



Excellence in Stand-Off Precision Engagement

# TAURUS KEPD 350

## The Modular Stand-off Missile for Precision Strike against HDBT

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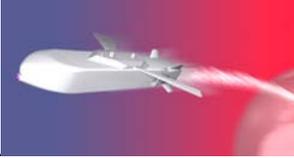
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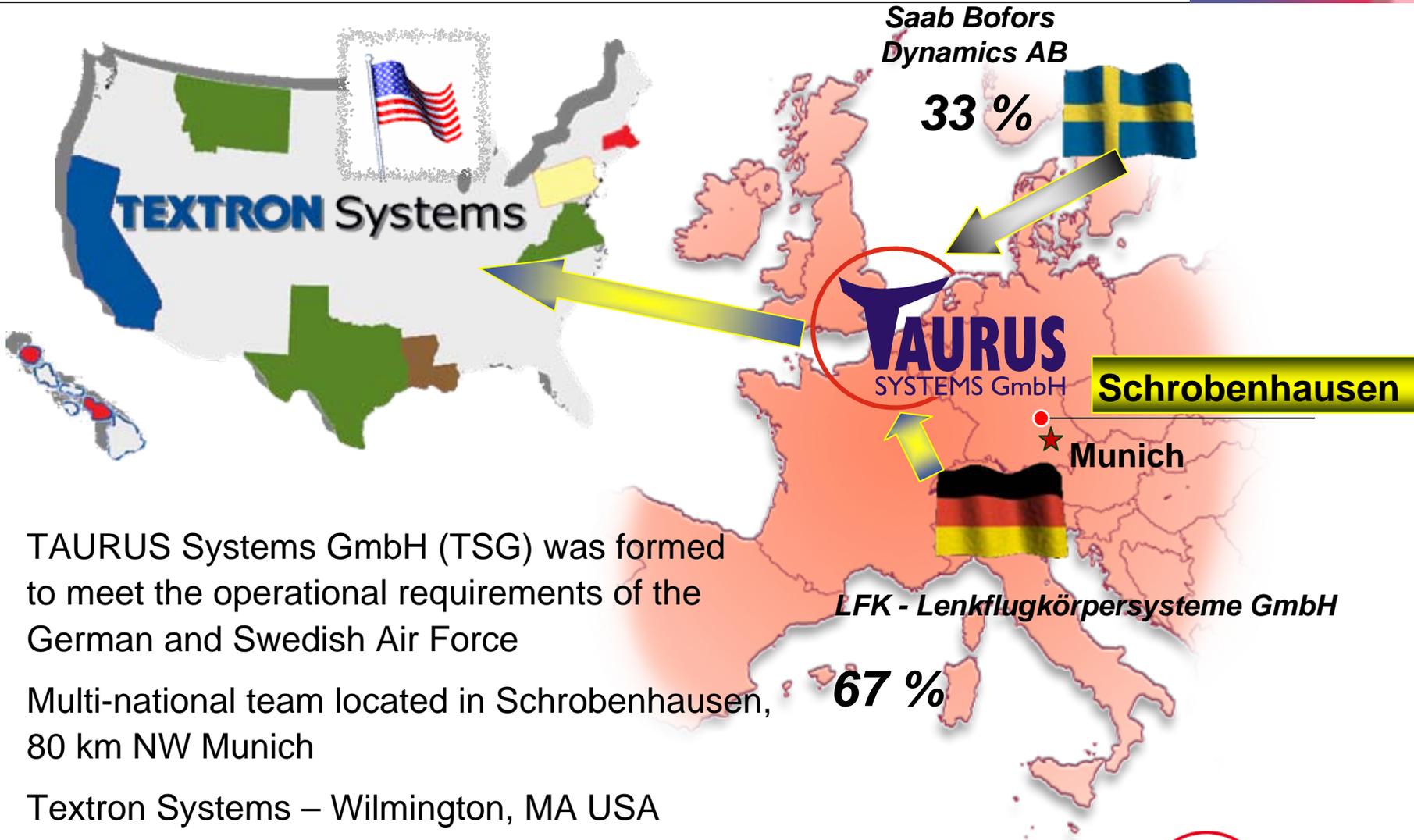
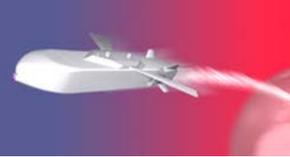


