

PRECISION STRIKE TO ENABLE BATTLE CONTINUITY IN SPACE AND TIME

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Topics

- **Battles of the last two decades**
- **The operational need for accurate fire**
- **The Precision Strike Systems (PSS)**
- **The GPS/INS guidance**
 - **Breaking the accuracy linkages**
 - **Shaping the munition trajectory**
 - **High velocity flight**
- **The PSS Family of IAI**

Battles of the Last Decades

- No more tremendous collisions of divisions
- Asymmetric warfare
- No actual front-line
- Ambushing
- Indirect fire
- The enemy avoids direct contact
- Intensity is varied unexpectedly
- Time Critical Targets (TCT)



The battlefield is only “dotted” by hostile forces

The Operational Need for Accurate Fire

- Multi Targets missions
- Urban terrain
- Effective, accurate, even surgical
- Area coverage achieved by range not maneuvers
- Unanticipated intensity \Rightarrow The need to operate anywhere and anytime

The battlefield is only “dotted” by hostile forces

The Operational Characterization

The Requirements

- Continuity in time
- Continuity in battlespace
- Short response time
- Decreased engagement time
- Avoid collateral damage



The Answers

- 24 / 7
- All weather
- No visibility limit
- No link to range
- No restrictions on trajectory

GPS / INS **Is The Solution**



Fire Control Unit

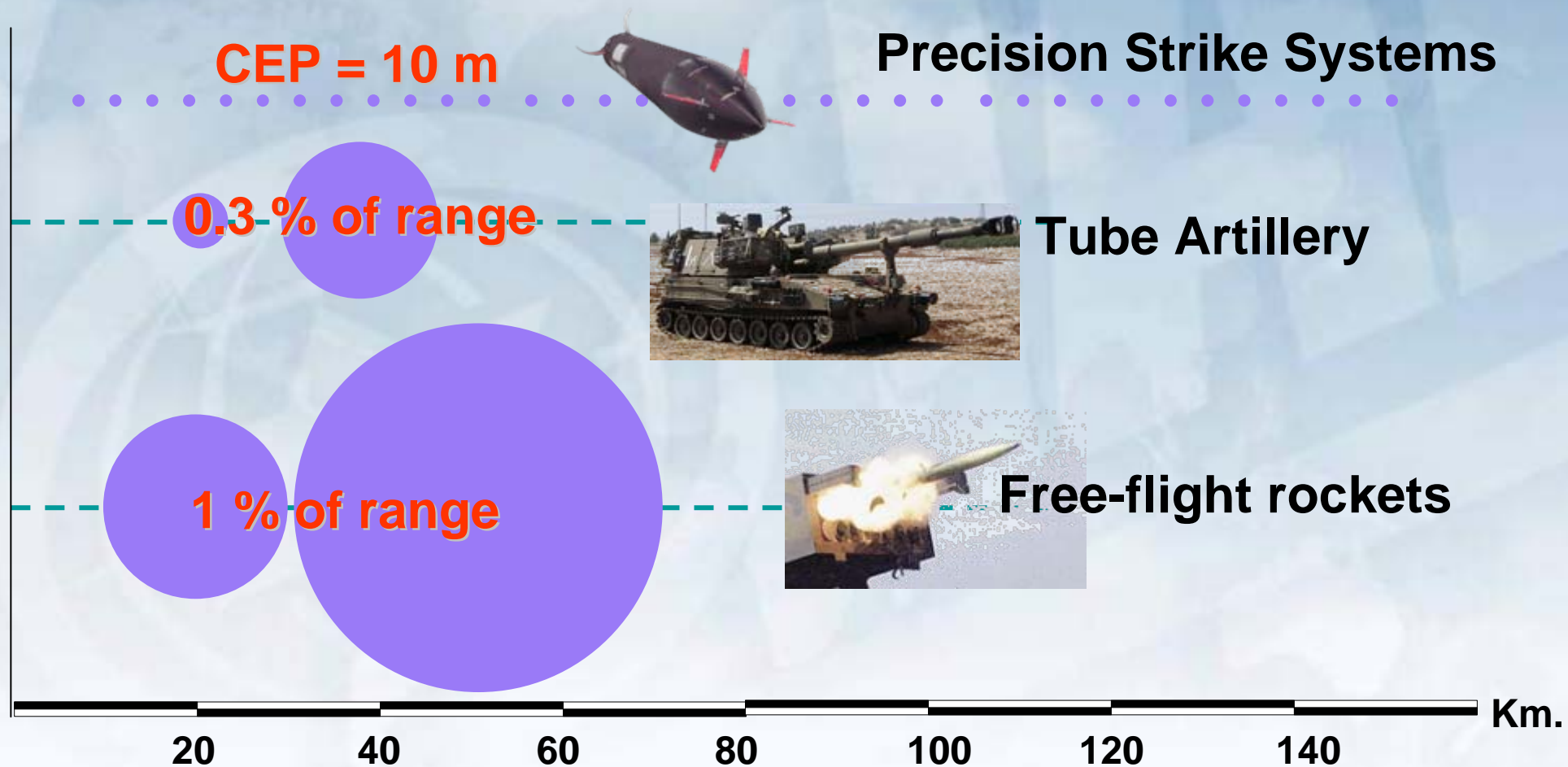


Target Locating Systems

Unclassified

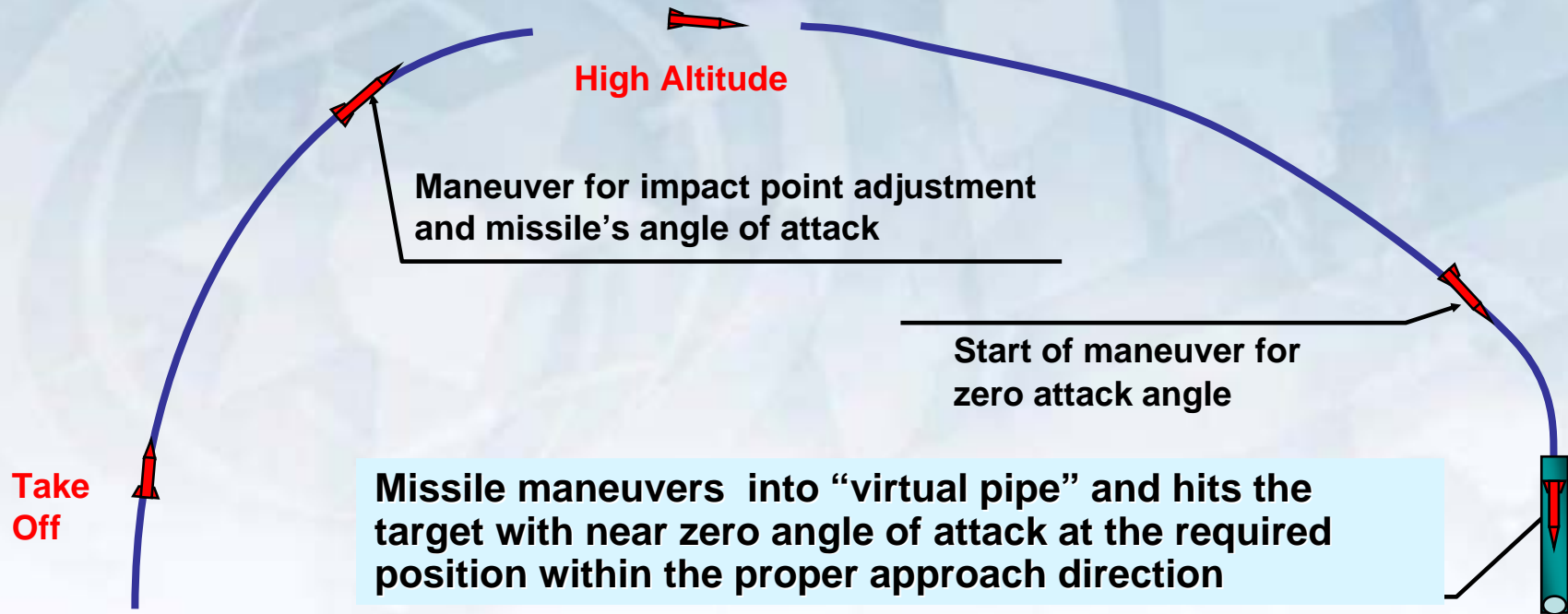
Breaking the Range - Accuracy Linkage

The Dispersion Magnitude – in terms of CEP



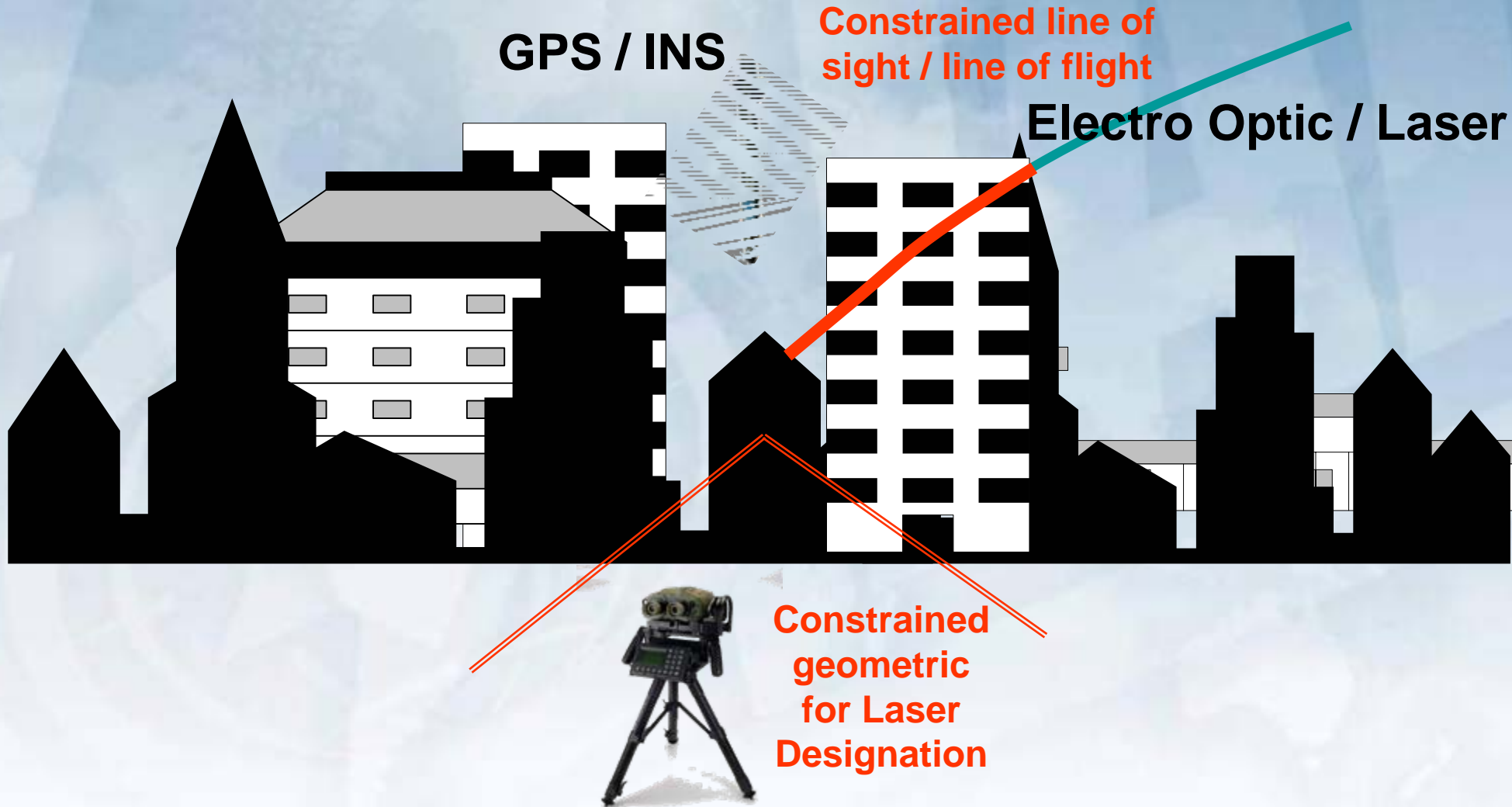
Shaping the Munition Trajectory

- Vertical angle and high velocity – at impact – are key factors for penetration
- Impact angle can be pre-determined
- Will shorten range of engagement



