WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES
Established in 1952 as the Customs Co-operation Council
Créée en 1952 sous le nom de Conseil de coopération douanière

HARMONIZED SYSTEM
COMMITTEE
-
30th Session
-

NC0615E1
(+ Annexes I to III)
O. Eng.

Brussels, 17 October 2002.

CLASSIFICATION OF THE "XEROX DOCUMENT CENTRE 230 DC" DIGITAL COPIER

(Item VII.9 on Agenda)

Reference documents :

42.406 (RSC/18)	NC0211E1 (HSC/25)
42.498 (RSC/18)	NC0250E2, Annex H/13 (HSC/25 – Report)
42.500, Annex B/19 (RSC/18 – Report)	NC0300E1 (HSC/26)
42.750, Annex E (HSC/22 – Report)	NC0335E1 (HSC/26)
NR0023E1 (RSC/19)	NC0398E1 (HSC/26)
NR0037E1 (RSC/19)	NC0430E2, Annex H/4 (HSC/27 – Report)
NC0090E2, Annex IJ/26 (HSC/23 – Report)	NC0613E1 (HSC/30)
NC0160E2, Annex H/14 (HSC/24 – Report)	NC0614E1 (HSC/30)

I. BACKGROUND

1.   At its 27th Session, the Committee examined the classification of various multifunction digital copiers, including the "Xerox Document Centre 230 DC". The Delegate of Brazil called the Committee's attention to the fact that this machine, as presented, was not connectable to an ADP machine and that when adapted to be connectable to an ADP machine it became a different machine, the "Xerox 230 ST". After some discussion, the Committee decided to postpone the classification of this machine to its next session, on the basis of a new document to be presented by the Secretariat that would provide additional information on the nature of the machine, i.e., whether it was connectable to an ADP machine as imported and the difference between the DC and ST models. Administrations were also invited to provide any additional information.

2.   Following the instructions of the Committee, the Secretariat contacted the manufacturer for additional information, which is reproduced in the following note. For the convenience of delegates, the Secretariat has also reproduced in the annexes to this document, the relevant information on the "Xerox Document Centre 230 DC" which was included in Doc. NC0300E1.

Note :   Shaded parts will be removed when documents are placed on the WCO documentation database available to the public.

File No. 2755

II. <u>NOTE FROM XEROX</u>

"**Architectural Design of the Modular Xerox 230 Printer Family**

3.   Xerox was known for years as the "Copier Company", based on its invention of electrophotographic copying and the creation of machines that could accomplish the photographic style dry copying with speed and good copy quality. While there has been a continued market for the ability to make multiple images of hard copy documents, the current market - like most documents - is digital. The widespread use of computers and their associated "soft copy documents" led to the need for printers able to create images based on stored digital data. These soft documents, which are actually data coded in memory in various page description languages consist of many varied types of digital data streams, for example : word documents, scanned images, and HTML documents from the World Wide Web. Xerox created a modular system based on the 230 print engine to print these varied types of digital data streams.

4.   The Xerox 230 family of devices is built around a common 30 print per minute laser printing engine. This print engine itself is designed and specified to produce 80,000 prints per month (about 4,000 per day). Every 230 series print engine is designed to be connected to the central processing unit (CPU) of a computer, and to send and receive data in a form (code or signals) which the computer system can understand. Thus, for example, every 230 series print engine features embedded, board-level computers which are designed to accept and receive digital code, process it, and provide digital information to the computer system. Each 230 print engine contains components which allow it to process the digital data received from a computer system or network, decode the data, and produce half-tone prints therefrom. These components do not connect to the CPU directly, but rather through another board-level computer, a "control and adapter unit" which may be housed inside or outside the printer cabinet.

5.   The modular Xerox 230 Printer family includes three basic models, the 230 DC, the 230 LP and the 230 ST. The modular components of each model are listed in the chart that follows :

<u>Model Number</u>	<u>Modular Components</u>
230 DC	230 print engine, scanner, with or without fax board
230 LP	230 print engine, embedded DFE
230 ST	230 print engine, embedded DFE, scanner, with or without fax board

6.   All members of the family were not introduced into the marketplace simultaneously, because, while the needed connectivity hardware was already built into the 230 product family, delays in the completion of software for both control and print drivers delayed the launch of the fully configured versions. While waiting for the software to become available, Xerox decided to offer the 230 printer in the "DC" (Digital Copier) configuration that featured a print engine and a connected digital scanner. This version allows customers to add their own Digital Front End (DFE) or perform various digital print jobs from hardcopy input. Once the software was available for release, an integrated modular DFE was offered by Xerox to interface with a wide array of computer systems and networks. This module enables more complex processing of print jobs from ADP data sources. The Xerox 230 LP, the basic, "laser printer only" version, a 230 print engine with DFE, was marketed along with the DC230

2.

