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DAEMON - A small program that runs in the background on Unix and other machines while other, higher-priority, programs run in the foreground. [10:1634]

NOTE: The word *daemon* is derived from the Greek word *daimon*, meaning a "supernatural being" or "spirit", rather than "demon," which refers to the fallen angels or followers of Satan.

DAISY CUTTER - (BLU-82) A 15,000-pound special purpose bomb, introduced in March of 1970 to carving out helicopter landing zones in the jungles of Vietnam (known as Commando vault airlift operations), the BLU-82B, more popularly known as the "Daisy Cutter", may well be the world's largest non-nuclear conventional air-dropped munition. It contains more than 12,000 pounds of GSX explosive slurry and when detonated creates a blast wave of over 1,000 lbs. per square inch, which is sufficient to shear an 8" diameter tree off at its base and clear an area of about 260 feet in diameter. The olive drab cylinder is more than four feet in diameter and is approximately 12 feet long. It is equipped with a conical aerodynamic nose cone and tipped with a 38-inch standoff detonator. The bomb itself is unguided and uses a drogue parachute to both orient the weapon "nose first" and to control its rate of descent. Prior to deployment the BLU-82 is mounted on a sled-like loading/delivery pallet. To launch the bomb, a cargo extraction parachute is deployed which, in turn, pulls the palletized bomb out of the aircraft. Once the bomb has left the aircraft a static line automatically deploys the bomb stabilization chute. The cargo extraction chute and delivery cradle are both discarded once the bomb stabilization chute

deploys. [military.com] NOTE: A popular misconception about the DAISY CUTTER is that it is a THERMOBARIC or FUEL AIR EXPLOSIVE (FAE) weapon - it is neither. The BLU-82 does use a slurry explosive - a very thick liquid explosive - but this is retained inside the warhead and not dispersed prior to detonation. The BLU-82 uses a stand-off fuze (M904 fuze in a fuze extender screwed into the front of the bomb) but this is an impact fuze and doesn't have the capability to function twice (once to disperse the FAE and once to detonate same). Another misconception is that these weapons kill by "burning the oxygen out of the air" or by "sucking up all the air and creating a vacuum. One way Thermobarics, FAEs and the BLU-82 are alike is that they kill by overpressure - a plain old blast that kills instantly. (Thanks to Dave mason, Major, USAF, RET, who is currently (2006) writing a book about the weapons used in "Desert Storm.")

DAMAGE ASSESSMENT - See BATTLE DAMAGE ASSESSMENT

DARPA SYNDROMIC SURVEILLANCE SYSTEM (D-S³) - A subsystem of the ENHANCED CONSEQUENCE MANAGEMENT PLANNING AND SUPPORT SYSTEM (ENCOMPASS), D-S³ provides a biosurveillance capability that tracks patients' signs and symptoms to alert epidemiologists of any new trends, such as the

possible release of a bioagent. [10:2955] See also INCIDENT COMMAND MANAGEMENT SYSTEM (ICMS).

DATA ARCHEOLOGY - See DATA MINING

DATA ASSOCIATION - The process of correlating new pieces of information with other reports, targets or tracks in the data base. See also DATA COMBINATION/ FUSION/ REASONING. [5:2]

DATA COMBINATION - The (primarily) numerical process which uses the multiple sensor measurements to classify the target or event into one or more categories (friend-foe-neutral, warhead, decoy, fighter-bomber or specific target type such as the Delta class submarine). [5:2] See also DATA ASSOCIATION/ FUSION / REASONING.

DATA DISTRIBUTION SYSTEM (DDS) - That component of the COOPERATIVE ENGAGEMENT SYSTEM (CES) that collects data from the COOPERATIVE ENGAGEMENT PROCESSOR (CEP), encrypts it, and transmits it to other cooperating units (CUs). It also accepts data from the CUs and sends it to the local CES. [10:2666] See also COOPERATIVE ENGAGEMENT.

DATA DREDGING - See DATA MINING

DATA DRIVEN ATTACK - A form of attack used by CRACKERS which is characterized by its being encoded inside innocuous data which is then executed by a user or other software to implement the attack. [] See also E-MAIL BOMB, HACKER NOTE: Data driven attacks may get through the FIREWALL in data form, enabling the attack to be launched behind the firewall.

DATA FUSION - The fully automated method of merging diverse data into a single, coherent representation of the tactical, operational or strategic situation. See also DATA ASSOCIATION, DATA COMBINATION, DATA REASONING. [5:2]

DATA MINING - (1) The attempt to find patterns, especially those which are hidden and unexpected, in data. [10:2833] (2) An iterative process of extracting patterns from a set of data, such as from those in a DATA WAREHOUSE, in order to deduce implicit, previously unknown, and potentially useful information. Data mining uses machine learning, statistical and visualization techniques to discover and present knowledge in a form that can be comprehended easily by humans. [] Also called DATA ARCHEOLOGY, DATA DREDGING, DATA PATTERN PROCESSING, INFORMATION DISCOVERY, INFORMATION HARVESTING, KNOWLEDGE DISCOVERY IN DATABASES (KDD), KNOWLEDGE EXTRACTION. See also

GENETIC DATA MINING. NOTE: Methodological approaches to data mining include cluster analysis, linkage analysis, visualization, algorithms, categorization analysis. Technologies used in data mining include NEURAL NETWORKS, decision trees, time series analysis, GENETIC ALGORITHMS, hybrid approaches, FUZZY LOGIC and statistics. [10:2833]

DATA PATTERN PROCESSING - See DATA MINING

DATA REASONING - The primary symbolic process which combines related measurement and decision data to infer the classification or intent of individual targets or larger target aggregates. See also EXPERT SYSTEM, DATA ASSOCIATION, DATA COMBINATION, DATA FUSION. [5:2]

DATA WAREHOUSE - A sophisticated database which comprises a complete repository of historical data for an organization. Its design emphasizes data storage efficiency and data reliability, rather than speed of extraction or currency of data. [10:2766] Compare with OPERATIONAL DATA STORE. See also DATA MINING. NOTE: In a data warehouse, data are stored at the lowest level of detail possible so that they can be searched, collected and re-shaped for any purpose.