Missile maneuvers into "virtual pipe" and hits the target with near zero angle of attack at the required position within the proper approach direction

Breaking the Azimuth Linkage



Unclassified

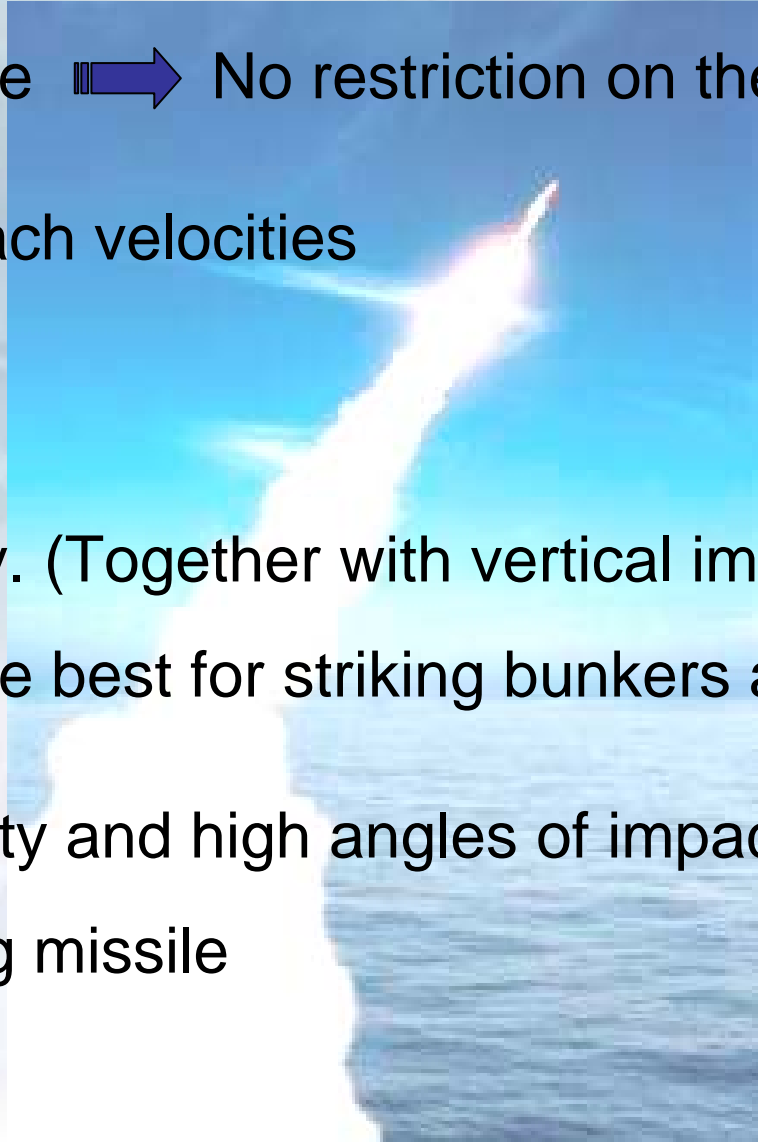
Breaking the Weather and Visibility Linkage

GPS/INS = Seekerless

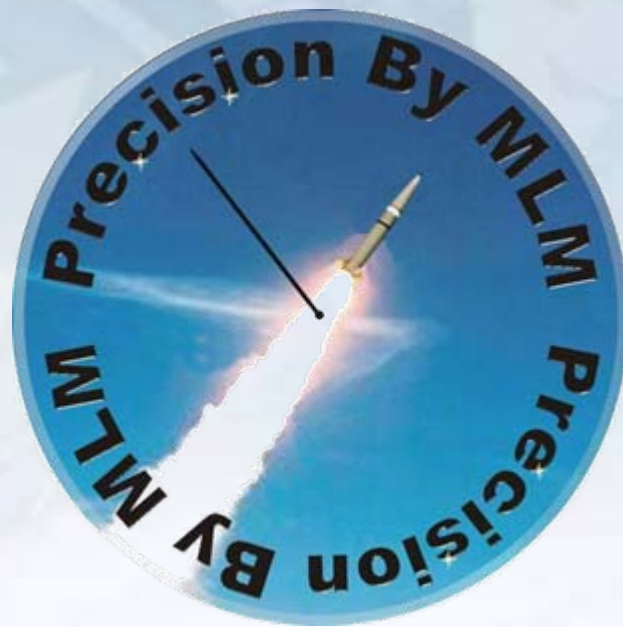
Not sensitive to bad weather,
camouflage, smoke, chaff etc.