ST. The most sophisticated model offered, the DC230 ST version combines the DFE and scanner modules with print engine. The 230 in this configuration can perform as *both* an ADP output device and an ADP input device with scan to computer. Because the digital data is available through the connectibility of the system, scanned data can be sent back and forth between data processors to modify or store the images before printing. In all configurations, the 230 print engine contains the components necessary to process data and exchange data with a computer system or network. A 230 DC can be upgraded to the ST by adding a DFE. The 230 LP can be upgraded to the ST by adding a scanner. In addition, a fax card can be added for receiving or sending facsimile over a phone line connection to the ST configuration, as well as the DC model. The architectural design modularity built around the 230 print engine enables upgrading from DC or LP models to a DC230 ST.

7.   As part of its design modularity, the 230 engine has an open area within the chassis to mount the Xerox DFE internally, but whether mounted inside or placed outside the chassis, simple wire and plug make the connection between the engine and DFE. The DFE already contains all the input and output, programmability, boards and memory, disk drives, and processing boards that are standard in any high end PC. Because printing speeds have increased and because the data density in digitally printed images has increased, other special boards are added to the DFE. These boards function to provide the video data output signals used to drive the Raster Output Scanner line by line in the print engine. The DFE also functions as the link so that an external computer can more easily use the 230 print engine as an output device.

Functional Capabilities of the Modular Xerox 230 Printer Family

8.   When the DC230 digital copier is removed from shipping crates, the only function it appears to perform when plugged into the wall is digital printing from hardcopy. However, it is much more than a digital copier with or without fax capabilities. The DC230 consists of a highly intelligent (via embedded computers) base printer engine designed to take digital data files from a scanner or computer, convert them to half tone image files, and print them onto paper at a specific speed and print quality. Thus when plugged into the wall, this device can take input from the user (an original document) via the attached digital scanner and render an image. This is not its principal function, however. Xerox placed input (and output) plugs for Internet or Intranet cables, LANS, fax lines, and Digital Front Ends (DFE's) on or in the cabinet. Thus, the DC230 arrives ready to connect to the external data sources, including the data and documents on computers and internet sites, to achieve full functionality. Also imbedded in this base print engine is the circuitry (like the tuner in the TV/VCR unit) needed to decode incoming digital data and produce half-tone prints. While a few consumers might buy this model only to scan and print (making multiple digital renditions of the original), many consumers purchase the device for its principal function when interconnected. When interconnected, the print engine is capable of accepting multiple input, and utilizing the digital scan to print capability as an added feature. This may be done in a modular fashion as the user upgrades to more functionality or by using hardware the user might already own to enhance functionality. This is by design in the ability to connect the DC230 to external computers right out of the box and is also indicated by the sale of Xerox or other vendor DFE's to many customers so that they can more fully utilize the print engine capabilities.

9.   The imbedded computers in the 230 print engine are sophisticated image processing devices. When the scanner is used, hard copy documents are converted into a digital data stream. The data stored internally for digital printing is derived from a single scan from an original or set of originals placed in a DC230 scanner Automatic Document Handler (ADH). This data stream gives the onboard computers in the print engine enough information to

3.

create a print job, so the DFE module is not a required part of this function. While the data for printing is computer generated and not directly from the scanned image, it contains all the information necessary to produce the digital output print. Once the originals are scanned and the data is transferred into the digital memory, the actual print job can be performed. The number of prints or digitally collated print sets, the orientation, print format (font, size, style, etc.), and print order are all determined by either the user or by the automatic detection systems.