DATAGRAM - (1) A data packet traveling through the Internet. [10:2619] (2) A PACKET carrying enough header information to be routed from its source to its destination independent of other packets and without any need to set up an end-to-end connection. [10:2632]

DATUM - In antisubmarine warfare, a datum is the last known position of a submarine, or suspected submarine, after contact has been lost. See also FLAMING DATUM. [1.1]

DAZZLE - Temporary loss of vision or a temporary reduction in visual acuity. See also FLASH BLINDNESS. [1.1]

DAZZLING - A COVER technique to hide the real by confusing the observer. [10:49]

DEAD HAND - A Russian ICBM launch system that, in the event of a U.S. first strike that would decapitate the top leadership in Moscow, provides for an automatic retaliatory launch against the United States. It is code-named *Perimetr*. [10:2860]

DEAD MAN'S SWITCH - See SPECIAL WEAPONS EMERGENCY SEPARATION SYSTEM (SWESS).

DECEPTION - Those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to

his interests. [1.1] See also ELECTRONIC DECEPTION. NOTE: A notion of DECEPTION is to "show the false".

DECEPTION MEANS - Methods, resources, and techniques that can be used to convey information to a foreign power. There are three categories of deception means: physical means; technical means; and administrative means. [1*]

DECEPTIVE HOLOGRAPHIC IMAGING - The projection of an array of holographic images about certain locations to deceive the adversary into misallocation of resources, attention, and/or effort around the present operation. [10:2751]

DECEPTIVE JAMMING - The transmission of signals similar to the victim's transmissions but false, causing the enemy to misinterpret or misuse the received signals. []

DECEPTIVE NOISE - [ACOUSTIC JAMMING term] The simulating of ship noise, torpedoes, or transient sounds to deceive a submarine. [10:41]

DECIBEL - One-tenth of a Bel (named after Alexander Graham Bell), the number of decibels denoting the ratio of the two amounts of power being ten times the logarithm to the base 10 of this ratio. [3] NOTE: the abbreviation dB is commonly used for the term decibel. With P1 and P2 designating two amounts of power and n the number of decibels denoting their ratio, $n = 10 \log_{10}(P1/P2)$ decibel. From this relationship, it can be seen that a 3dB decrease is a 50% reduction in power, approximately. [11.2].

DECISION TECHNOLOGY SYSTEM - An information system to support all phases of decision making from problem recognition, through problem formulation, analysis, solution, interpretation, and implementation. The system can include management information systems, decision support systems, expert systems, executive information systems, office automation systems, and idea processing systems. [10:118]

DECONFLICTION - (1) The process of optimizing frequency usage in a tactical environment. See FREQUENCY DECONFLICTION. [] (2) The minimization of fratricide through SITUATIONAL AWARENESS (SA) and effective use of weapons. (3) The control of shipping to prevent interference with military operations. []

DECONVOLUTION - Processing of signal parameters to exclude undesirable effects, such as ambient noise and own signals. []

DECOUPLING TILE - Foam tiles applied to ships' hulls adjacent to main and auxiliary engine spaces to decouple the sound path between machinery noise and the external environment. []

DECOY - An imitation in any sense of a person, object or phenomenon which is intended to deceive enemy surveillance devices or mislead enemy evaluation. See also CHAFF. [1.1]

DECOYING - A deception technique which diverts attention to offer misleading or multiple options to the enemy. [10:49] NOTE: Examples of DECOYING are the diversionary strike and use of devices to simulate ships or aircraft.

DECOY SHIP - A ship CAMOUFLAGED as a noncombatant ship with its armament and other fighting equipment hidden, and with special provisions for unmasking its weapons quickly. [10:2764] Also called Q-SHIP.

DEEP ATTACK - (1) All actions that can apply force outside the area of close combat. (2) The application of force in adversary space outside the area of close engagement. [10:2909]

DEEP SIREN - A surface-towed batwing-shaped low frequency (less than 2KHz) sonar system which permits submerged submarines to maintain communications with a task force while remaining on station (*i.e.*, the submarine need not leave station to come to periscope depth to communicate with the task force). [10:2850]
[10:3103]

DEEP VIEW - The **Deep View** program (formerly called Space Object Identification System) consists of a a high power, high-resolution, ground-based radar to image and characterize small objects in both low-earth orbits and deep space. The objective is to perform a variety of space surveillance missions, including characterizing debris and other objects that are more than an order-of-magnitude smaller than current capabilities (*ca* 2003) allow, and monitoring satellite health. [Source: DARPA]

DEFENSE INFORMATION INFRASTRUCTURE (DII)- The worldwide shared or interconnected system of computers, communications, data, applications, security, people, training, and other support structures serving a nation's military's information needs.

DEFENSE COUNTER CYBER (DCC) - See CYBER DEFENSE.

DEFENSE SWITCHED NETWORK (DSN) - A component of the Defense Communications System that handles Department of Defense (DoD) voice, data, and video communications. Formerly, the AUTOMATIC VOICE NETWORK (AUTOVON). []

DEFENSIVE COUNTERSPACE OPERATIONS - That part of **COUNTERSPACE OPERATIONS** that involves active and passive actions to protect space-related capabilities from enemy attack or interference. [Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, September 1997, 48] See also **OFFENSIVE COUNTERSPACE OPERATIONS**.