# Today's Agenda



- ≡ Company Information
- ≡ TAURUS – The Weapon
  - Missile
  - Mission Planning
  - A/C Integration
- ≡ Flight Campaign South Africa
- ≡ TAURUS Family and Growth Potentials
- ≡ Summary and Conclusions

# Who We are...

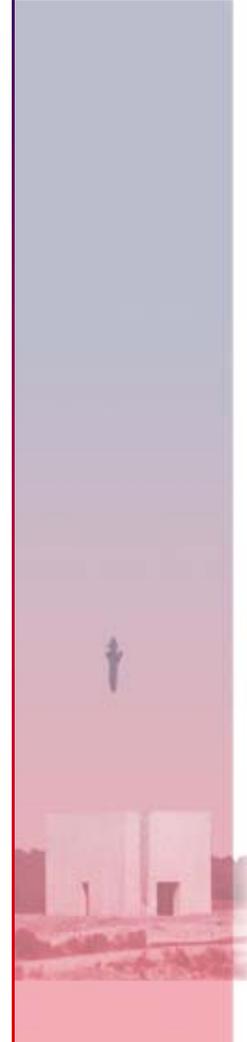


# Overview

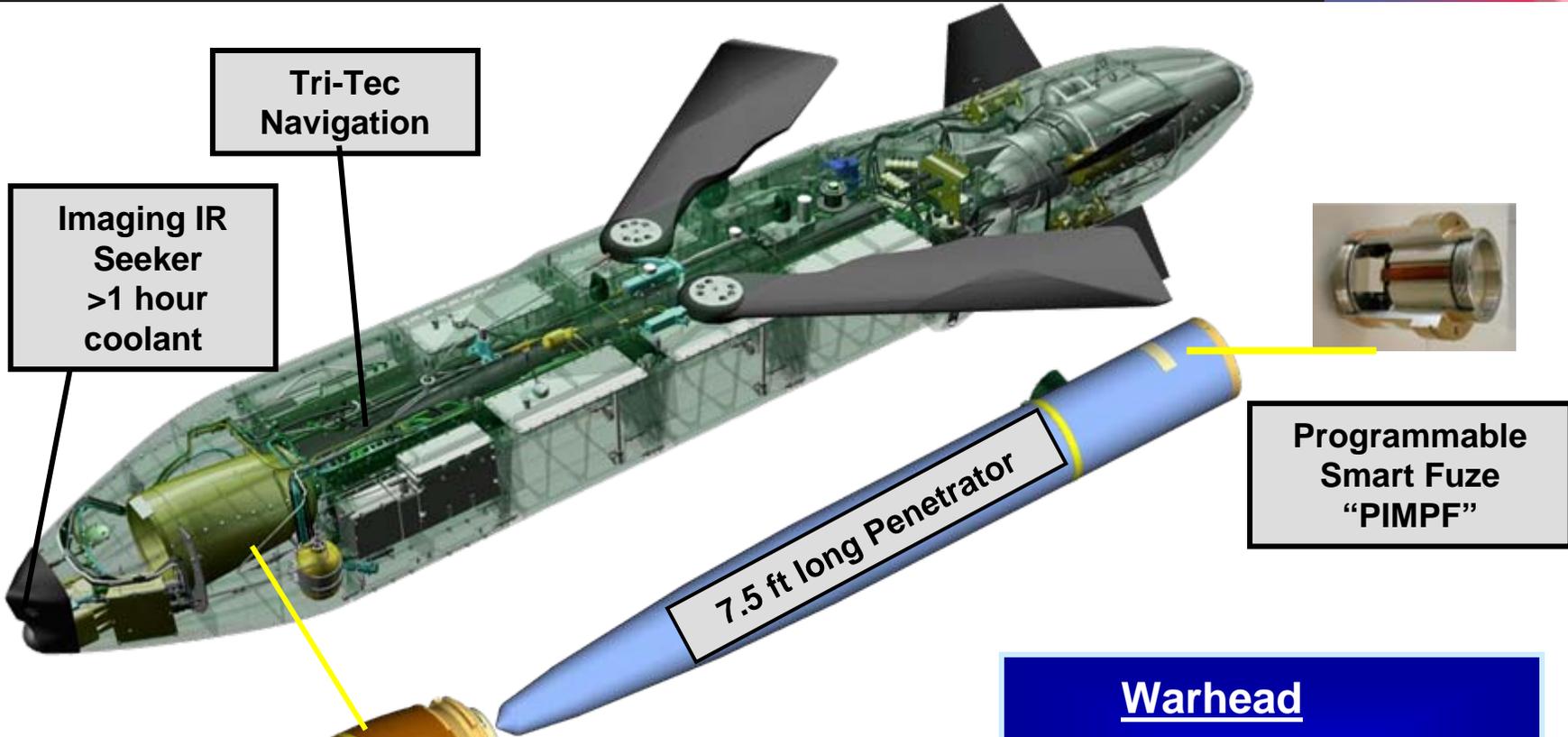
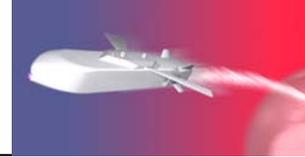
- ≡ Modular all-weather high precision stand-off weapon with more than 500 km (270 nm) range



