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**JACKSTRAWING** - A term describing poor chaff dispersal due to tangling of stiff dipoles where no physical adhesion is involved. [10:68] Contrast with **BIRDNESTING**.

**JAFF** - [Derived from "JAMming and CHaff"] An ECM tactic involving the use of jammers to illuminate chaff corridors or chaff bursts to produce false targets. [8] Synonymous with **NOISE ILLUMINATED CHAFF**.

**JAMMING** - See **ELECTRONIC JAMMING**.

**JAM RESISTANT** - A descriptive term which indicates that a device is relatively unaffected by jamming. []

**JAM-TO-SIGNAL RATIO (JSR)** - The ratio of jamming power to received signal power at which the target illuminated by a radar is exactly at the threshold of detection. This occurs at the **BURN-THROUGH RANGE**. []

**JAVA** - A computer language, developed by Sun Microsystems Inc., for writing small programs that can be downloaded and executed. [10:2619] See also **ACTIVEX**, **JAVASCRIPT**.

**JAVASCRIPT** - A computer language, more modest than **JAVA**, used principally within Web pages to manipulate browser windows and the items within a browser. [] See also **ACTIVEX**, **JAVA**.

**JET ENGINE MODULATION (JEM)** - RF sidebands surrounding the **SKIN PAINT**. Jet engine modulation amplitude and frequency depend on engine type and jet engine speed, and may be exploited through **SPECTRA RECOGNITION** techniques. [10:2446]

**JIGSAW** - A DARPA project (*ca* 2003), Jigsaw is a three-dimensional (3-D) imaging laser radar (LADAR) capable of reliably identifying hidden targets, such as personnel and vehicles, through gaps in trees, foliage and camouflage, and, in urban settings, identify targets in alleyways and alcoves. The Jigsaw sensor will collect high-resolution, 3-D images from multiple viewpoints and combine them to form a composite 3-D image to enable the warfighter to see underneath the canopy and visually recognize targets, day or night. [Source: DARPA] NOTE: Jigsaw sensor and technology development is focused on application to the Army's Future Combat Systems (fcs).

JITTERED PRF ECCM - An ECCM technique where the radar PULSE REPETITION FREQUENCY (PRF) is changed between two or more PRFs. [8]

JITTERED PRF JAMMING - A jamming technique where the ECM equipment jitters the pulse frequency of the signal returned to the victim radar. []

JITTERED PULSE WIDTH ECCM - An ECCM technique where the radar jitters its PULSE WIDTH. [8]

JITTERED PULSE WIDTH JAMMING - An ECM technique that involves the re-radiation of a victim radar's signal after randomly varying its PULSE WIDTH. []

JOAN-ELEANOR (J/E) - A World War II directional two-way High Frequency (HF) communications device that enabled an agent on the ground to talk directly with an appropriately-equipped OSS (Office of Strategic Services) agent flying above. [10:2765] NOTE: The J-E's HF band and vertical cone-shaped directivity made direction finding (DF-ing) by the enemy next to impossible.

JOGGER - A military space mission to detect missiles by employing OVER-THE-HORIZON RADAR as well as other sensor systems and classified technologies. [10:2509] See also FAST WALKER, SLOW WALKER.

JOHN MADDEN PENCIL - See TELESTRATOR.

JOINT FIRES (Jfires) - A program (*ca* 2006) that seeks to enable widely dispersed service elements to develop an identical picture of the battlespace that would foster the integration of many forms of air and missile defenses. [10:3084]

JOINT FIRES NETWORK (JFN) - A real-time intelligence correlation, sensor control, target generation, mission planning, engagement, and battle damage assessment capability for precision strike. [10:3025]

JOINT HELMET-MOUNTED CUEING SYSTEM (JHMCS) - A CUEING (or CUING) system which projects a display onto a pilot's visor, allowing the pilot to aim the aircraft's radar, missiles, INFRARED sensors and air-to-ground weapons merely by looking at the target and pressing the applicable controls. [10:2820]

JOINT LAND-ATTACK CRUISE MISSILE DEFENSE ELEVATED NETTED SENSOR (JLENS) - A Joint program designed to provide over-the-horizon, wide-area surveillance and precision tracking data to support an over-arching mission area of joint land-attack cruise missile defense and enhanced theater air defense based on the

air-directed (*e.g.*, AEROSTAT) surface-to-air missile (ADSAM) engagement concept. [10:2837] See also OVER-THE-HORIZON TARGETING.

**JOINT MOBILE OFFSHORE BASE (JMOB)** - A man-made, movable, multipurpose, sea-based logistics facility. The JMOB is ideally suited to the maintenance of continuous overseas presence; and theater access complementary to, or independent of, allied or coalition support and infrastructure. The JMOB will provide C<sup>4</sup>I to a Joint Task Force, house depot-maintenance and other support facilities required by tactical aviation, facilitate special operations forces (SOF) missions, and serve as a logistics base for U.S. and allied air and sea transports, (including the C-17). [10:2662]

**JOINT READINESS AND LOGISTICS** - The capability to enhance readiness and logistics for joint and combined operations. It supports the ENABLERS required to deploy and sustain the joint force across the full spectrum of operations. [NAVWAR Joint Warfighting Science and Technology Plan (*circa* 2000)]

**JOINT SERVICE CHEMICAL MINIATURE AGENT DETECTOR (JSCMAD)** - A small device worn by individual personnel to warn them of a chemical agent attack. Variants include devices to quantify and warn of the presence of nerve agents and blister agents in vapor form in aircraft and shipboard compartments. []

**JOINT-SERVICE INTERIOR INTRUSION DETECTION SYSTEM (J-SIIDS)** - A detection device, designed for the protection of weapons storage sites, that features sensors which can detect penetration of rooms, movement of intruders and the touching or removal of protected items. [10:2746]

**JOINT SERVICES WORKSTATION (JSWS)** - A REAL TIME multi-sensor C<sup>4</sup>I system. []

**JOINT SURVEILLANCE SYSTEM (JSS)** - An overlapping system of radar units positioned across the perimeter of the continental United States. The JSS is co-owned by the U.S. Air Force (USAF) and the Federal Aviation Administration (FAA). [10:2839]

**JOINT UNMANNED COMBAT AIR SYSTEM (J-UCAS)** - An unmanned aircraft capable of launching smaller expendable unmanned aircraft especially designed for reconnaissance or to jam, attack or decoy high-value targets such as enemy air defenses. [10:3060] NOTE: (2005) This capability is planned for naval service by "the end of the next decade."

