Battelle has developed a series of tactical climbing equipment that reflects user input from concept to finished product. Battelle tactical climbing hardware now in service includes:

- Tactical Air Initiated Launch (TAIL) System
- Improved Caving Ladder
- Rapidly Deployable Rope Ladder
- Common Tip Interface (CTI)
- Fast Rope Descend Device (FRDD)
- Pneumatic and Manual Poles

Battelle has proven expertise and experience in developing, applying, fabricating, and testing composite materials used in lightweight, high-strength structures, as well as a broad and deep knowledge of corrosion, corrosive environments, and corrosion prevention. Battelle has extensive in-house capabilities to conduct structural analysis, failure analysis, and testing results in equipment that operates reliably and safely in a variety of harsh environments.

**THE CHALLENGE**

Special Operations Forces have tactical access needs ranging from climbing to fast-roping in environments from salt water to high desert.

**THE SOLUTION**

- Pneumatically operated TAIL system launches a tethered hook over a 100-foot obstacle with a 60-foot standoff
- Better performance than its predecessor, at a reduced cost
- Simple, rugged design provides safety and reliability with low maintenance
- Versatility to throw any object that fits into its barrel

**TACTICAL AIR INITIATED LAUNCH (TAIL) SYSTEM**

**IMPROVED CAVING LADDER**

- Designed specifically for Visit, Boarding, Search, and Seizure missions
- Stainless steel construction with customized aluminum rungs improves operational life in salt water environments
- Procured by the U.S. Navy to outfit its Visit, Boarding, Search, and Seizure teams
RAPIDLY DEPLOYABLE ROPE LADDER
- Employs Kevlar® rope which endures operational use in harsh environments
- Glass-filled nylon rungs designed with operator guidance and molded over the Kevlar® rope for a seamless, lightweight solution.

COMMON TIP INTERFACE (CTI)
- Flexible and versatile, enabling operators to readily mate a variety of attachments to climbing equipment
- Secure attachment with quick-change capability while preventing unwanted tip rotation and binding

FAST ROPE DESCEND DEVICE (FRDD)
- Assists heavily loaded operators with slowing their descent while fast-roping (traveling down ropes from helicopters at low altitudes), reducing injury from hard landings
- Creates an “S” curve in the rope, increasing friction to slow the descent

MANUAL POLE
- Enables operators to place a hook high above their heads
- Created with carbon fiber composite
- Collapsible, lightweight, and easy to carry
- Allows simple interchange of tip attachments