- ≡ Main targets: HDBTs, bunkers, bridges, runways, ships in port, shelters, aircraft on ground, SAM-sites
- ≡ Worldwide only system achieving high precision over large distances without GPS



# The TAURUS KEPD 350 Missile...



Weight: 3,200 lbs  
Length: 16.7 ft  
Wing Span: 6.7 ft  
Diameter: 3.5 ft  
Speed: M 0.6 - 0.95  
Range: > 500 km (270 nm)  
approximately 15 % longer range with JP10 fuel

Distance Sensor

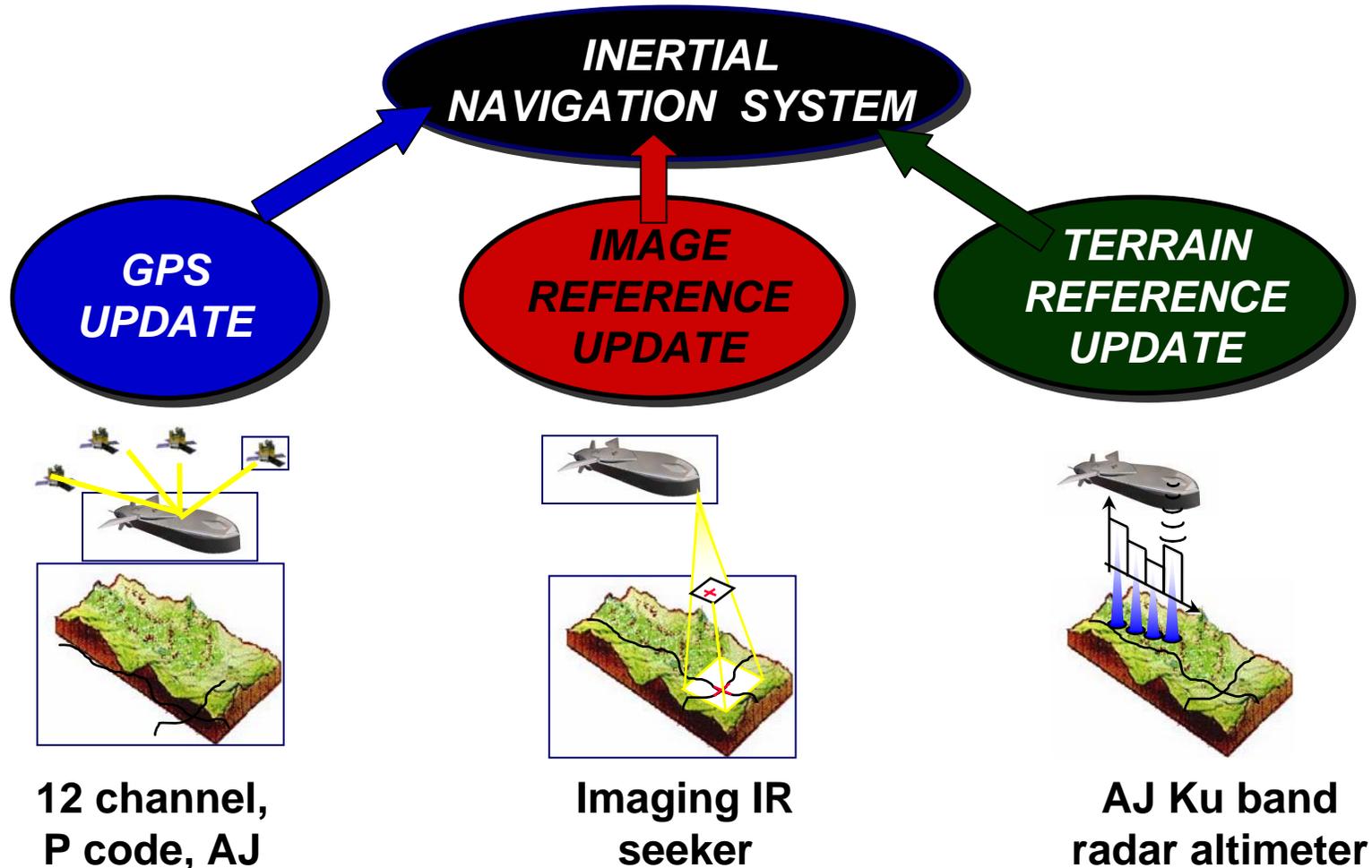
Precursor Shaped Charge  
21 in long - 14 in dia.