10.   When either the user or automatic detection systems set the print parameters, a single digital data set is generated for each page no matter how many output pages or collated sets are requested. The size and orientation of the original on the platen can be determined from the digital scan data and the data can then be processed so that a rotated, enlarged, or reduced image is printed onto the final document. Once a job is scanned into the machine memory, the originals are no longer involved in the process. The image processing capabilities of the printer will output in sets and, if there is a jam in the print paper path, the job recovery software will reprint the appropriate pages and finish the job without the need to reorder and/or rescan the originals. The booklet capability allows multiple originals to be scanned and the data reduced and reordered to produce two sided booklets with pages 4 –1 on one side and 2-3 on the other so that it can be folded to a 1-2-3-4 booklet.

11.   The principal function of the DC 230 is a printer. An analogy to a combined TV/VCR may help prove this point. The TV/VCR is designed to take electromagnetic wave or digital cable signals and convert them into a raster scanned video output. When plugged into the wall, this device can only take input from the user via a VCR tape and render an image. This is not its principal function, however. The appliance awaits connection to a source of external data to achieve full functionality. The manufacturer placed several input plugs for cable and antennas on or in the cabinet. Also imbedded in this appliance is the tuner circuitry needed to decode the TV cable signal and produce a real time image of the TV channel selected. A few consumers who live in an area with no TV signal or cable might buy this model, or a stripped down model without the tuner circuitry, to watch VCR tapes only. However, most consumers purchase the device for its principal function when interconnected, as a television set, and utilise the VCR monitor capability as an added feature.

12.   The full functionality of the 230 system is obtained when the modules are fully connected to a computer or Digital Front End (DFE) via the existing ports. The internal boards of the 230 family are designed expressly for this connectibility. Xerox and many other companies sell sophisticated computers to make that connection that have added boards and memory specifically to provide the rapid data stream to digital print engines. Both the LP and ST versions use a DFE as the link to external data sources. When the printer is upgraded to the ST version, the independence of the modules can easily be seen. The DC230 ST can carry out several commands simultaneously. While carrying out a print command for one user, the DC230 ST can simultaneously transmit a computer fax message or scan a document, either for the same or for a different user. Certain commands can be carried out even when other components, i.e., those that are not required for the particular command, are temporarily out of order. For instance, the DC230 ST and DC models can scan documents while the toner has run out or is being replaced in the print engine, or it can print and receive fax messages while the scanner is being repaired.

13.   Computer control of the order of printing of stored data again indicates the computer printer design intent. New jobs can be scanned into memory while previous jobs are being printed. When the DC230 ST receives several commands at the same time that cannot be

processed simultaneously, the commands are placed in a queue. Users on connected computers can determine the order of the commands in this queue and thus the order that their jobs are printed when the device is in heavy demand. In this way, not only can certain kinds of commands be given priority over others, but also specific users can be given priority over other users.

14.　　　The addition of the DFE to the 230 also enables other high-end printer features. For example, connected computers can enable job queuing and job status checks. The most obvious feature that proves this technology is far from photocopying is printing via dataglyphs. When a 2-dimentional "barcode like" glyph is scanned by the platen, instead of producing a digital reproduction of the barcode, the DC230 ST recognises the information as a print job request and prints from previously stored data that it recovers from *external* data sources automatically. Because the image is digital halftone cells, non-visible identification dataglyphs that are not in the original can be embedded into the print for identification purposes. Finally, because it can identify information in the scanned data, the system can be configured to recognise secure documents (money, certificates, bonds, etc) and refuse to make digital reproductions.

15.　　　The 230 printer family has been discontinued (order taking has ceased) having been superceded by follow-on products. The evolution from the 230 printer family demonstrates the principal purpose of the 230 concept. Product upgrades have been made by incorporating newer microprocessor chips to drive the image processing and data exchange. In fact, the Power PC chip that was used in the 230 family DFE to add ST level capabilities to the 230 went out of production. Upgrades to both the existing 230 machines and follow-on products are now done with an Intel© microprocessor, the same chip that is found in many off the shelf PC's."

III. SECRETARIAT COMMENTS

16.　　　The Committee originally decided to postpone the classification of this machine to its next session pending additional information. Subsequently, due to the tabling of reservations on similar products, the Committee postponed its examination of this item in order to group it with those reservations. Consequently, the Secretariat is of the opinion that this question should only be taken up once the Committee takes decisions on whether "photocopying" is limited to the projection of an image onto a photosensitive surface and whether present heading 90.09 covers digital copying, as the decision on these two points will affect the decision taken on the "Xerox Document Centre 230 DC".