DEFERENCE TONES - A **NONLETHAL WEAPON** consisting of sophisticated arrays that can project a voice, or other sound, to a particular location so that the sound can only be heard at that particular location. [10:2754]

DEFERRED TIME - Operations yielding results than can be manifested, displayed, or printed later. Contrast with **REAL TIME**. []

DEGAUSSING - The neutralization of the strength of the magnetic field, e.g., of a vessel. [3] See also **DEPERMING**.

DEINTERLEAVING - The process of separating simultaneously-received signals from multiple emitters so that the pulses of a single emitter can be isolated and identified. []

DELAYED-ACTION AGENT - A **NONLETHAL WEAPON** consisting of a nonlethal agent (e.g. **CALMATIVE AGENT**) that has a controlled delay time before becoming effective. [10:2751]

DELOUSING - The distinguishing of returning Blue (friendly) strike aircraft from tag-along Red (enemy) aircraft so as to (1) avoid firing upon friendly forces, (2) provide assistance in getting them home, and (3) recognize and counter any tag-along Red aircraft. []

DELTA JAMMING - A **SELF-SCREENING ECM** technique that causes angle errors in monopulse radars by transmitting two RF signals whose frequencies are separated in such a way as to cause false intermediate frequency (IF) signals in the victim radar's IF amplifier. [8]

DEMON DIALER - A relatively unsophisticated computer program that dials the same telephone number continually until it detects an answer. [] Compare with **WARDIALER**.

DEMPSTER-SHAFER REASONING - A method of **DATA REASONING** that allows multiple information sources with varying levels of belief to contribute to probabilistic decisions. When used for sensor fusion, each sensor is allowed to contribute information at its own level of detail. [] See also **EXPERT SYSTEM**,

DATA ASSOCIATION, DATA COMBINATION, DATA FUSION. NOTE: Other sensor fusion techniques include KALMAN FILTERING, Bayes networks, hidden Markov models, and FUZZY LOGIC.

DENDRIMERS - Nanotechnology spherical polymers used experimentally (2005) for medical drug delivery and as light emitters. [10:3058] See also BUCKMINSTERFULLERENES, BUCKY TUBE, FULLERENE, MOLECULAR ELECTRONICS, NANOWIRE, QUANTUM DOTS.

DENIAL - Preventing an adversary from gaining information on friendly intentions, disposition or capabilities. []

DENIAL OF SERVICE (DOS) ATTACK - See E-MAIL BOMB.

DENSE WAVELENGTH DIVISION MULTIPLEXING (DWDM) - A LASER technique which enables a single strand of fiber to carry up to 400 gigabits per second. It features transmission of very closely spaced wavelengths by dividing the laser light among 80 different channels of varying colors. [10:2630]

DEPARTMENT/SERVICE MILITARY DECEPTION - MILITARY DECEPTION planned and executed by Military Services about military systems, doctrine, tactics, techniques, personnel or service operations, or other activities to result in foreign actions which increase or maintain the originator's capabilities relative to adversaries. Department/Service Military Deception is a category of Military Deception. [1.1] See also DECEPTION, ELECTRONIC DECEPTION, MILITARY DECEPTION.

DEPERMING - To remove, as far as practicable, the permanent magnetic characteristics of a ship's hull by powerful external demagnetizing coils. [3] See also DEGAUSSING.

DESTRUCTIVE ELECTRONIC WARFARE - Those EW actions that are planned to damage or destroy enemy personnel, equipment, or facilities. [7:CJCS MOP 6, APPENDIX B]

DETECTIVE TAGGANT - See TAGGANT

DETECTOR - With respect to electromagnetic energy, a detector is a device for the indication of the presence of electromagnetic fields. [3]

DETUNING SKIRT - An electrical attachment to tower structures (*e.g.*, cellular telephone tower) used to prevent the tower from reflecting or reradiating AM signals, which would affect the intended directional characteristics of the AM station. []
NOTE: A detuning skirt consists of three or more wires spaced equally about the structure and

strung alongside its length at a distance of 18-30 inches. The wires of the skirt are bonded to the tower at the top, and are connected to a wire hoop around its bottom (the 'skirt'). The wires are kept from touching the tower at any place (except the top) by insulators, if required. The hoop is connected to an electrical tuning circuit housed near the tower, which is tuned to the signal of interest. After proper tuning (or 'detuning') the tower presents a high impedance to the signal and, therefore, will not reflect nor reradiate it. [10:2897]

DEUTERIUM FLUORIDE (DF) LASER - The DF laser is chemically the same as the **HYDROGEN FLUORIDE (HF) LASER**. However, the increased mass of heavy hydrogen deuterium, shifts the laser wavelengths to 3.5 μm to 4 μm . This range is superior to the HF laser range for transmission through the atmosphere. [10:2607] See also **MID INFRARED CHEMICAL LASER (MIRACL)**.

DEVELOPING CRITICAL TECHNOLOGIES (DCT) - Technologies that will produce increasingly superior performance of military systems or maintain a superior capability more affordably. [www.dtic.mil/mctl] See also **WEAPONS SYSTEMS TECHNOLOGIES (WST)**, **MILITARILY CRITICAL TECHNOLOGIES LIST (MCTL)**.

DIBIT - A group of two **BITS**. [] See also **BYTE**. NOTE: The four possible states for a dibit code are 00, 01, 10, and 11.