Programmable Smart Fuze  
"PIMPF"

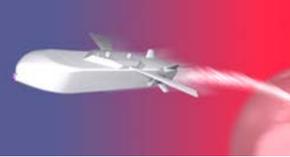
<u>Warhead</u>	
❖ Weight	1090 lbs
❖ Penetrator	880 lbs
❖ Shaped Charge	210 lbs

# TAURUS Failsafe Navigation

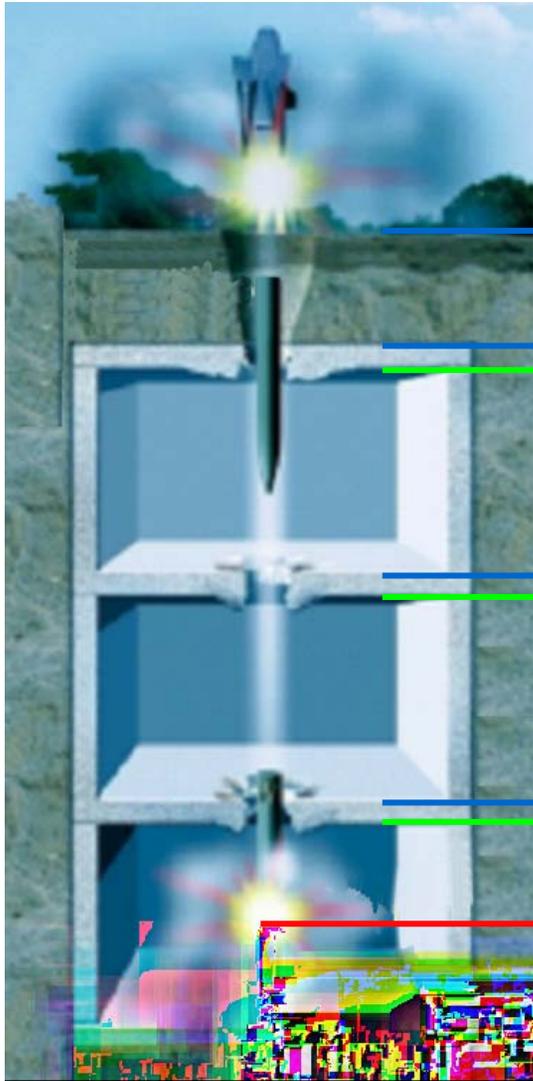
Continuously tuned, high resolution INS:



# ...assuring deep penetration and highest efficiency



by using the first “smart” active decision-making fuze (PIMPF) with void sensing and layer counting capability:



1<sup>st</sup> Impact  
Soil

2<sup>nd</sup> Impact

1<sup>st</sup> Exit

Void

3<sup>rd</sup> Impact

2<sup>nd</sup> Exit

Void

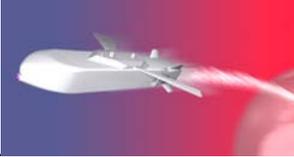
4<sup>th</sup> Impact

3<sup>rd</sup> Exit

Programmable  
Time delay



# TAURUS results with Mephisto Warhead



- ≡ Entry at 90° to vertical
- ≡ Target dimensions classified reinforced with rebar