17.　　　Concerning the classification of the "Xerox Document Centre 230 DC", the Secretariat is of the opinion that the Committee's decision depends on its decisions on the issues mentioned in the previous paragraph, as well as the decision it will take on whether the "Xerox Document Centre 230 DC" is connectable to an ADP machine. In this regard, the Secretariat refers the Committee to paragraph 8 of the present document, wherein the first part of the paragraph explains the capabilities of the product. In the Secretariat's opinion, the Committee must answer the following questions :

(1)　　Does "connectable" in the sense of Note 5 (B) (b) to Chapter 84 mean operating directly out of the box without the necessity of purchasing and installing a DFE to ensure Internet, Intranet, LAN or fax connection ?

5.

    (2)   Should the term "connectable" only be applied to the concept of "full functionality" of the machine, as argued by Xerox in paragraph 8 of this document ?

    (3)   Does the placement by Xerox of input (and output) plugs for Internet or Intranet cables, LANs, fax lines, and Digital Front Ends (DFE's) on or in the cabinet, in order to enable the DC230 to connect to the external data sources, including the data and documents on computers and internet sites, fulfil the requirements of the term "connectable".

18.   These questions really boil down to whether the term "connectable" should be interpreted narrowly to mean "connectable in the imported condition" or broadly to mean "capable of connection". The Secretariat leaves it to the Committee to decide these questions.

IV. CONCLUSION

19.   The Committee is invited to rule on the classification of the "Xerox Document Centre 230 DC" taking into account of the additional information received from Xerox, the information contained in the annexes to this document, as well as the decision which the Committee will have taken on Agenda Item VII.3, which will have a bearing on the classification of the product at issue.

*   *   *

6.

Excerpt reproduced from Doc. NCO300E1

<u>Xerox Document Centre 230 DC</u>

42.   The Xerox Document Centre 230 DC is a component system consisting of two physically-distinct components (an Image Output Terminal (IOT) and a Digital Document Scanner (DOT)) and four major boards (each of which has, at a minimum, its own dedicated processor and memory). A fifth major board (Network Printer Controller Board) is added if the 230DC is upgraded to function as a networkable multifunction machine.

43.   The Xerox Document Centre 230 DC is a device that is designed to be connected to an ADP system. In fact, based on the description from the manufacturer, the 230 DC contains a ribbon-cable connection on the laser printer controller board to which a PC (not a LAN) could be directly connected. However, this device could be connectable (by addition of a network printer controller board) to a LAN.

44.   At importation, this model is capable of performing "digital copying", faxing and scanning. If the user wants to connect the machine to a PC in order to print, a plug must be opened in order to connect the ribbon-cable connection on the laser printer controller board to the PC. The Secretariat leaves it to the Committee to decide whether the fact that the means exist to connect the Xerox Document Centre 230 DC to a PC is sufficient to say that this machine has a printing function. If this is the case, the Secretariat believes it could be classified as an output device for an automatic data processing machine (printer), under subheading 8471.60, by application of Note 3 to Section XVI. If the Committee believes that this machine at the time of importation is only capable of faxing, copying and scanning, then it could be classified in subheading 9009.12 or 9009.21, by application of GIR 3 (b) or 3 (c), depending on whether the Committee can determine the component which gives the machine its essential character.

*   *   *

Reproduced from Annex I to Doc. NCO300E1

NOTE FROM THE BRAZILIAN ADMINISTRATION

THE XEROX DOCUMENT CENTER 230 DC

This machine is a multifunctional digital copier (DC is "digital copier"). Its design is modular, i.e., the user can add options to the "basic" machine at any time.

The basic Xerox 230 DC scans the original document, digitizes it and then copies it by means of a laser-optical-electrostatic process. The basic machine can become multifunctional by adding the faxing function, to receive and send faxes, and the printing function, if the product is connected to an automatic data processing (ADP) machine. The Xerox 230 DC operates without being connected to an ADP machine or network. When it is connected to a computer or network, and so incorporates the printing function, it becomes the Xerox 230 ST.