**JOINT VIRTUAL BATTLESPACE (JVB)** - A SYSTEM ARCHITECTURE designed to integrate existing military models into a robust representation of the

BATTLESPACE with high fidelity digital terrain, dynamic environmental effects, and physics-based modeling. JVB allows integrated models to pass data among themselves and share a common battlespace. [] NOTE: JVB is a tool for evaluating concepts, technologies and proposals, and tactics techniques and procedures (TTPs) and Concepts of Operation (CONOPS) from unit entities to Joint Task Force levels.

## K

KALMAN FILTER - A device which uses sensor measurements to determine the position and velocity of a moving or stationary object. The filter can utilize angle-only measurements (*e.g.*, from an optical sensor) or angle-plus-range measurements (*e.g.*, from a radar). It can also simultaneously utilize measurements from more than one sensor (*e.g.*, stereoscopic tracking). [10:2545] See also DEMPSTER-SHAFER REASONING.

KERR EFFECT - A change in the refractive index of a material under the influence of an electric field. [] See also ELECTRO-OPTICS.

KEYSTROKE MONITORING - Using a hardware or software mechanism to capture user keyboard strokes and report the stroke sequence to a HACKER. [10:2964]

KILL ASSESSMENT - See BATTLE DAMAGE ASSESSMENT.

KILL CHAIN - (1) The USAF six-stage target cycle of Find, Fix, Track, Target, Engage, and Assess (F2T2EA). [] NOTE: The time interval between each adjacent pair of stages in F2T2EA is referred to as a "seam." See also THREAT KILL CHAIN. (2) A U.S. Navy modeling and simulation system that utilized video game technology to examine new ship systems and military tactics. [10:3065] NOTE: KILL CHAIN was initially designed to illustrate the capabilities that the DD(X) will add to the battlespace for the U.S. Navy.

KILTING - A National Security Agency (NSA) database (*i.e.*, National Technical ELINT Database) containing the characteristics and attributes of non-communications U.S. and foreign emitters. This comprehensive data source, maintained by NSA, includes the technical signal parameter detail necessary to meet the requirements of electronics intelligence (ELINT) customers. []

KINEMATIC FLARE - See FLY-ALONG FLARE.

KINEMATIC SPECIAL MATERIAL DECOY (KSMD) - A rocket-propelled DECOY that dispenses special material INFRARED payloads for tactical aircraft self-

protection against threats that employ motion as well as special discriminants in their SEEKERS. [] See also SPECIAL-MATERIAL DECOY.

**KINETIC ENERGY ANTISATELLITE (KE-ASAT)** - An anti-satellite missile designed to reduce orbital debris by flying close by the target satellite and swatting it with a large paddle-like extension of the weapon. [10:2608]

**KINETIC ENERGY PENETRATOR** - An armament consisting of a combustible cartridge case and a base case with a long-rod tungsten or depleted-uranium penetrator equipped with stabilizing fins and contained within a metal sabot. [10:2719] NOTE: Due to its high muzzle velocity and mass, the kinetic-energy penetrator has a significant armor-penetrating ability.

**KINETIC ENERGY WEAPON (KEW) - A DIRECTED ENERGY WEAPON (DEW)** under DoD's WEAPONS SYSTEMS TECHNOLOGIES (WST). A term used in connection with ballistic missile defense to mean projectile-type weapons such as hypervelocity rail guns, and chemically propelled space-based interceptors. [10:13] NOTE: The Soviets have experimented with kinetic energy weapons using streams of high-speed particles of heavy metals (tungsten or molybdenum). [10:18] See also **ANTIMATTER PARTICLE BEAM (APB)**, **CHARGED PARTICLE BEAM (CPB)**, **GAMMA-RAY LASER (GRASER)**, **HIGH POWER MICROWAVE/RADIO FREQUENCY (HPM/RF)**, and **NEUTRAL PARTICLE BEAM (NPB)**.

**KINETIC KILL VEHICLE (KKV)** - A Strategic Defense Initiative (SDI) kinetic energy weapon intended to be carried and launched from low Earth orbit carrier satellites against enemy intercontinental ballistic missiles (ICBMs). [10:35] NOTE: The KKV may be launched and propelled with self-contained booster rockets, or by an **ELECTROMAGNETIC RAIL GUN (EMR)**. It carries its own communications and terminal guidance system, and will reach a terminal velocity of about 30,000 mph. The destructive force of the KKV is due to the kinetic energy of its 10-15 pound mass rather than explosives.

**KLYSTRON** - A velocity-modulated (vacuum) tube comprising, in principle, an input resonator, a **DRIFT SPACE**, and an output resonator. [3]

**KNOWLEDGE BASED SYSTEM** - See **EXPERT SYSTEM**.

**KNOWLEDGE DISCOVERY IN DATABASES** - See **DATA MINING**.

**KNOWLEDGE EXTRACTION** - See **DATA MINING**.

**KYTOON** - A combination kite and balloon. []

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