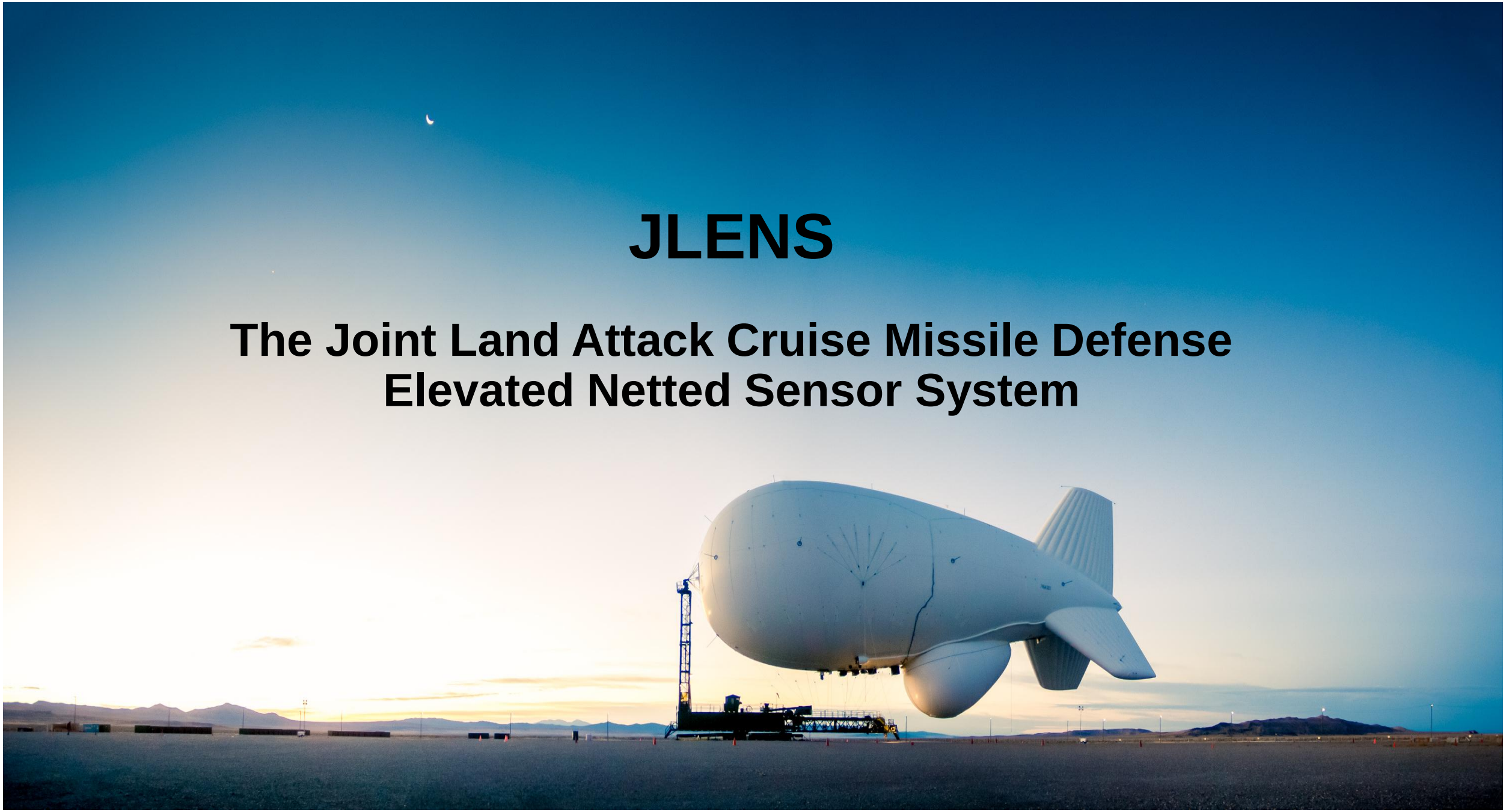
JLENS

The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System



Winter at the Utah Test Site

JLENS Aerostat First Flight at Elizabeth City, NC

TCOM Hanger in Elizabeth City, NC

Inside the TCOM Hanger

Low Altitude First Flight

Description

- A complete JLENS system, called an orbit, consists of two aerostats with radars mounted on them and tethered to ground stations.
- The JLENS aerostat is 74 meters long
- JLENS is an aerostat, a large, helium-filled balloon tethered to the ground mobile mooring station integrated winch system for launch and retrieval.
- The tether carries power up to the radar and sends data down to a computer processor.
- The Survailance VHF radar (SuR) is used to provide 360-degree situational awareness.
- The Fire Control X-Band Radar (FCR) provides precision information about objects detected by the 360-degree SuR and provides intercept data to several missile systems.
- JLENS can see surface moving objects: tanks, boats, trains and vehicles.
- JLENS is mobile and can be emplaced in 120 hours

Facts

- JLENS can remain aloft and operational for 24/7 up to 30 days at a time.

- Provides 360 Degree Coverage about the size of Texas from 10,000 ft. Altitude

- Threats include:
  - Cruise Missiles
  - Unmanned Aircraft
  - Rotary and Fixed wing Aircraft
  - Surface moving targets
  - Tactical Ballistic Missiles
  - Large Caliber Rockets

- Tested at the Hill AFB Utah Test and Training Range (UTTR) and the White Sands Missile Range (WSMR) in New Mexico

- Raytheon has delivered two orbits to the U.S. Army

- Now Deployed at the Aberdeen Proving Grounds, MD

Advantages

- JLENS provides 360-degrees of defensive radar coverage and can detect and track objects like missiles, and manned and unmanned aircraft from up to 340 miles away.
- This potent combination of persistence and capability give defenders more time and more distance to:

    - Identify potential threats
    - Make critical decisions (Combat ID)
    - Conduct crucial notifications
    - Provides Fire Control Guidance Data

- JLENS allows the military to safeguard hundreds of miles of territory at a fraction of the cost of fixed wing aircraft, and it can integrate with defensive systems including:

    - Patriot
    - Standard Missile 6
    - Advanced Medium Range Air-to-Air Missile
    - National Advanced Surface-to-Air Missile System

Advantages contd.

- An aerostat has two advantages. The first is elevation. If you're standing on the ground, you can only see for a few miles because of the curvature of the earth and obstructions. Greater Altitude provides increased line of sight distance. The same principle holds true with radar, which is why we put the radar on an aerostat that can go as high as 10,000 feet. The other advantage is persistence. Unlike a plane, which can only stay aloft for a few hours, the JLENS aerostat can stay aloft for up to 30 days at a time.

- One JLENS system, known as an orbit, can provide the same 24/7 coverage for a 30-day period that 4-5 fixed wing surveillance aircraft (AWACS, JSTARS or E-2C) can provide.

    - Depending on the kind of aircraft used, a fixed-wing surveillance aircraft is 500-700% more expensive to operate than a JLENS during that same time period because of manpower, maintenance and fuel costs.

    - A JLENS orbit uses less than 50% of the manpower required to fly a fixed wing aircraft.

JLENS System - Video on YouTube

- (JLENS) System – YouTube 4:56
    - YouTube Video - Raytheon presentation of JLENS
    - Oct 10, 2011 - Uploaded by Raytheon
    - Meet JLENS, a revolutionary Surveillance capability providing continuous detection and fire control….