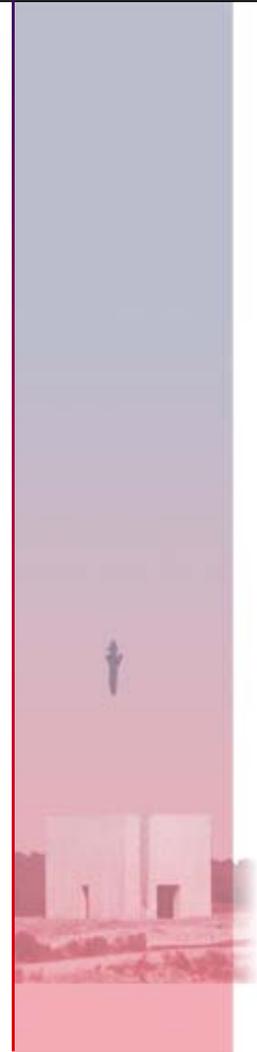
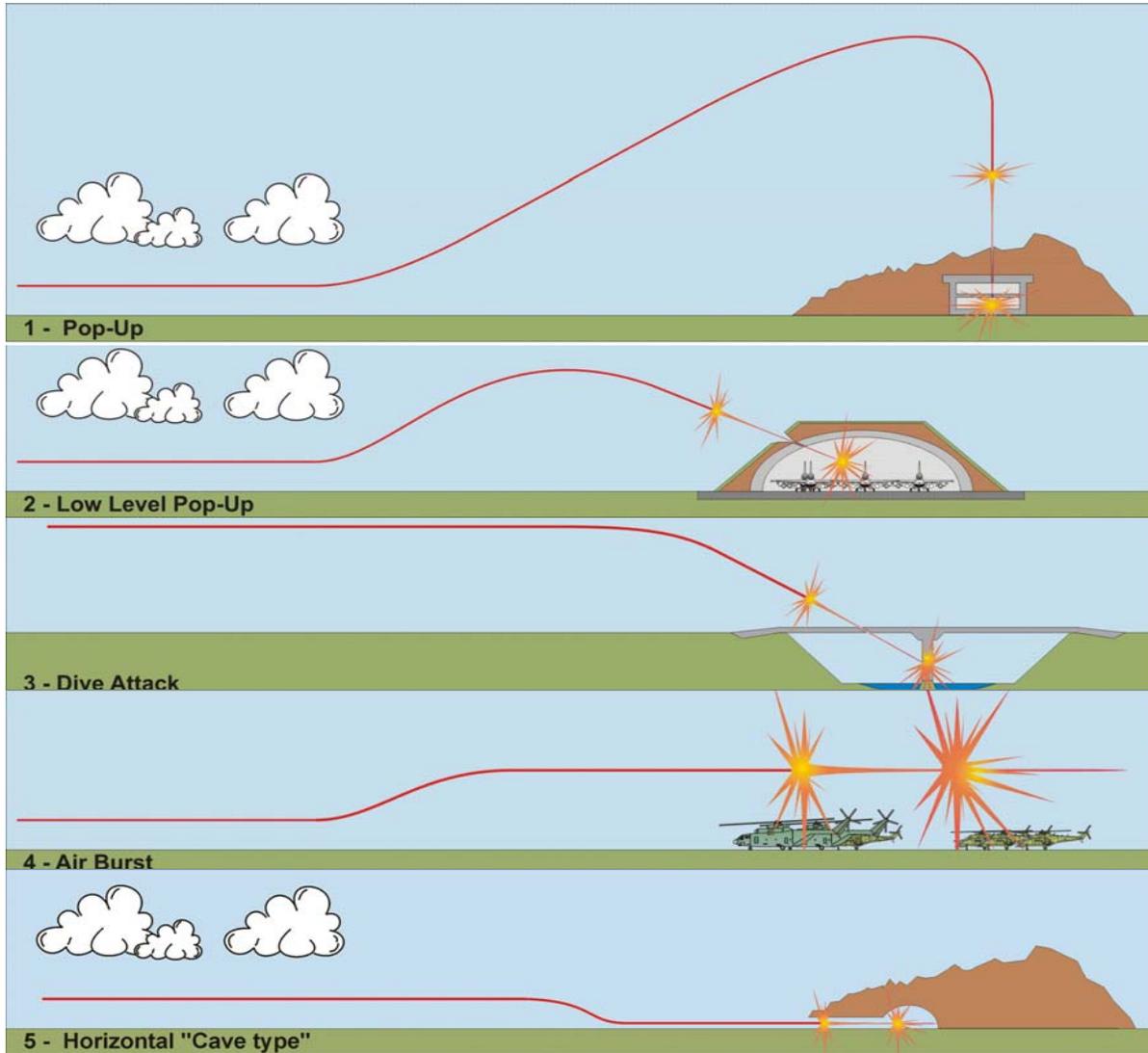


