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- (a) Turnkey contracts for net-working of computer systems.

The Commission has been receiving complaints that in turnkey contracts for net-working of computer systems a lot of unrelated products are being included in the contracts which are either not required or which are stand alone in nature and can be procured separately at much lower cost. Inclusion of these unrelated items creates opportunities for malpractices. The Commission is of the view that wherever possible it will be advisable to take an independent third party view about the scope of turnkey projects so that the tendency to include unrelated products as part of the turnkey project is avoided.

(CVC Office Order No. 69/11/04 issued vide letter No.004/ORD/8 dated 3.11.2004)

- (b) Measures To Curb The Menace Of Counterfeit And Refurbished IT Products

With the increasing use of IT to leverage technology, a large number of Government organizations are either upgrading or in the process of procurement of new computer hardware and software. It is often difficult to know the difference between PC made of "**Genuine Parts**" and that made of "**Counterfeit Parts**". It may also be the case often that while various authorized order and pay for brand new equipment, they end up getting an inferior PC with counterfeit and second hand/refurbished parts disguised as new in new/original cabinets to various customers designated as consignees by the ordering agencies at the headquarters of these organizations who are ignorant or have little or no technical knowledge in the matter.

In effect, this amounts to the authorized not getting what they actually ordered and paid for. The supplies of such PC in the long run would defeat the very purpose of going for a new system. COUNTERFEITING is designed to cheat naive consumers/ organizations.

This current circular is intended to help/ inform and enable due diligence as well as curbing the menace of counterfeit and refurbished IT products disguised as new. As a first step, there is a need for all buyers in the Government Departments/ PSU to insist on a signed undertaking (sample format enclosed) from some authority not lower than the Company Secretary of the system OEM that would certify that all the components/parts/assembly/software used in the Desktops and Servers like Hard disk, Monitors, Memory etc were original/new components/parts/assembly/software, and that no refurbished/duplicate/ second hand components /parts / assembly / software were being used or would be used, so that the buying organizations were not cheated and get the original equipments as ordered by them. Also one could ask for 'Factory Sealed Boxes' with System OEM seal to ensure that the contents have not been changed en route.

Following advisory checkpoints it is hoped shall help identify the fraudulent practices that have come to notice and help guard against spurious and refurbished/duplicate/second hand components/parts/ assembly / software being received by purchasers and consignees who receive such goods and may not have much technical knowledge.

1. CPU. Buyers are cautioned against buying IT Hardware with remarked CPUs that are freely / readily available in the market today. Entry Level processors get Remarkd / Over clocked and sold as high end processors. These CPUs, come disguised as higher clock speed processors (e.g. a Celeron CPU can be remarked as a P4 CPU) while their real clock speed may be lower. Since Operating System is loaded from CD bundled with Motherboard, the CD contains image of configured OS. Hence information as seen in 'My Computer' - 'System Properties' shall give deceptive information. In other words, a Celeron CPU remarked as a P4 CPU, shall be seen as a P4 CPU only. Buyers should therefore, use various tool / utilities like the 'CPU-Z' Utility or the 'sSpecNo.' For ascertaining the real parameters of the CPU. Utility like CPU-Z (approximately 1.3 MB size) are available free on the web.

2. Hard Disk IT Hardware with refurbished Hard Disks that are actually 2nd hand / repaired hard disks are readily available at low cost. In hard disk drives, the factory repaired hard disk drives, which are mainly used in the warranty replacements are substituted in the new machines. Same is the case observed with floppy drive and Optical disk drives many times. Most of the competent hard disk makers use a sticker on such hard disks sold by them that clearly distinguishes such hard disks from the fresh ones. For example, manufacturer 'Seagate' marks Green Border and label of "Certified Repaired HDD" to distinguish such disk drives from New Genuine HDD. There is No border or Refurbished label on genuine new HDD. In addition to this, buyers may also use HDTUNE_210 Utility. This utility shall return Hard Disk Manufacturers' Serial no. and Date of manufacturing of the Hard Disk. These parameters can be used to cross-verify with the hard disk vendor. Various Hard Disk vendors also put a date code on the hard disk. A mismatch between this date and the one returned by HDTUNE_210 Utility can also be viewed as tampering with the actual information of the hard disk.

3. Monitors. IT Hardware with refurbished Monitors that are actually 2nd hand / repaired monitors are given a "new look" by changing the body, with internal components remaining "old / repaired". These CRT monitors are usually discarded from developed countries like US and Europe. There are also B Grade (New but Low Quality) CRT Monitors used in place of new

monitors. Many times these can be distinguished by opening the cabinet body and noticing that the label on the tube does not carry various certifications and there are scratch marks on the tube. While 'Genuine' Picture Tubes have all mandatory Certifications, 'Counterfeit' Picture Tubes would not have these certifications. Certification gives an assurance of Reliability. Further many such cathode ray tubes (Picture Tubes) are found to need extra magnets to achieve focusing and earthing also is missing. Genuine Monitors rely on 'Yoke Coil' alone to focus electronic beam. Counterfeit Monitors typically require Numerous Magnetic Strips in addition to Yoke Coil to focus electronic beam. Further, 'Earthing' and 'Shielding' provide ESD (Electro Static Discharge) protection. Genuine Picture Tubes have proper "Earthing and Shielding". Earthing and Shielding is compromised in counterfeit Picture Tubes to reduce cost. In 'B' Grade LCD Monitors, panels used are B grade in which the number of spots may be higher, response time & brightness of lower specs than what is stated. Above monitors are all available at low cost. The "Signed Undertaking" as suggested shall serve as a deterrent and as a safeguard to ensure that bidders are not fleecing them by supplying such monitors.