DICKE FIX - An **ECCM** technique used to counter **SWEEP JAMMING**. []

DIFFERENCE ACOUSTIC WAVE GENERATION SYSTEM (DAWGS) - A **NONLETHAL ACOUSTIC WEAPON** consisting of electro-pneumatic acoustic generators which produce a high power acoustic beam with precise frequency control. [10:2731]

DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) - A system in which on-shore **GPS** stations measure the difference between their actual position and the **GPS** measurement, then broadcast a correction signal for navigators aboard nearby ships to use. Positions can be determined to within 3 meters. [10:2680]

DIFFUSE REFLECTION - Reflection from a rough surface. Contrast with **SPECULAR REFLECTION**. [3]

DIGITAL BATTLEFIELD - A combination of automated position location, communications, information, targeting, and sensor systems that provides a common operational picture. [10:2852]

DIGITAL DUST - See **SMART DUST**

DIGITAL MICRO-MIRROR DEVICE (DMD) - A space-and-cost-effective alternative to the CATHODE RAY TUBE (CRT). A DMD creates images using millions of tiny mirrors, each a PIXEL. The DMD projects light with a grid-like series of pixels and the light reflected from the pixels creates detailed pictures. Each micro-mirror element is suspended at two corners, enabling it to turn on microscopic torsion hinges. Computer-driven electrical impulses to a pad beneath the matrix of mirrors causes the pixels to tilt and direct light toward or away from an imaging lens and onto a viewing screen. Optical resolution is improved by increasing the number of mirrors used. DMDs may have from 440,000 to more than two million mirrors. [10:2523*]

DIGITAL MODULAR RADIO (DMR) -- A reprogrammable radio that permits the operator to instantly change the device's bandwidth, modulation and security waveforms with software commands. The digital modular radio can also function as a router, moving voice, data and video over a wide variety of wireline and wireless paths. Users can reprogram the radio through a Windows-like interface from a personal computer, or remotely over wireless and wireline, or over Internet pathways. [10:2661] Also called SOFTWARE REPROGRAMMABLE RADIO.

DIGITAL NAUTICAL CHART (DNC®) - A relational, vector-based digital database containing selected maritime features collected and attributed individually to support worldwide marine navigation and Geographic Information Systems (GIS). [Source: NIMA] NOTES: (1) DNC® is a registered trademark owned by the National Imagery and Mapping Agency (NIMA); (2) The database is a replication of the feature content of NIMA's portfolio of hard copy Harbor, Approach, Coastal, and General charts (about 5,000 charts); (3) Currently (2002), only the U.S. Navy, U.S. Coast Guard, DoD government agencies, and authorized DoD contractors are authorized to use DNC®.

DIGITAL RADAR - A radar in which system control and signal processing are effected by digital computer systems. [10:2389] Contrast with ANALOG RADAR.

DIGITAL RADIO FREQUENCY MEMORY (DRFM) - An electronic device consisting of a random access memory, analog-to-digital converters, digital-to-analog converters, and associated circuitry which provides the ability to capture threat emissions and to generate precise replicas for transmission at a later time. [4:18]

DIGITAL RADIO FREQUENCY TAGS (DRaFT) - Lightweight RF tags worn by personnel and placed on unattended ground sensors and other units that will permit sensors such as radars to track the identification and location of friendly units. [10:2955]

DIGITAL SIGNATURE - A method for providing proof of the identity of the sender of a message and verification that the message has not been altered in transit. [10:2817]

DIGITAL TECHNICAL CONTROL (DTC) - A component of the Marine Corps digital communication network (other components include, the Unit Level Circuit Switch (ULCS), Tactical Data Network (TDN), Tactical Communications Central (TCC), and various multi-channel radios) which acts as a central management facility for the installation, operation, restoration, and management of digital trunk groups consisting of multiplexed and individual circuits. [*extracted from a USMC Web page*] NOTES: DTC provides the primary interface between subscriber systems and LOCAL AREA NETWORKS (LANs) with the long-haul multichannel transmission systems to transport voice, message, data, and imagery traffic. It can add, drop, and insert digital circuits into multiplexed groups; provide a source of stable timing to connected equipment or conditioned circuits; and perform analog/digital, 2-wire/4-wire, and signaling conversions. It contains the monitoring, testing, and patching equipment required by technical controllers to troubleshoot and restore faulty circuits and links.

DILUTION CHAFF - See **DISTRACTION CHAFF**.

DIMINISHING MANUFACTURING SOURCE - The phenomenon which results in unavailability of spare parts because the original manufacturers have gone out of business, are making fewer of them, or have stopped making them altogether. [10:3036]

DIODE - (1) A VACUUM TUBE containing two elements: CATHODE and ANODE (plate). [] (2) A semiconductor device having two terminals and exhibiting a non-linear voltage-current characteristic. [3*]

DIODE LASER (DL) - A LASER in which a semiconductor is used as the light-emitting source. The choice of semiconductor material determines the wavelength of the output light, with very little tunability permitted for a given semiconductor material. [10:2559] See also **CRYSTAL LASER**, **DYE LASER**, **GAS LASER**. NOTE: Unlike other lasers, DIODE LASERS have no energy storage states, but they can be made very small, yet powerful.

DIPLEXING - The use of a single antenna to transmit on two separate frequencies simultaneously. []

DIPOLE - (1) A metal radiating structure of one-half wave-length in length so that the current has a node at each end of the element [3*] (2) A strip of metal cut to one-half wavelength. [] Synonymous with **HALF-WAVE ANTENNA**.

DIRECT COUPLING - (1) The coupling or conduction of signals or noise from one conductor to another by means of direct hardwire contact (as opposed to inductive or capacitance coupling) or an optical fiber to fiber direct interface (as opposed to, say, a lens interface). [10:17*] (2)The injection of a virus directly into the target system. See also **COMPUTER VIRUS COUNTERMEASURES**. [10:47] **NOTE:** Direct coupling could be accomplished by a continuous transmission of the virus code at the same time that the victim is receiving a valid transmission.

DIRECT FINGER READER (DFR) - A **BIOMETRIC DEVICE**, placed on a peripheral (*e.g.*, keyboard or mouse), which will allow usage of the peripheral only by users whose fingerprints are on file in the system's database of authorized users. [10:2874]

DIRECT JAMMING SUPPORT - A type of **TARGET AREA JAMMING SUPPORT** in which the jamming aircraft flies directly through hostile territory, sometimes with the strike package it will support. [10:2521] See also **AREA JAMMING SUPPORT**, **CLOSE-IN JAMMING SUPPORT**, **CORRIDOR JAMMING SUPPORT**, **STAND-OFF JAMMING SUPPORT**.