GPS / INS – High Velocity Flight

- Seekerless guidance ➡ No restriction on the flight velocity
- Supersonic high-mach velocities
- Short time of flight
- High impact velocity. (Together with vertical impact – the GPS/INS guided munitions are best for striking bunkers and fortified assets)
- High terminal velocity and high angles of impact ➡ Difficult to intercept the coming missile



IAI is Developing Seekerless Ammunition based on GPS/INS



EXTRA – EXTENDED Range Artillery



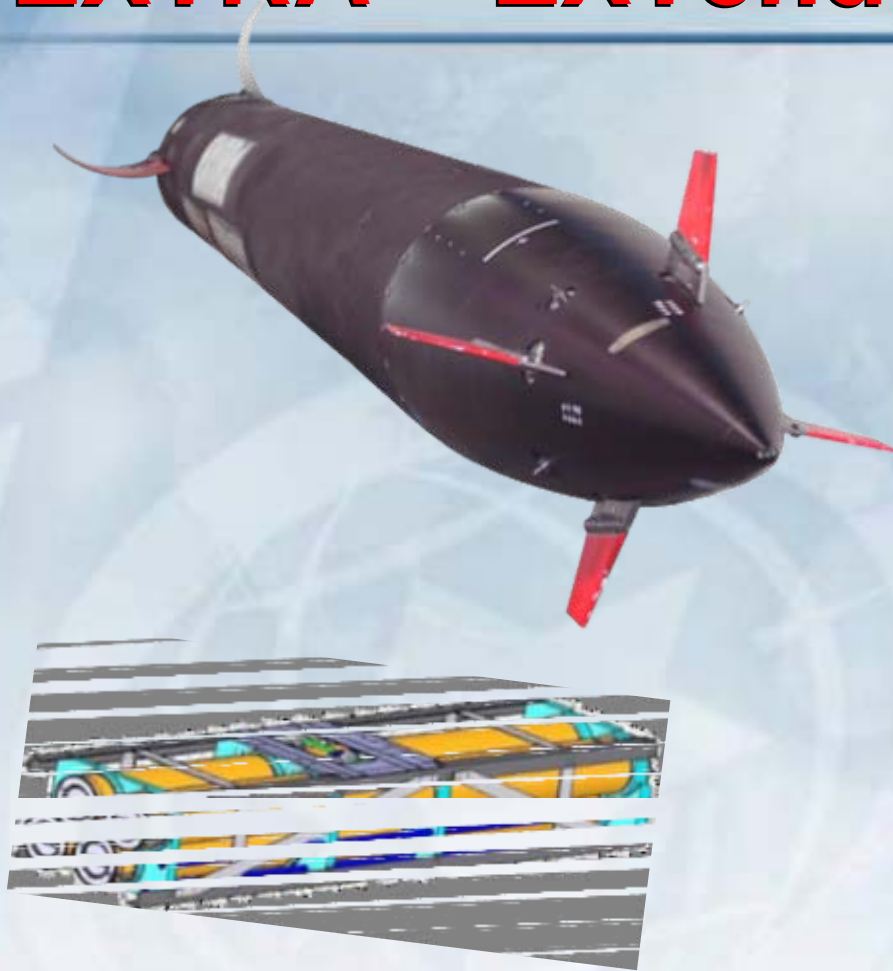
Rocket

- Length: 4000mm
- Diameter: 300mm
- Weight: 400Kg
- CEP: Better than 10m

Warhead	Max.Range	TOF
120Kg	150Km	5-6min



EXTRA – EXTENDED Range Artillery



Launcher

- Any regular launcher
- Pod with 4 missiles



Questions ?