The scanning function is performed by a flatbed scanning device, which can be optionally a duplex (a duplex scanner can scan both faces of a document simultaneously). The copy and fax functions (both sending and receiving) can also be duplex. The scanning resolution is 400 x 400 dots per inch (dpi) and the scanning speed is 30 pages per minute (ppm) for an 8.5 inch x 11-inch page size. Up to 30 originals can be scanned at one time. If the duplex is used, up to 50 two-sided originals can be scanned at one time. The document sizes to be scanned range from between 5.5 inches x 8.5 inches and 11 inches x 17 inches.

The fax sending function is programmable for a 200-number dial directory and speed dials. The user can program the fax numbers he wishes to send to, load the originals and start to scan them at rated speed. The machine will send the scanned faxes automatically. The fax documents' sizes range between 8.5 inches x 11 inches and 11 inches x 17 inches. The resolution of the fax printer is 400 x 400 dpi. Its modem speed is 14,400 bits per second, i.e., it takes seven seconds to receive or send one page.

The standard digital memory of the machine is 10 MB, which can store up to 50 pages of 8.5 inch x 11 inches page size. There is an optional hard disk with 250-MB storage capability, which can store up to 50 pages of 11 inch x 17-inch page size.

The zoom reduction/enlargement varies from 25 % to 400 % in 1 % increments.

Regarding the copying function, the first copy is produced in 4.7 seconds after the original is placed on the platen. The copy speed is 30 ppm (8.5 inch x 11 inch), 17 ppm (8.5 inch x 14 inch) or 14 pages per minute (11 inch x 17 inch). The maximum copy resolution in black/white is 600 x 600 dpi. The copy selector can handle 1 – 250 paper sheets. The front loading trays can receive up to 500 sheets. There is an optional high capacity feeder for 2,000 sheets.

The machine's dimensions are about 39.8 inches x 29.2 x 43.1 inches (about 101 cm x 74 cm x 110 cm) and its weight is about 250 pounds (about 112.5 kilos).

With regard to the digital copy technology of this equipment, we would like once more to sum up its main points. The original document is scanned and converted into digital data. The digital data is stored in the machine's memory and can be treated by image processing technology to enhance the image. The image is then directed to a photoreceptor by a laser reflected through an optical system of mirrors and lenses imparting an electrical charge to the photoreceptor. The photoreceptor is then exposed to a toner material, which is attracted to oppositely charged areas on the photoreceptor corresponding to the directed image. This creates an electropositive image, which is then transferred to a paper sheet and fused onto it.

The digital technology enables this machine to separate the image in text, graphics and photo mode and treat each part separately, in order to attain a better quality reproduction.

*   *   *

Reproduced from Annex II to Doc. NCO300E1

Xerox Document Centre 230 DC

The Xerox model 230 DC is a digital printing terminal, capable of being connected, through an electronic subsystem or "Network Printer Controller" board, to the central processing unit ("CPU") of an automatic data processing machine. It is designed to accept and deliver data in a form (code or signals) which can be understood by the CPU. Even when not connected to, or communicating with a CPU, it can print data from digital files, including files created through the scanning of "hard copy" documents on its self-contained scanner unit. Using an optional facsimile board, the 230 can also transmit and receive facsimile messages across public or private telephone lines.

As imported, the Xerox Model 230 DC is a multifunctional data input/output terminal, which is composed of two close-coupled modules :

> (1) An Image Output Terminal (IOT), which incorporates all of the printing and paper handling components of the 230 ST. These include a monochromatic digital laser printing engine capable of printing 30 pages per minute (30 ppm), a number of paper trays, a paper path, a photoreceptor drum and a fuser assembly. The IOT houses digital electronic data processing systems, which control and operate the 230. These include a Laser Printer Controller PWBA (printed wire board assembly), as well as a Scanner Image Processing PWBA, and

> (2) A Digital Document Scanner, incorporating a document feeder paper path, and an image input terminal (IIT), which uses raster scanning technology to create digital "bitmap" files of scanned original documents. These files can then be processed by the IOT, or, when the 230 is connected to an ADP system, by the CPU of such a system.

As noted above, the Xerox 230 DC can connect to the CPU of an automatic data processing system or network, through a Network Printer Controller Board.

The 230 DC receives, processes, and at the operator's instruction, prints digital data files. Its IOT component, when sold without the scanner, is basically identical to the Xerox 230 LP, a dedicated laser printer, used with computer networks. The IOT is a 30 page per minute indirect process electrostatic laser printing engine which receives all print jobs in the form of binary digital data files, and converts them into a hard copy printed form, using two or more board-level electronic data processing systems.