DIRECT SEQUENCE SPREADING - A **SPREAD SPECTRUM** technique which employs a code-carrier to multiply a signal containing the information to be transmitted. Direct Sequence Spreading uses the entire spread bandwidth as an instantaneous bandwidth. Contrast with **FREQUENCY HOPPING**, **TIME HOPPING**. [4:13]

DIRECT (FREQUENCY) SYNTHESIS (DS) - **FREQUENCY SYNTHESIS** where generation of desired frequencies is achieved by using a stable oscillator to generate a single reference frequency. [10:2616] Contrast with **INDIRECT SYNTHESIS (IS)**.

DIRECT VIEW OPTICS (DVO) - A generic term for any set of optics designed to enhance the human eye, which is the sensor in such a system. [] **NOTE:** An example of DVO is a pair of binoculars.

DIRECTED ENERGY (DE) - An umbrella term covering technologies that relate to the production of a beam of concentrated electromagnetic energy or atomic or subatomic particles. [7:CJCS MOP 6, APPENDIX B] **NOTE:** Directed energy is one of DoD's **WEAPONS SYSTEMS TECHNOLOGIES**, and, with Kinetic Energy (KE) Systems Technology, comprises the following:

***DIRECTED ENERGY (DE) AND KINETIC ENERGY (KE)
SYSTEMS TECHNOLOGY***

CHARGED PARTICLE BEAM (CPB)
NEUTRAL PARTICLE BEAM (NPB)
ANTIMATTER PARTICLE BEAM (APB)
GAMMA-RAY LASER (GRASER)
KINETIC ENERGY WEAPON (KEW)
HIGH POWER MICROWAVE/RADIO FREQUENCY (HPM/RF)

DIRECTED ENERGY DEVICE - A system using **DIRECTED ENERGY (DE)** primarily for a purpose other than as a weapon. Directed energy devices may produce effects that could allow the device to be used as a weapon against certain threats, for example, laser rangefinders and designators used against sensors that are sensitive to light. [7:CJCS MOP 6, APPENDIX B]

DIRECTED ENERGY WARFARE (DEW) - Military action involving the use of DE weapons, devices, and countermeasures to either cause direct damage or destruction of enemy equipment, facilities, and personnel, or to prevent hostile use of the electromagnetic spectrum through damage, destruction, and disruption. It also includes actions taken to protect friendly equipment, facilities, and personnel and retain friendly use of the electromagnetic spectrum. [7:CJCS MOP 6, APPENDIX B]

DIRECTED ENERGY WEAPON (DEW) - (1) A system using **DIRECTED ENERGY (DE)** primarily as a direct means to damage or destroy enemy equipment, facilities, and personnel. [1.1] (2) A **HARD-KILL ECM** weapon employing directed energy, such as **PARTICLE BEAM**, **HIGH ENERGY LASER**, **LASER ZAPPER**, high powered microwaves, etc. []

DIRECTED ENERGY WEAPON INTELLIGENCE (DEWINT) - Intelligence derived from the collection and analysis of **DIRECTED ENERGY WEAPONS (DEW)** or directed-weapon-related radio frequency/**HIGH POWERED RF**, **ELECTROMAGNETIC PULSES (EMP)**, **LASERS**, and **PARTICLE BEAMS (PB)**. [] **NOTE:** DEWINT is a component of **MEASUREMENT AND SIGNATURE INTELLIGENCE (MASINT)**.

DIRECTED STICK RADIATOR (DSR) - A portable battery-operated **NONLETHAL WEAPON** that uses a highly focused and intense acoustic pressure wave to disorient and disable targeted individuals up to 100 yards away. [*American Technology Corp. press release 10/30/2001*] **NOTES:** (1) The DSR causes no lasting effects and can be safely used in aircraft without fear of puncturing the fuselage. (2) The DSR could also be used for animal control. (3) The DSR also has application in secure communications and psychological warfare.

In secure communications, the DSR would work as a directional loudspeaker, whereby messages could be sent to individuals in a crowd without disturbing or alerting others. [10:2946]

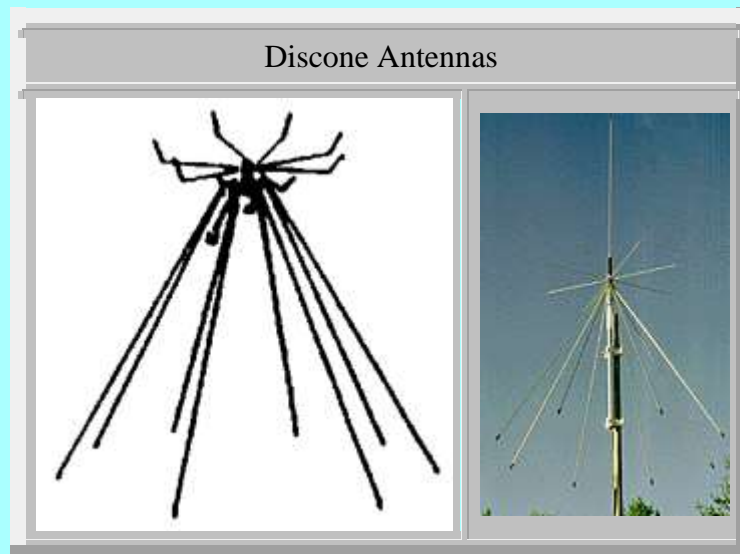
DIRECT EW SUPPORT - Mission support in which EW platforms accompany protected units, e.g., strike aircraft. See also **ACCOMPANYING JAMMING**. Contrast with **STAND-IN EW SUPPORT**, **STAND-OFF EW SUPPORT**. [10:127*]

DIRECTIONAL INFRARED COUNTERMEASURES (DIRCM) - The use of high-powered directional infrared jamming. [10:98] See also **INFRARED COUNTERMEASURES**. NOTE: A DIRCM engagement consists of four phases: (1) **Detect** - in which the missile warning system (MWS) detects a missile plume and sends a signal to the processor; (2) **Handoff** - in which the processor sends threat information to the DIRCM transmitter; (3) **Track** - in which the transmitter slews to the location of the threat and the flexible turret system (FTS) acquires the signal, locks on to the threat and tracks the target; and (4) **Jam** - wherein the transmitter sends a modulated beam of infrared (IR) energy to the missile seeker and jams its guidance signal. [10:2841]

DIRECTION FINDING (DF) - See **RADIO DIRECTION FINDING**.

