

2. The interconnection of two "digital computers" so that, if the active central processing unit fails, an idling but mirroring central processing unit can continue the system's functioning;
3. The interconnection of two central processing units by data channels or by use of shared storage to permit one central processing unit to perform other work until the second central processing unit fails, at which time the first central processing unit takes over in order to continue the system's functioning; or
4. The synchronisation of two central processing units by "software" so that one central processing unit recognises when the other central processing unit fails and recovers tasks from the failing unit.

1041. 3. c. "Digital computers" having a "composite theoretical performance" (CTP) exceeding 12.5 million theoretical operations per second (Mtops);

1041. 3. d. "Assemblies" specially designed or modified to enhance performance by aggregation of "computing elements", as follows:

**NOTES:**

1. 1041.3.d. applies only to "assemblies" and programmable interconnections not exceeding the limit in 1041.3.c., when shipped as unintegrated "assemblies". It does not apply to "assemblies" inherently limited by nature of their design for use as related equipment embargoed by 1041.3. e. to k.
2. 1041.3.d. does not embargo "assemblies" specially designed for a product or family of products whose maximum configuration does not exceed the limit of 1041.3.c.

1041. 3. d. 1. Designed to be capable of aggregation in configurations of 16 or more "computing elements"; or

1041. 3. d. 2. Having a sum of maximum data rates on all data channels available for connection to associated processors exceeding 40 MBytes/s;

1041. 3. e. Disk drives and solid state storage equipment, as follows:

1. Magnetic, erasable optical or magneto-optical disk drives with a "maximum bit transfer rate" exceeding 25 Mbit/s;
2. Solid state storage equipment, other than "main storage" (also known as solid state disks or RAM disks), with a "maximum bit transfer rate" exceeding 36 Mbit/s;

1041. 3. f. Input/output control units designed for use with equipment embargoed by 1041.3.e.;

1041. 3. g. Equipment for "signal processing" or "image enhancement" having a "composite theoretical performance" exceeding 8.5 million theoretical operations per second (Mtops);

1041. 3. h. Graphics accelerators or graphics coprocessors exceeding a "3-D Vector Rate" of 400,000 or, if supported by 2-D vectors only, a "2-D vector rate" of 600,000;

**NOTE:**

1041.3.h. does not apply to work stations designed for and limited to:

1. Graphic arts (e.g., printing, publishing); and
2. The display of two-dimensional vectors.

1041. 3. i. Colour displays or monitors having more than 12 resolvable elements per mm in the direction of the maximum pixel density;

**NOTES:**

1. 1041.3.i. does not embargo displays or monitors not specially designed for electronic computers.
2. displays specially designed for Air Traffic Control (ATC) systems are treated as specially designed components for ATC systems under Category 1060.

1041. 3. j. Equipment performing analogue-to-digital or digital-to-analogue conversions exceeding the limits in 1031.1.a.5.;

1041. 3. k. Equipment containing "terminal interface equipment" exceeding the limits in 1051.b.3.;

**NOTE:**

For the purposes of 1041.3.k., "terminal interface equipment" includes "local area network" interfaces, modems and other communications interfaces. "Local area network" interfaces are evaluated as "network access controllers".

1041. 4. Computers, as follows, and specially designed related equipment, "assemblies" and components therefor:

- a. "Systolic array computers";

- b. "Neural computers";
- c. "Optical computers".

## 1042. TEST, INSPECTION & PRODUCTION EQUIPMENT

1042. Equipment for the development and production of magnetic and optical storage equipment, as follows:

1042. 1. Equipment specially designed for the application of magnetic coating to embargoed non-flexible (rigid) magnetic or magneto-optical media;

**NOTE:**

1042.1. does not embargo general purpose "sputtering" equipment.

1042. 2. "Stored programme controlled" equipment specially designed for monitoring, grading, exercising or testing embargoed rigid magnetic media;

1042. 3. Equipment specially designed for the production or alignment of heads or head/disk assemblies for embargoed rigid magnetic and magneto-optical storage, and electro-mechanical or optical components therefor.

## 1043. MATERIALS

Materials specially formulated for and required for the fabrication of head/disk assemblies for embargoed magnetic and magneto-optical hard disk drives.

## 1044. SOFTWARE

**NOTE:**

The embargo status of "software" for the "development", "production", or "use" of equipment described in other Categories is dealt with in the appropriate Category. The embargo status of "software" for equipment described in this Category is dealt with herein.

1044. 1. "Software" specially designed or modified for the "development", "production" or "use" of equipment, materials or "software" embargoed by 1041, 1042, 1043 or 1044;

1044. 2. "Software" specially designed or modified to support "technology" embargoed by 1045;

1044. 3. Specific "software", as follows:

- a. "Programme" proof and validation "software" using mathematical and analytical techniques and designed or modified for "programmes" having more than 500,000 "source code" instructions;
- b. "Software" allowing the automatic generation of "source codes" from data acquired on line from external sensors described in these Lists;
- c. Operating system "software", "software" development tools and compilers specially designed for "multi-data-stream processing" equipment, in "source code";
- d. "Expert systems" or "software" for "expert system" inference engines providing both:
  1. Time dependent rules; and
  2. Primitives to handle the time characteristics of the rules and the facts;
- e. "Software" having characteristics or performing functions exceeding the limits in Category 1150 ("Information Security");
- f. Operating systems specially designed for "real time processing" equipment which guarantees a "global interrupt latency time" of less than 30 microseconds;

## 1045. TECHNOLOGY

1045. 1. "Technology" according to the General Technology Note, for the "development", "production" or "use" of equipment, materials or "software" embargoed by 1041, 1042, 1043 or 1044;

- a. "Technology" for the "development" or "production" of equipment released under 1041.3.h.;
- b. "Technology" for the "development" or "production" of equipment designed for "multi-data-stream processing";
- c. Technology "required" for the "development" or "production" of magnetic hard disk drives with a "maximum bit transfer rate" exceeding 11 Mbit/s.