- ≡ Underside of hole  
Note: spalling of reinforced concrete

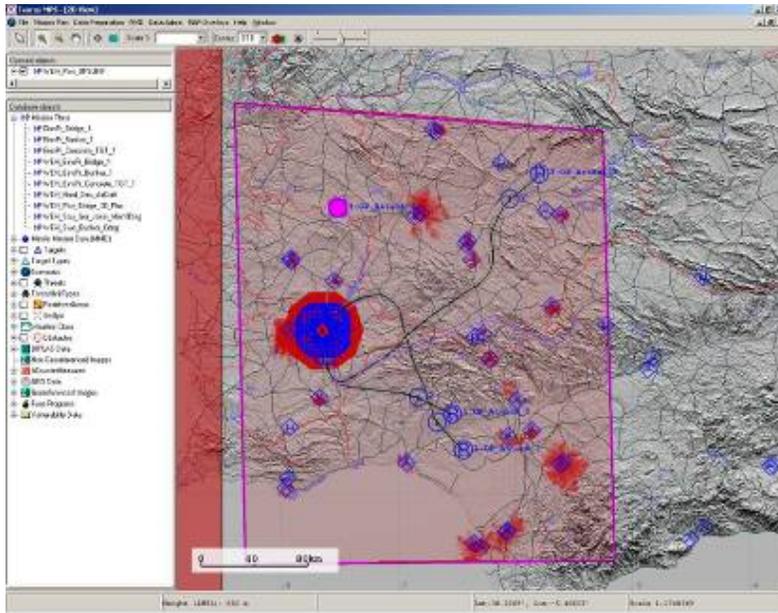


- ≡ Entry hole in top level caused by penetrator

# Examples of Target Attacks



# The TAURUS KEPD 350 Mission Planning System

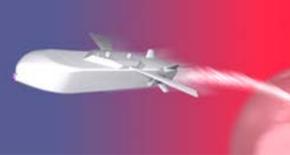


- **Generation of Target Attack Plan**
- **Calculation of the Target Effect**
- **Flight Path Generation**
- **Survivability Calculation**
- **Missile Navigation Data Generation**
- **Multi-Missile Mission Optimization**
- **Mission Success Calculation**
- **JMPS Adaptable**

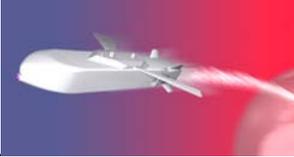


- **HW based on standard PC**
- **Windows application**
- **Oracle Database**
- **Carmenta SpatialAce Map engine**