DIRECTIVITY - (1) The ratio of the radiation intensity in a given direction from the antenna to the radiation intensity averaged over all directions. [3] (2) The ratio of the power scattered back in the radar's direction to the power that would have been **BACKSCATTERED** had the scattering been uniform in all directions. []

DISCONE - A biconical antenna (two conical conductors that have a common axis and vertex and are excited (or connected to the receiver) at the vertex) for which one of the cones has a vertex angle of 180 degrees. [3] NOTE: Discone antennas have wide **BANDWIDTH** characteristics and are omnidirectional.



DISK OPERATING SYSTEM (DOS) - A popular microcomputer operating system.
[]

DISORIENTATION DEVICE - NONLETHAL WEAPON ammunition which, upon impact, inflicts an electric shock that potentially causes disorientation of the target individual. [10:2745]

DISSIMILAR SOURCE INTEGRATION - The integration of information or data from diverse sources, *e.g.*, RADAR, IDENTIFICATION, FRIEND OR FOE (IFF), ELECTRONIC WARFARE (EW), acoustic, visual, *etc....* []

DISTRACTION - The successful lock-on-before-launch (LOBL) of weapons to be launched at false targets or decoys, or lock-on-after-launch (LOAL) of weapons to initially acquire and home on false targets or decoy. See also SEDUCTION. [10:126]

DISTRACTION CHAFF - CHAFF which presents a credible decoy to a missile before it acquires track on the target ship or after it has been subjected to angle or range gate stealing. [4:16] Synonymous with DILUTION CHAFF. Contrast with SEDUCTION CHAFF. See also LOCK-ON METHOD OF CHAFF DEPLOYMENT and DUMP METHOD OF CHAFF DEPLOYMENT. NOTE: Distraction chaff need not have as great a RADAR CROSS SECTION as the target ship, but should be deployed at some distance away to effectively "distract" the missile.

DISTRIBUTED COMMON GROUND SYSTEM (DCGS) - A system which allows remote exploitation of multiple sensors by ground stations in the continental United States (CONUS). [10:2865] NOTE: DCGS brings Web-based technologies and automated data sharing and dissemination. Newly acquired intelligence, surveillance and reconnaissance (ISR) imagery or data from diverse collection platforms are posted on the network, immediately tagged in a standard format and catalogued to facilitate user searches. [10:3067]

DISTRIBUTED INTERACTIVE SIMULATION (DIS) - A protocol for DISTRIBUTED VIRTUAL ENVIRONMENTs developed by the U.S. military so that COMPUTER GENERATED FORCES and manned simulators might interact on a large scale; now an IEEE standard. [10:2595]

DISTRIBUTED OPERATIONS (DO) - Operations (USMC) which empower small teams with small footprints, typically the size of a rifle squad or 12-13 Marines, to operate independently while miles apart within the battle space. The teams are linked by satellite communications and possess Global Positioning System capability. [10:3075] NOTE: These fast-moving teams perform many of the tactical missions normally assigned to companies or even battalions, with younger, lower-ranking Marines making decisions entrusted only to the higher ranks in larger, conventional Marine units.

DISTRIBUTED POWER (DP) - Modular electric generation or storage located near its point of use. [10:2885] **NOTE:** In addition to providing stand-alone power for isolated sites, distributed power ensures electricity during system outages and allows customers to save money by switching to distributed generation during high-cost peak periods. [10:2885]

DISTRIBUTED SENSING - See **MULTISENSOR DATA FUSION**

DISTRIBUTED VIRTUAL ENVIRONMENT (DVE) - A **VIRTUAL ENVIRONMENT** in which several users may interact and whose elements exist on two or more platforms. [10:2595]

DISTRIBUTIVE EXPLOSIVE TECHNOLOGY (DET) - A surf mine-clearing system consisting of a dual-rocket-deployed system that fires an explosive array (or net) charge from a Landing Craft, Air Cushion (LCAC) to destroy mines in the shallow-water zone from three feet up to the beach. [10:2790] Compare with **SHALLOW-WATER ASSAULT BREACHING (SABRE) SYSTEM**. See also **AIRBORNE MINE-NEUTRALIZATION SYSTEM (AMNS)**, **RAPID AIRBORNE MINE-CLEARANCE SYSTEM (RAMICS)**, and **SHALLOW WATER INFLUENCE MINE SWEEP (SWIMS) SYSTEM**.

DNA CRYPTOGRAPHY - A cryptographic technique in which each letter of the alphabet is converted into a different combination of the four bases that make up the human deoxyribonucleic acid (DNA). A piece of DNA spelling out the message to be encrypted is then synthesized, and the strand is slipped into a normal fragment of human DNA of similar length. The end result is dried out on paper and cut into small dots. As only one DNA strand in about 30 billion will contain the message, the detection of even the existence of the encrypted message is most unlikely. [10:2815]

DNS SPOOFING - See **MALICIOUS CACHE POISONING**.