The Scanner Image Processing PWBA, contained in the IOT, is a board-level electronic data processing system, which handles communication and control functions between the scanner, the Laser Printer Controller PWBA, the IOT and an optional fax subsystem, and generates all reports concerning the status of the 230 DC. It incorporates an Electronic Pre-Collation Memory (EPC), which enables the "scan once, print many" feature of the 230 DC by storing and collating digital page images in memory. The EPC memory (having a standard capacity of 250 megabytes, subject to expansion) is used to store digital files created by the 230 DC's self-contained digital scanner, as well as facsimile printing.

An optional Group 3 (G3) facsimile board may also be added to the Scanner Image Processing Board for the 230 product. The Scanner Image Processing board contains direct memory access capability, a Motorola 68000 microprocessor, video compression and expansion memory capability as well as a Network Connection Unit (the NCU provides isolation and protection between the fax board and the telephone network).

The Laser Printer Controller PWBA, also contained in the IOT, is a printed wiring board assembly which controls the paper path of the print engine, the laser writing process, and controls the operation of the laser print engine.

The 230 DC also features a cable-connected Digital Document Scanner. The scanner, which is identical to scanners commonly found in facsimile machines or sold as separate input terminals for automatic data processing systems, converts "hard copy" documents into digital data files by using a linear array of photosensors to measure the light intensity areas on the scanned document. The resulting digital data file is usually expressed in a Tagged Image File Format (TIFF) or similar electronic format for printing. A central processor in the image output terminal controls an application-specific integrated circuit (ASIC), retrieves the scanned data from the electronic pre-collation memory (EPC) in the Scanner Image Processing Board, compresses the data, and routes the compressed file to the Laser Printer Controller board, from which it can be printed, using the laser printing engine.

The 230 was designed from its earliest planning stages to be used as the print terminal for an automatic data processing machine or system. Connection to a CPU is effected through a Network Printer Controller board, which contains a powerful RISC data processor, and which is capable of supporting numerous computer operating system and page description languages (PDLs) used in printing. The ESS supports a variety of computer print drivers, such as Microsoft Windows 3.X, 95, and NT 4.0, Macintosh 7.x, MacPPD for Laser Writer 7.5.5, 7.6.1 or 8.x, and OS/2 Warp. The 230 ST Terminal also contains various print submission tools for Adobe PostScript, such as Unix AIX, HP-UX9.x and 10.x, and Solaris 1.0 and 2.4 +, and supports connectivity with computer systems utilizing various operating systems, including those manufactured by Novell, Microsoft, Apple, Banyon and TCP/IP.

When the Network Printer Controller PWBA is connected to the 230 terminal, the 230 DC becomes the 230 ST and can accept print jobs from ADP machines, networks, and the Internet (indeed, the 230 ST contains an embedded Web Server), and can communicate its readiness status to all network users. The 230 ST can also be used for "media printing", accepting and printing data from a built-in floppy disc drive. Media printing jobs can be routed from the disc drive either directly to the print engine (bypassing the CPU) or can be processed through the CPU, provided the files to be printed are in a recognized "Page Definition Language" (PDL) software format.

When the 230 is used to immediately convert a scanned document to printed output, this printing process is sometimes referred to as "digital copying". However, the product does not incorporate the "light lens" technology of the photocopier, but instead prints documents solely from digital data files. It performs a digital printing function.

One of the more important general features of the 230 platform's architecture is the modularity of its subsystems. Each has its own intelligence enabling a high degree of independent operation. For example, modular architecture provides greater concurrency, enabling different functions (printing, faxing, scanning) to be going on at the same time. In addition, the "scan once print many" architecture of the 230 means greatly reduced handling of paper, with far fewer jams.

The 230 can perform "1-N printing". The system does not have to wait until it has received all the pages of the document before it can start printing. Rather it can process and start printing a document as soon as it receives its first page. There can be paper coming out of the system even before the entire file has been transmitted or scanned.

The Xerox 230 print engine output resolution is 600 x 600 dpi, giving crisp resolution and clarity to printed documents. Overall, the Document Centre 230 provides customers with a unique combination of sophisticated document processing services.

—————————