Excalibur (XM982)

INVESTMENT COMPONENT

- **Modernization**
- Recapitalization
- Maintenance

MISSION

To provide improved fire support to the maneuver force commander through a precision-guided, extended range-artillery projectile that increases lethality and reduces collateral damage.

DESCRIPTION

The Excalibur (XM982) is a 155mm, Global Positioning System (GPS)-guided, fire-and-forget projectile, in use today in Operation Iraqi Freedom and Operation Enduring Freedom as the Army's next-generation cannon artillery precision munition. The target, platform location, and GPS-specific data are entered into the projectile's mission computer through an enhanced portable inductive artillery fuze setter.

Excalibur uses a jam-resistant internal GPS receiver to update the inertial navigation system, providing precision guidance and dramatically improving accuracy regardless of range. Excalibur has three fuze options: height-of-burst, point-detonating, and delay/penetration; and is effective in all weather conditions and terrain.

The program is using an incremental approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities and lower costs as technology matures. The initial variant (Increment Ia1) was fielded in 2007 to provide an urgently needed capability. It includes a unitary high-explosive warhead capable of penetrating urban structures and is also effective against personnel and light materiel targets. Increment Ia2 will provide increased range (up to 40 kilometers) and reliability improvements. The third variant (Increment Ib) will maintain performance and capabilities while significantly reducing unit cost and increasing reliability.

Excalibur is designed for fielding to the digitized Lightweight 155mm Howitzer (LW155), the 155mm M109A6 selfpropelled howitzer (Paladin), and the Swedish Archer howitzer. Excalibur is an international cooperative program with Sweden, which contributes resources toward the development in accordance with an established project agreement and plans to join in procurement.

SYSTEM INTERDEPENDENCIES

None

PROGRAM STATUS

- **Current:** Army and Marine Corps units in Afghanistan and Iraq are now Excalibur capable.

PROJECTED ACTIVITIES

- **FY10:** Initial operational test and evaluation for Increment Ia2.
- **FY10:** Full materiel release and full-rate production of Increment Ia-2.
- **FY10:** Conduct competition between Increment Ib competitors and down-select to one contractor team for Phase 2 (Qualification and Production).
- **FY11:** Milestone C decision for Ib
- **FY12:** Operational test for Increment Ib
- **FY13:** Full material release for Ib

ACQUISITION PHASE

Technology Development | **Engineering & Manufacturing Development** | **Production & Deployment** | Operations & Support

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FOREIGN MILITARY SALES

Canada, Australia, Sweden, United Kingdom (compatibility testing with AS90 howitzer)

CONTRACTORS

Excalibur Increment Ia (Systems Integration):
Raytheon (Tucson, AZ)
Atlantic Inertial Units (Plymouth, England)
BAE Systems Bofors Defense (teamed with Raytheon) (Karlskoga, Sweden)
General Dynamics Ordnance and Tactical Systems (Healdsburg, CA; Niceville, FL)

Excalibur Ib Phase 1 (Design Maturation):
Raytheon (Tucson, AZ)
Alliant Techsystems (Minneapolis, MN)