DOMAIN - A set of interconnected networks, **GATEWAYs**, and hosts. [10:2619]

DOMAIN NAME SYSTEM (DNS) - The **DOMAIN NAME SYSTEM (DNS)** is used on the Internet and other **UNIX-based networks** to map computer names to Internet Protocol (**IP**) addresses. [] **NOTE:** The generic top level domains and the organizations which operate them are listed below . .

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Generic Top-Level Domains

- The .biz domain is restricted to businesses and is operated by NeuLevel, Inc.
- The .com domain is operated by VeriSign Global Registry Services.
- The .coop domain is reserved for cooperative associations and is sponsored by Dot Cooperation LLC.
- The .info domain is operated by Afilias Limited.
- The .museum domain is reserved for museums and is sponsored by the Museum Domain Management Association.
- The .name domain is reserved for individuals and will be operated by Global Name Registry.
- The .net domain is operated by VeriSign Global Registry Services.
- The .org domain is operated by VeriSign Global Registry Services.

Registrations in the domains listed above may be made through dozens of competitive registrars. For a list of the currently operating accredited registrars, go to the InterNIC site. Information about becoming an accredited registrar is available on the ICANN site.

- The .gov domain is reserved exclusively for the United States Government. It is operated by the US General Services Administration.
- The .edu domain is reserved for educational institutions in the United States granting four-year degrees and is registered only through Educause.
- The .mil domain is reserved exclusively for the United States Military. It is operated by the US DoD Network Information Center.
- The .int domain is used only for registering organizations established by international treaties between governments. It is operated by the IANA .int Domain Registry

DOMAIN NAME SYSTEM SPOOFING - See MALICIOUS CACHE POISONING.

DOMINANT MANEUVER - The multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, sea, land, and space forces to accomplish assigned operational tasks. [10:2941]

NOTE: The term "FORCE PROJECTION/DOMINANT MANEUVER is sometimes used, and is defined in the *NAVWAR Joint Warfighting Science and Technology Plan* (circa 2000) as "Fast deployment and timely employment and maneuver of joint forces to rapidly dominate the full range of military operations."

DONGLE - A small security device that attaches to a computer port to control access to a specific software application. [10:2855] NOTES: (1) A dongle-protected program will run only when its dongle is attached to the computer. (2) The term DONGLE is said to be

patterned after the name of a Mr. Don Gaul, whose software application was being used around the world without his knowledge or compensation.

DOPPLER EFFECT - The effective change of frequency of a received signal due to the relative velocity of a transmitter with respect to a receiver. [3]

DOPPLER RADAR - A radar which utilizes the Doppler effect to determine the radial component of relative radar target velocity or to select targets having particular radial velocities. [3]

DOPPLER RESOLUTION -- The minimum difference in Doppler that permits target resolution among multiple contacts. []

DOPPLER SHIFT - The magnitude of the change in the observed frequency of a WAVE due to the DOPPLER EFFECT. The unit is the HERTZ. [3] . [11.2]

DOPPLER SONAR VELOCITY LOG (DSVL) SYSTEM - A speed-measuring device which functions by transmitting acoustic energy at a specific frequency and receives returns from the reflection medium. The shift in frequency (Doppler shift) of the returned signal is determined and used to calculate the ships speed. []

DOUBLE-DIAPHRAGM RADOME - A RADOME possessing a second diaphragm, perforated with holes about 3.8mm in diameter, positioned outside the conventional diaphragm-type radome, forming a plenum with the inner diaphragm. Air forced into the plenum flows out through the holes, floating raindrops away from the outer surface. Also called RAIN-BLOWING PLENUM [10:99] NOTE: A double-diaphragm radome drives raindrops away from the antenna feed horn. It thus nearly eliminates the increase in noise temperature that occurs when water covers a radome. This design is particularly useful for X-band and higher frequencies, which are especially susceptible to the effects of water.

DOUBLE LAYER CAPACITOR - See SUPERCAPACITOR

DOUBLE PULL -- An ECM technique involving coordinated use of VELOCITY GATE PULL OFF (VGPO) and RANGE GATE PULL OFF (RGPO). []

DOUBLE PULSING - An ECCM technique used by tracking radars against SELF-SCREENING ECM pulse repeaters by exploiting the ECM equipment's dead time which occurs after an ECM pulse transmission. [8]

DOUBLER - With respect to LASERS, certain non-linear crystals which oscillate at the frequency of the input laser and also at a harmonic of twice that of the input laser's frequency. For example, with the input of a 10.6 micron laser light (FAR INFRARED), the output of a doubler will also include a 5.3 micron (MID

INFRARED) [10:2559] See also OPTICAL PARAMETRIC OSCILLATOR, TRIPLER.

DOUBLY-CONFORMAL ANTENNA - A CONFORMAL ANTENNA which does not protrude from the vehicle surface nor intrude into the vehicle support structure. [10:54] See also MICROSTRIP ANTENNA, CONFORMAL ANTENNA ARRAY, SHARED-APERTURE ANTENNA.

DRAG BAG - A padded abrasion-resistant enclosure designed to meet the needs of the tactical shooter. The drag bag is used for carrying a rifle (generally a sniper's weapon) and other gear as a back pack, and can be removed and dragged quietly behind as the stalker moves into position. Numerous pockets provide storage for binoculars, range finder, spotting scope and ammunition. Pockets are provided to hold cleaning rods and retaining straps for the rifle. The back-pack shoulder straps may be removed and stored in a pocket. The drag bag may be opened fully to serve as a ground pad. [] See also GHILLIE SUIT, BALACLAVA, SNIPER FACE VEIL. NOTE: Drag bags are also used in rescue missions for carrying air, rope, hose and other tools a rescuer might need during rapid intervention and rescue. A thick nylon material with foam padding provides the strength and shock resistance for the most hazardous rescues. Internal compartments hold the air cylinder, regulator assembly, air mask, radio, man-down alarm, rope and other required rescue supplies.