a) Operating System. Purchasers should check the IT Hardware supplied (randomly selected IT Hardware) for Certificate of Authenticity (COA) pasted on the PC for product serial number and OEM's / Supplier's name to be printed on it. In Operating systems, pirated OS software with fake Certificates of Authenticity are used by some suppliers to cut costs. They look as good as the real ones. In PCs, counterfeiters buy legitimate software and copy the box design and packaging. Using sophisticated and expensive copiers, many copies of illegal CDs are created in a day. Purchasers should guard against buying IT Hardware with pirated copies of Operating Systems. Such Operating Systems, though, available at low prices, do not have the updated patches and security features that help safeguarding the PC and also improve its lifespan. Purchasers, therefore, may use the standard testing procedures (randomly on randomly selected IT Hardware) available on the following URL for ascertaining the in authenticity of the operating system installed on their PC:

<http://www.microsoft.com/resources/howtotell/ww/windows/default.aspx>.

4. Microsoft provides an inbuilt tool to diagnose the "Genuineness of its Operating System". One could go to 'My Documents', and 'Help', from where one shall get step by step instructions to find out whether the windows installed is genuine.

<http://www.microsoft.com/resources/howtotell/ww/windows/default.aspx>

5. Mechanical Keyboards: Fake mechanical keyboards that are partially mechanical, with only the key plunger being that of a real mechanical keyboard and rest of the keyboard features remaining the same as those of membrane keyboard are being passed on as true mechanical keyboards. While these keyboards are available at low prices, they do not offer the robustness and long key-stroke life expected of a real mechanical keyboard. Real Mechanical Keyboards are expected to have Keystroke life of 50 Million as against 10 million for Membrane and Semi-Mechanical Keyboards. In case of bulk orders, it is recommended to physically

examine a few keyboards for their construct to ascertain the genuineness of their being real mechanical keyboards.

6. Low Quality Memory Module - Memory chips are remarked or downgraded wafers are plastic packed under unknown brands or remarked with names of well known brands. Such memory modules have lower performance levels. It is better to go in for proven reputed brands such as Kingston, Transcend, Corsair, Samsung and Hynix to name a few available in the market.

7. Fraudulently Marked SMPS - In power supplies, wrong marking of the wattage is done. The power supplies do not carry all required certifications. While 'Genuine' Power supplies carry all mandatory certifications, in counterfeit Power supplies these certifications shall be found missing. Further Short circuit & over voltage protection circuitry could be missing in counterfeit Power Supply to reduce cost.

8. Counterfeited Consumables - Counterfeited consumables such as printer cartridges etc are used which are refilled with ink of poor quality leading to poor performance and clogging, smudging in printers etc. It is advisable to buy such consumables from OEM authorized suppliers or distributors to ensure quality and longevity of the printer equipment.

Annexure: Model Undertaking of Authenticity form

(007/CRD/008 Dated 15th Feb 2008) (c)

(c) IT Procurement

Minutes of the above seminar were circulated vide letter no 3/CTE (2)- VR/2007 dated 3.10.2007. It has come to the notice of the Commission that despite specific instructions / guidelines and booklets issued by the Commission from time to time, and the holding of an exclusive seminar referred to above for the benefit of the Bank's executives dealing with IT procurements along with respective CVO's, Bank officials do not appear to adhere to these instructions / guidelines as expected of them, which leaves room for various irregularities. As such Commission desires that you organize seminars/workshops and lecture classes at frequent intervals to keep the officials of the bank, particularly those dealing with procurement activities educated and updated regarding procurement procedures, CVC guidelines. Instances have also come to the notice of the Commission indicating that a number of bank officials lack basic skills in computer operations and knowledge of the banking software. There is also a tendency on the part of senior officers to disclose their password to junior officials / staff for operating the system on their behalf, citing reasons, including work pressure and ignorance which you would appreciate is not acceptable. Therefore, there is an urgent need to impart proper training to such officers and staff at various levels particularly those working in the branches so that they have up-to-date knowledge of the computer system for day to day operations and are not dependent on their colleagues. You are, accordingly, advised to arrange such programmes for training on an on going basis for the benefit of bank officials. Please note to keep the Commission apprised of the steps taken in this regard and the progress so achieved.

(008/VGL/016 Dated 18th Feb 2008)