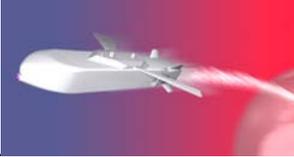
# Aircraft Integration Activities



# Satellite picture of target area



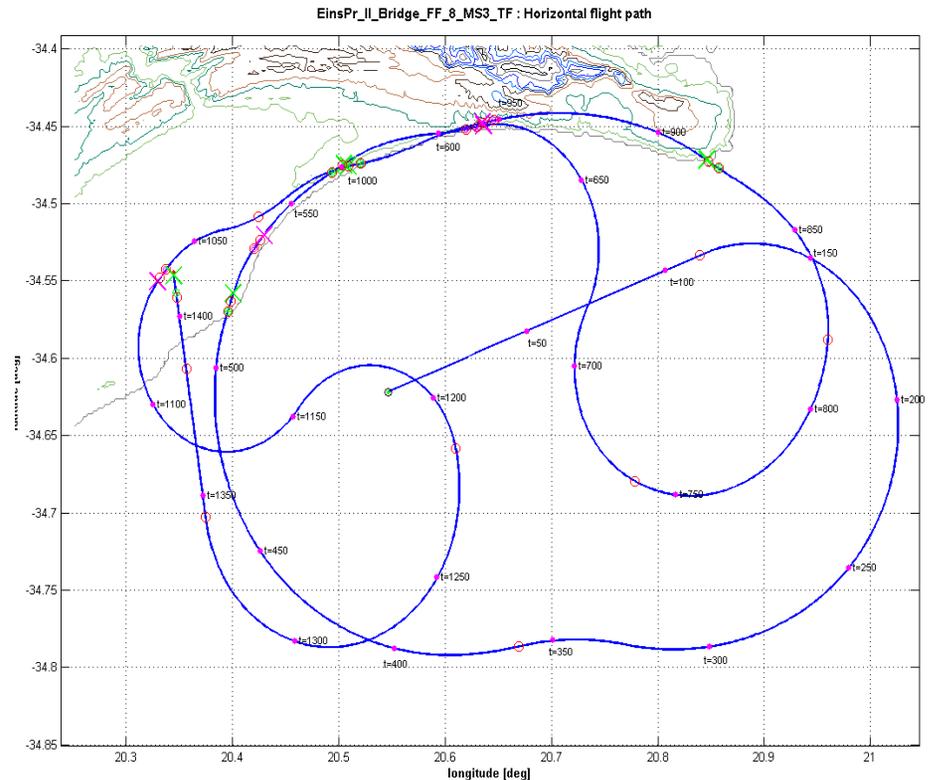
# Target area – bunker and bridge target



# Example – Bridge Mission



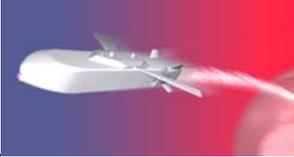
## Flight path to Bridge



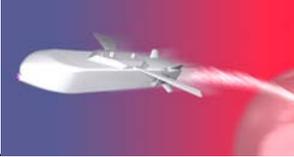
### Mission data:

- High level release
- Single store
- Flight route over 380 km

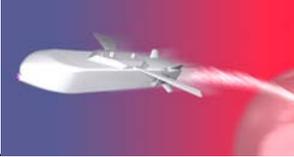
# Bridge Mission, Target hit view



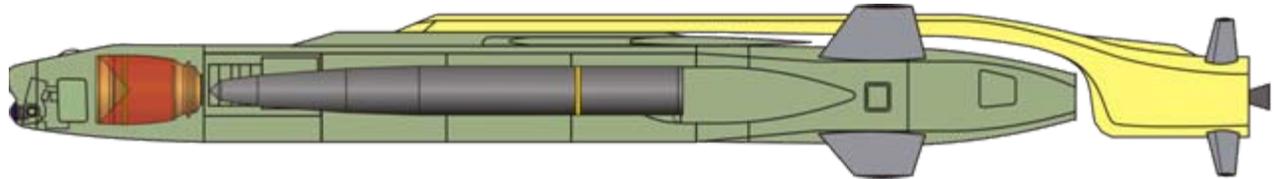
# Target Hit



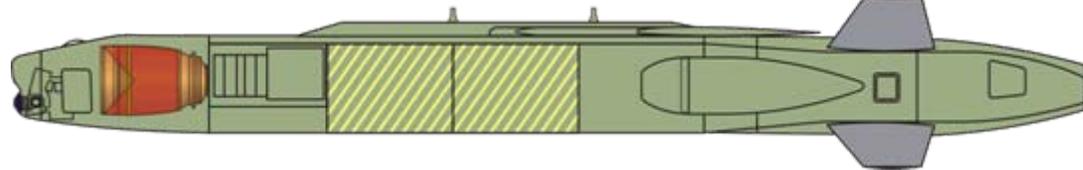
# TAURUS Product Family



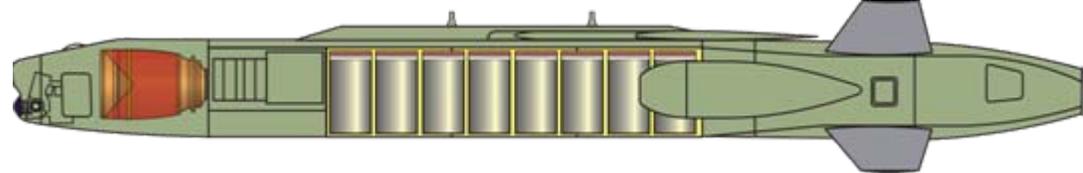
**TAURUS CL**  
(Container launched)