DRIFT SPACE - In a VACUUM TUBE, A region substantially free of externally applied alternating fields, in which a relative repositioning of the electrons takes place. [3] See also KLYSTRON.

DRIVER'S VISION ENHANCER (DVE) - A device which provides the driver of a vehicle with the ability to drive at night and under obscured conditions. []

DRONE - (1) A land, sea, or air vehicle that is remotely or automatically controlled. [1.1] (2) A pilotless air vehicle pre-programmed prior to launch to accomplish a set of functions with no further human intervention. The drone may use on-board sensors to autonomously make mission adjustments. [10:25] See also REMOTELY PILOTED VEHICLE, UNMANNED AIR VEHICLE.

DRY-ICE WEAPON - A NONLETHAL WEAPON consisting of a dry-ice bomb that incapacitates subjects by overwhelming them with CO₂ at concentrations above 15% by volume. [10:2745] NOTE: Because high concentrations of CO₂ can be lethal, oxygen must be available to treat the affected individuals as soon as possible.

DUAL ANAMORPHIC REFLECTOR TELESCOPE (DART) - A low-mass membrane telescope for use in earth-orbiting and deep space applications. DART uses a thin membrane for the reflective surfaces, which allows for greater aperture size

without increasing the telescope's overall mass. DART consists of two parabolic-cylindrical trough-shaped reflectors aligned with each other to produce a point focus. The mirrors are formed by tensioning a reflective foil over a frame with a parabolic contour along one axis. [10:2886] NOTE: As the aperture of a DART device increases, the mass ratio of structure to reflector decreases - the opposite of traditional telescopes. [10:2886]

DUAL-MODE EXPENDABLE - See FLAMING RECEIVER.

DUAL TONE MULTI FREQUENCY (DTMF) - Also known as Touch Tone™, DTMF, or dual tone multi frequency, uses two tones to represent each key on the telephone touch pad. (The **A**, **B**, **C**, and **D** keys were used for the U.S. military's Autovon phone system).

DUAL-USE TECHNOLOGY - Technology which is usable in both military and civilian applications. []

DUAL WARNING PHENOMENOLOGY - Deriving warning information from two systems observing separate physical phenomena (e.g., radar/infrared or visible light/X-ray) associated with the same events to attain high credibility while being less susceptible to false reports or SPOOFING. [1.1]

DUCTING - A phenomenon in which radio waves are bent to conform to the curvature of the Earth (e.g., in the troposphere), rather than traveling in a straight line, thus extending the range of propagation. [] NOTE: Ducting of sound waves can occur within temperature inversion layers in water, as well.

DUKE - See WARLOCK DUKE

DUMB AMMUNITION - A generic classification. Dumb ammunition follows a purely ballistic trajectory with spin stabilization. There is no guidance, and errors in delivery are due primarily to pointing, propellant burn, and meteorological factors. [10:19] Contrast with BRILLIANT AMMUNITION, SMART AMMUNITION. NOTE: An example of dumb ammunition is the CLUSTER BOMB UNIT.

DUMB MINE - A mine which has no self-destruct capability, and therefore remains a threat while implanted. [] Contrast with SMART MINE.

DUMMY LOAD - A dissipative but essentially non-radiating substitute device having impedance characteristics simulating those of the substituted device. [3]

DUMP METHOD OF CHAFF DEPLOYMENT - An EW technique whereby the seeker of an inbound missile is first seduced by a jammer using angle or range-gate

stealing and forced to lock on to the already deployed DISTRACTION CHAFF decoy. [4:21] Contrast with LOCK-ON METHOD OF CHAFF DEPLOYMENT.

DUTY CYCLE - See DUTY FACTOR.

DUTY FACTOR - With respect to radar, the ratio of the active, or "ON," time within a specified period to the duration of the specified period. [3] Note: This is sometimes called DUTY CYCLE. [11.2].

DWELL TIME - (1) A measure of the signal-handling rate of a receiver. Specifically, dwell time is the difference in acceptance time of two signals spaced in frequency. [10:2] (2) In ECCM, DWELL TIME is the length of time that a sensor looks at an emitter. [] NOTE: A receiver is not always ready to accept a new signal because it may be "dwelling" on a different signal at that instant.

DWELL WALK PROGRAMMING - An ECM technique to deceive the tracking gate of a victim radar. The ECM receiver first captures the angle-gate, range-gate, or velocity-gate of the victim radar and repeats the parameters for a short time (dwell) so that the victim radar locks on to the ECM signal. Slowly - to maintain inside the tracking limits of the victim radar - the ECM set varies (walks) the angle, range, or velocity of the jamming signal to simulate a movement away from the actual ECM platform's position. After walking ten or more times the width of the victim radar's tracking gate, the ECM set stops radiating, leaving the victim radar with no target, thus breaking the lock-on. This process is repeatable, and can be used in conjunction with other complementary ECM techniques. [8]

DYE LASER - A LASER in which the emitting element is a liquid. [10:2559] See also CRYSTAL LASER, DIODE LASER, GAS LASER. NOTE: Dyes can be toxic and combustible and have a relatively short operating life.

DYNAMIC HYPERTEXT MARKUP LANGUAGE (DHTML) -- An extension of HYPERTEXT MARKUP LANGUAGE, providing more control over the appearance and position of elements on a Web page. DHTML is considered 'dynamic' because it provides a way to include elements on a Web page that download to a user's Web browser along with the page but do not become visible until the user interacts with them. This means that when the user interacts with the elements, they activate without requiring any action from the Web site's server. []

DYNAMIC MEMORY ACCESS (DMA) - Direct data transfer between memory and peripherals, without going through the CPU. []

DYNAMIC RANGE - The difference, in decibels, between the overload level and the minimum acceptable signal level in a system or transducer. [3]
