



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

# Lightening the Soldiers Load For Mounted Systems

James Murtaugh & Anthony Piccolo

16 May 2012

DISTRIBUTION STATEMENT A: Approved for public release. Distribution is unlimited.



#### **Background - CREW Served**



A **crew-served weapon** is any weapon system that requires a crew of more than one individual to function at optimum efficiency due to its operational complexity, such as requiring one person to load while another fires.







# RDECOM CREW Served Weapon Mounts



#### Weapons

## **Mounts - Tripods**

- M249
- M240
- M2
- **MK19**

- M122A1
- M192
- M3
- XM205







#### Soldier's Load

- Soldiers often carry over 100 pounds of equipment.
- Weapon and mounting system are in addition to these items.
- Constant goal is to reduce the weight a soldier may carry while maintaining or improving the performance of the product.









#### **M122A1 - Previous Generation Tripod**



### Limitations:

- T&E is cumbersome to acquire targets
- T&E and Pintle are detached from tripod and may be lost
- Training to use T&E is lengthy and may be confusing to soldiers
- Weight
- No traverse stop for field of fire
- Tripod maintains length for storage







#### **Creation of M192 Tripod**



- Research and development contract with Capco, Inc. in 2004
- Initial production and fielding in 2005
- Currently over 40k units have been produced
- Continuing to phase out M122A1
- Winner of 2005 Army's Top Ten Greatest Inventions award

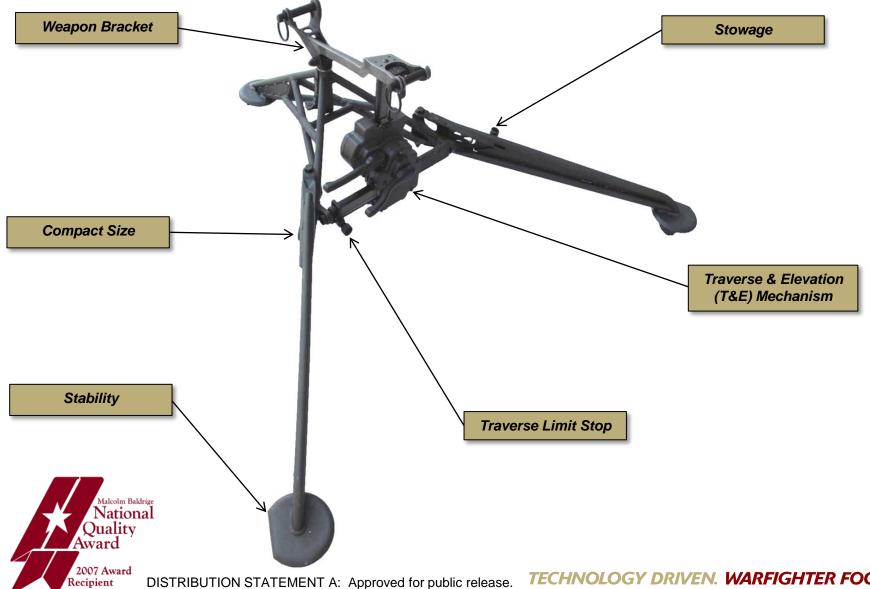






### M192 Lightweight Ground Mount (LWGM)





TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

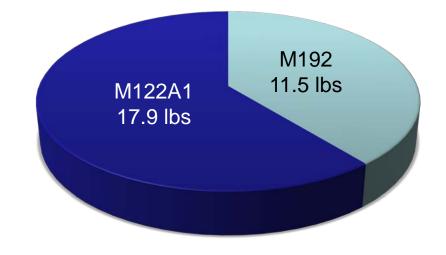


#### M192 Replaces M122A1



- The M192 provides an improved platform for the M240B 7.62mm Medium MG and M249 5.56mm Light MG
- M192 currently weighs 11.5 lbs -Approx. 6.4lbs, (34%) less than the M122A1 Tripod
- M192 weapon cradle includes a deflector for ejected M240B cartridge cases during operation