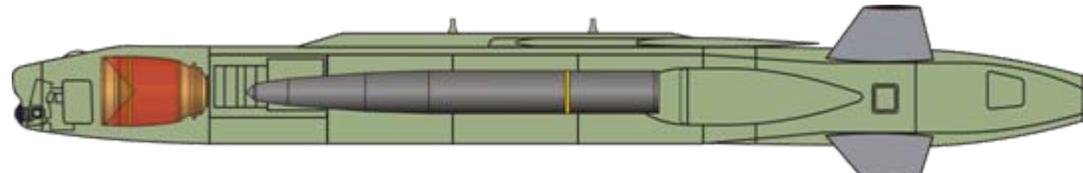
**TAURUS MP**  
(Modular Payload)



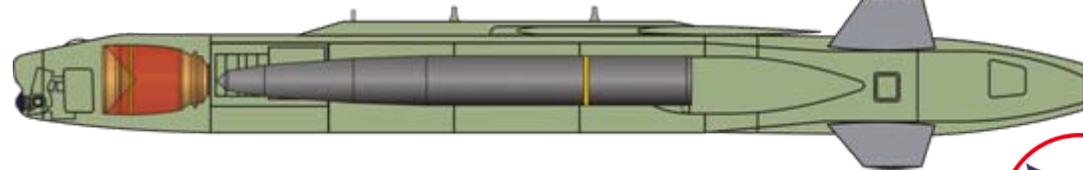
**TAURUS M**  
(Multiple Warhead)



**TAURUS TAURUS L**  
(Mass reduced version)



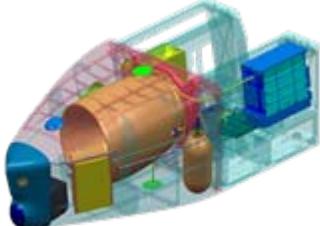
**TAURUS KEPD 350**  
(Product basis)



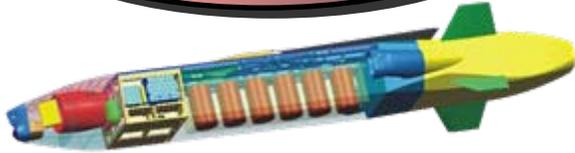
# Incremental Capability Development



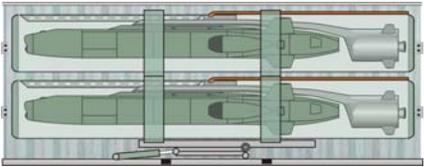
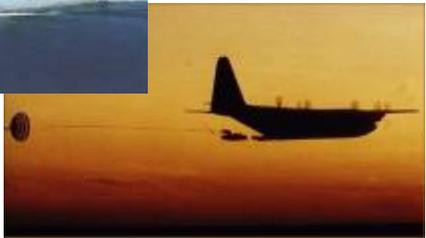
## DATALINK and ENHANCED MISSION CONTROL



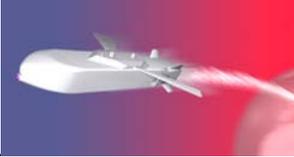
## MODULAR MISSION PACKAGES



## TRI SERVICE CAPABILITY



# TAURUS Capabilities



## ≡ Penetration

- Superior penetration compared to all other stand-off missiles
- Contains first in class, void-sensing fuze (PIMPF)
- Airburst performance 2 x better than all competitor stand-off weapons

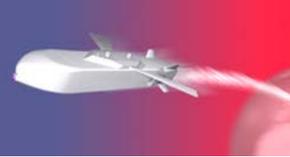
## ≡ Range

- 2 x range than all current stand-off missiles on the market today

## ≡ Navigation

- Tri-tec mid course navigation system (INS aided by GPS or IBN or TRN)
- GPS independent – only stand-off missile so equipped
- Nap of the earth (Terrain Following) – Superior survivability

**...Read today to meet urgent warfighter requirements...**



# Questions?

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