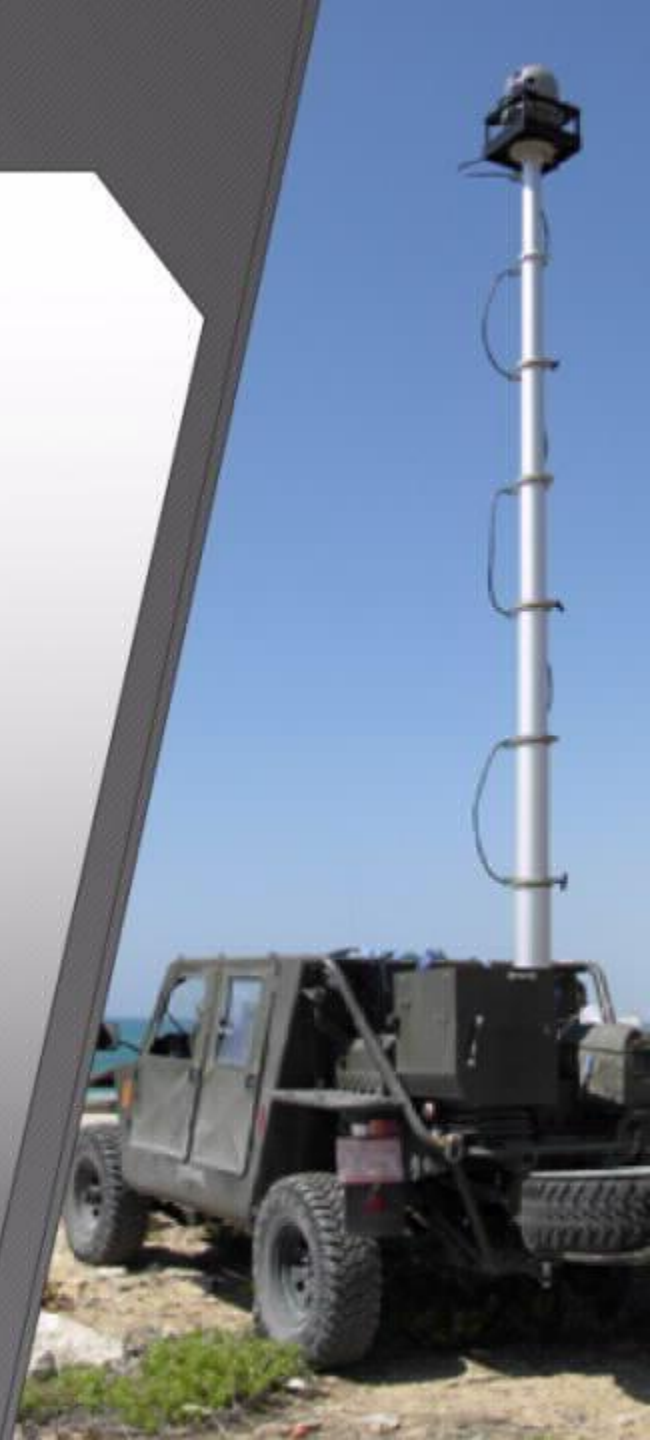
Flexible: arrives to target area
within 10-60 minutes



All terrain **all weather**



Multi-target multi-mission:
operates in wide area and
supports several units



Orbiter 3 - based forward observer



Multi-sensor: uses EO/IR, COMMINT, ELINT and other sensors



Silent, covert and difficult to hide from



Very high target accuracy
(< 5 M)



BDA capability



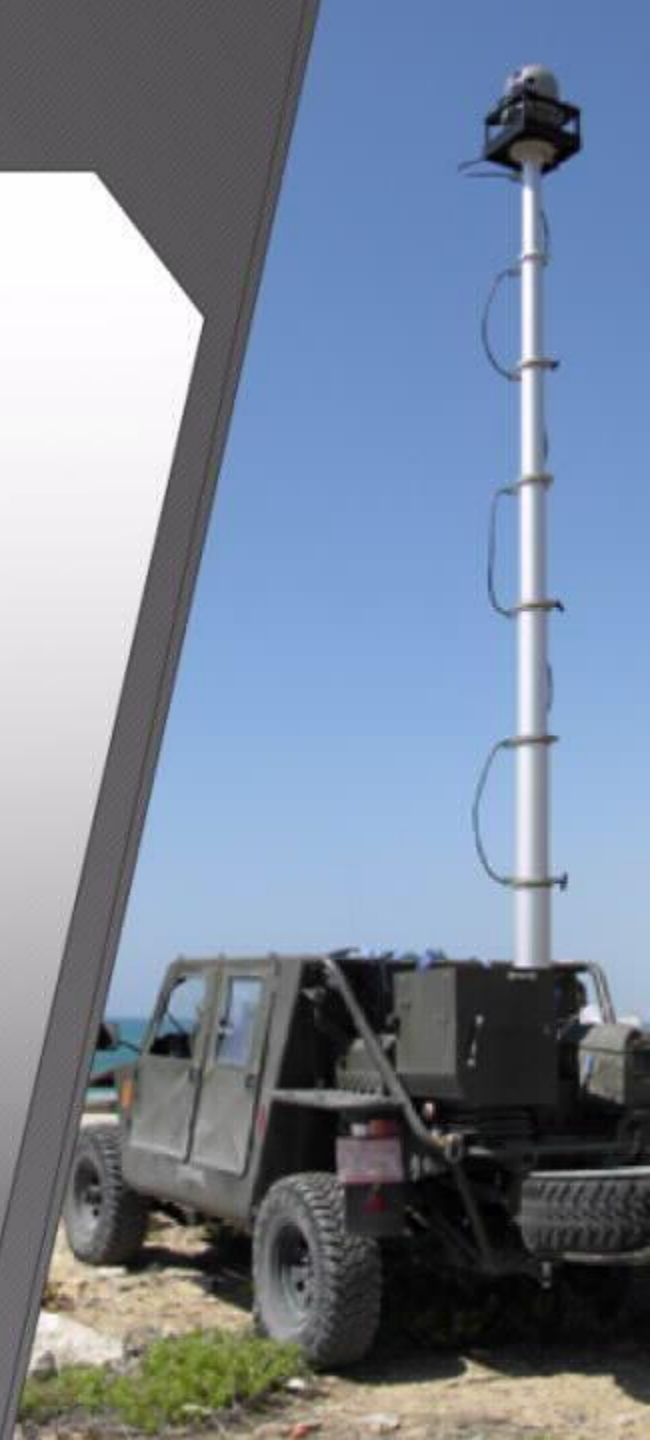
Orbiter 3 - based forward observer



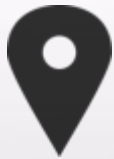
Small team and low support effort



Laser designation capability



Orbiter 3 - based forward observer



Very precise target acquisition



Human errors reduced to a minimum
by direct network link between the
Orbiter® and the artillery unit



Sensor-to-shooter capability

To summarize:



Shorter than ever circuit



Accurate



Network-centric



Deadly



Real - Time



Cost effective



Video clips

Orbiter 3

Orbiter 3 as ISTAR



Summary

Orbiter 3[®] benefits to 21st century artillery are:

Orbiter 3 Provides TRUE ISTAR capabilities.

- Long range operations
- High accuracy
- Real-time, network-centric
- All weather operation
- BDA
- Minimum personnel
- Multi targets handling to a multiple artillery units
- Laser designation
- Very Cost-effective



<https://aeronautics-sys.com/>

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THANK YOU