#### M192 Replaces M122A1



- The Traverse and Elevation (T&E)
   mechanism improves flexibility for
   traverse, elevation, depression
   and facilitates one-hand
   manipulation
- M192 includes a stop screw that sets the limit of traverse
- The M192 tactical carry configuration has a collapsed length of 24 inches - 6 inches less than the M122A1 Tripod









#### **M3 - Previous Generation Tripod**



### Limitations:

- T&E is cumbersome to acquire targets
- T&E and Pintle are detached from tripod and may be lost
- Training to use T&E is lengthy and may be confusing to soldiers
- Weight
- No traverse stop for field of fire
- Legs cannot be locked while collapsed









#### **Creation of XM205**



- Non-developmental item program that began in 2008 with Capco, Inc.
- Testing is now complete
- Program Manager anticipates a Milestone C decision this summer
- Production schedule to begin fall/winter of 2012
- XM205 will phase out M3



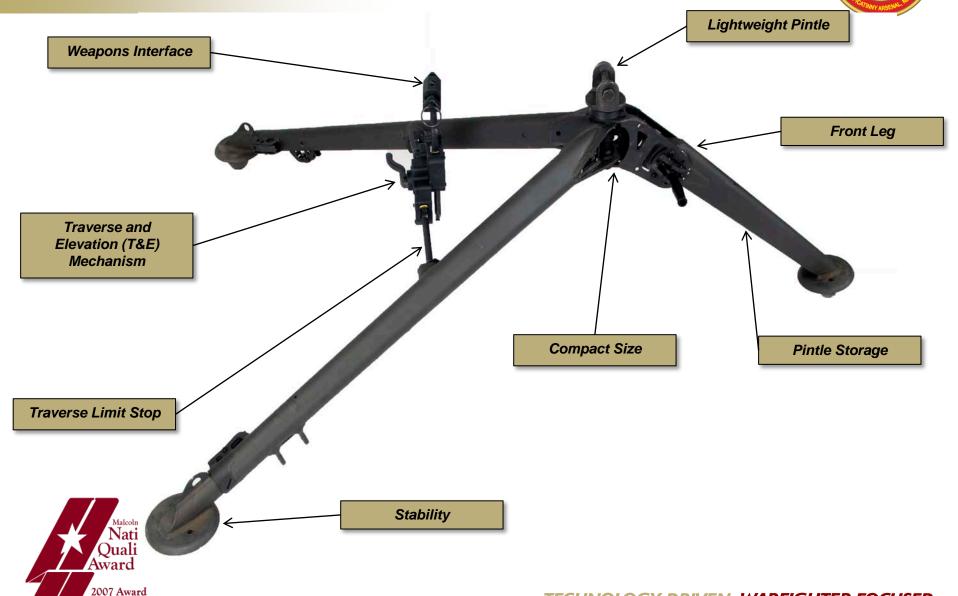






Recipient

# XM205 Lightweight Tripod for Heavy Machine Guns (LTHMG)







- The XM205 provides an improved platform for the M2 .50 Cal Heavy MG and MK19 Grenade Machine Gun
- The XM205 has a collapsed length of 47 inches and width of 12 inches, including a captured leg feature that is unavailable on the M3









#### XM205 Replaces M3



- The Traverse and Elevation (T&E) mechanism improves flexibility for traverse, elevation, depression and facilitates one-hand manipulation
- XM205 includes a stop screw that sets the limit of traverse









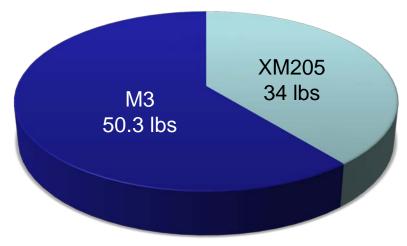


#### XM205 Replaces M3



- XM205 currently weighs 34 lbs -Approx. 16.3lbs, (33%) less than the M3 Tripod
- XM205 has a new lightweight pintle that reduces the weight and increases the elevation and depression capability of the M3 pintle
- XM205 has a stowage place for the lightweight pintle so it can remain attached while it is being transported









#### **QUESTIONS?**





James Murtaugh jj.murtaugh@us.army.mil



Anthony Piccolo anthony.piccolo@us.army.mil