

"Linearity"

(Usually measured in terms of non-linearity) is the maximum deviation of the actual characteristic (average of upscale and downscale readings), positive or negative, from a straight line so positioned as to equalise and minimise the maximum deviations.

"Local area network"

A data communication system which:

- a. Allows an arbitrary number of independent "data devices" to communicate directly with each other; **and**
- b. Is confined to a geographical area of moderate size (e.g. office building, plant, campus, warehouse).

N.B.

"Data device": equipment capable of transmitting or receiving sequences of digital information.

"Magnetic Gradiometers"

Are designed to detect the spatial variation of magnetic fields from sources external to the instrument. They consist of multiple "magnetometers" and associated electronics the output of which is a measure of magnetic field gradient. (See also "Intrinsic Magnetic Gradiometer")

"Magnetometers"

Are designed to detect magnetic fields from sources external to the instrument. They consist of a single magnetic field sensing element and associated electronics the output of which is a measure of the magnetic field.

"Main storage"

The primary storage for data or instructions for rapid access by a central processing unit. It consists of the internal storage of a "digital computer" and any hierarchical extension thereto, such as cache storage or non-sequentially accessed extended storage.

"Matrix"

A substantially continuous phase that fills the space between particles, whiskers or fibres.

"Maximum Bit Transfer Rate" ("MBTR")

Of solid state storage equipment: the number of data bits per second transferred between the equipment and its controller.

Of a disk drive: the internal data transfer rate calculated as follows:

"MBTR" (bits per second) = $B \times R \times T$

where:

B = Maximum number of data bits per track available to read or write in a single revolution;

R = revolutions per second;

T = Number of tracks which can be read or written simultaneously.

"MBTR" - see "Maximum Bit Transfer Rate"

"Measurement uncertainty"

The characteristic parameter which specifies in what range around the output value the correct value of the measurable variable lies with a confidence level of 95%. It includes the uncorrected systematic deviations, the uncorrected backlash and the random deviations (Reference: VDI/VDE 2617).

"Mechanical Alloying"

An alloying process resulting from the bonding, fracturing and rebonding of elemental and master alloy powders by mechanical impact. Non-metallic particles may be incorporated in the alloy by addition of the appropriate powders.

"Media access unit"

Equipment which contains one or more communication interfaces ("network access controller", "communications channel controller", modem or computer bus) to connect terminal equipment to a network.

"Melt Extraction"

A process to "solidify rapidly" and extract a ribbon-like alloy product by the insertion of a short segment of a rotating chilled block into a bath of a molten metal alloy.

N.B.

"Solidify rapidly": solidification of molten material at cooling rates exceeding 1,000 K/sec.

"Melt Spinning"

A process to "solidify rapidly" a molten metal stream impinging upon a rotating chilled block, forming a flake, ribbon or rod-like product.

N.B.

"Solidify rapidly": solidification of molten material at cooling rates exceeding 1,000 K/sec.

"Microcomputer microcircuit"

A "monolithic integrated circuit" or "multichip integrated circuit" containing an arithmetic logic unit (ALU) capable of executing general purpose instructions from an internal storage, on data contained in the internal storage.

N.B.

The internal storage may be augmented by an external storage.

"Microprocessor microcircuit"

A "monolithic integrated circuit" or "multichip integrated circuit" containing an arithmetic logic unit (ALU) capable of executing a series of general purpose instructions from an external storage.

N.B.

1. The "microprocessor microcircuit" normally does not contain integral user-accessible storage, although storage present on-the-chip may be used in performing its logic function.
2. This definition includes chip sets which are designed to operate together to provide the function of a "microprocessor microcircuit".

"Military high explosives"

Solid, liquid or gaseous substances or mixtures of substances which, in their application as primary, booster, or main charges in warheads, demolition and other military applications, are required to detonate.

"Military propellants"

Solid, liquid or gaseous substances or mixtures of substances used for propelling projectiles and missiles, or to generate gases for powering auxiliary devices for embargoed military equipment which, when ignited, burn or deflagrate to produce quantities of gas capable of performing work, but in their application these quantities are required not to undergo a deflagration to detonation transition.

"Military pyrotechnics"

Mixtures of solid or liquid fuels and oxidizers which, when ignited, undergo an energetic chemical reaction at a controlled rate intended to produce specific time delays, or quantities of heat, noise, smoke, visible light or infrared radiation. Pyrophorics are a subclass of pyrotechnics, which contain no oxidizers but ignite spontaneously on contact with air.

"Monolithic integrated circuit"

A combination of passive or active "circuit elements" or both which:

- a. Are formed by means of diffusion processes, implantation processes or deposition processes in or on a single semiconducting piece of material, a so-called 'chip';
- b. Can be considered as indivisibly associated; **and**
- c. Perform the function(s) of a circuit.

N.B.

"Circuit element": a single active or passive functional part of an electronic circuit, such as one diode, one transistor, one resistor, one capacitor, etc.

"Motion control board"

An electronic "assembly" specially designed to provide a computer system with the capability to coordinate simultaneously the motion of axes of machine tools for "contouring control".

"Multichip integrated circuit"

Two or more "monolithic integrated circuits" bonded to a common "substrate".

"Multi-data-stream processing"

The "microprogramme" or equipment architecture technique which permits simultaneous processing of two or more data sequences under the control of one or more instruction sequences by means such as:

- a. Single Instruction Multiple Data (SIMD) architectures such as vector or array processors;
- b. Multiple Single Instruction Multiple Data (MSIMD) architectures;
- c. Multiple Instruction Multiple Data (MIMD) architectures, including those which are tightly coupled, closely coupled or loosely coupled; **or**
- d. Structured arrays of processing elements, including systolic arrays.

"Multilevel security"

A class of system containing information with different sensitivities that simultaneously permits access by users with different security clearances and needs-to-know, but prevents users from obtaining access to information for which they lack authorization.

N.B.

"Multilevel security" is computer security and not computer reliability which deals with equipment fault prevention or human error prevention in general.

"Multispectral imaging sensors"

Are capable of simultaneous or serial acquisition of imaging data from two or more discrete spectral bands. Sensors having more than twenty discrete spectral bands are sometimes referred to as hyperspectral imaging sensors.

"Network access controller"

A physical interface to a distributed switching network. It uses a common medium which operates throughout at the same "digital transfer rate" using arbitration (e.g. token or carrier sense) for transmission. Independently from any other, it selects data packets or data groups (e.g. IEEE 802) addressed to it. It is an assembly that can be integrated into computer or telecommunications equipment to provide communications access.