

**CUSTOMS, EXCISE & SERVICE TAX APPELLATE TRIBUNAL  
NEW DELHI**

PRINCIPAL BENCH

**CUSTOMS APPEAL NO. 52287 OF 2019**

(Arising out of Order-in-Original A. O. No. 04/2019/MKS/Pr. Commr. /ICD-Import/TKD dated 27.03.2019 passed by the Principal Commissioner of Customs (Import), ICD, Tughlakabad, New Delhi)

**M/s. Vodafone Idea Limited**  
(Previously M/s. Idea Cellular Limited)

**...Appellant**

**VERSUS**

**Principal Commissioner of  
Customs (Import),**  
ICD, Tughlakabad, New Delhi

**...Respondent**

**APPEARANCE:**

Shri B.L. Narasimhan, Shri Harshit Khurana, Shri Yashisht Shrivastava and Ms. Nupur Maheshwari, Advocates for the Appellant

Shri Ajay Jain, Special Counsel and Shri Rakesh Kumar, Authorized Representative for the Department

**CORAM: HON'BLE MR. JUSTICE DILIP GUPTA, PRESIDENT  
HON'BLE MR. P.V. SUBBA RAO, MEMBER (TECHNICAL)**

**Date of Hearing: 06.07.2022  
Date of Decision: 20.09.2022**

**FINAL ORDER NO. 50874/2022**

**JUSTICE DILIP GUPTA:**

This appeal seeks the quashing of the order dated 27.03.2019 passed by the Principal Commissioner of Customs (Imports), New Delhi<sup>1</sup>, by which the product "Router Line Cards"<sup>2</sup> imported by the appellant has been directed to be classified under Customs Tariff Item<sup>3</sup> 8517 69 90 of the Customs Tariff Act, 1965<sup>4</sup> instead of CTI 8517 70 90, as claimed by the appellant. Accordingly, the demand of Rs.

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1. the Principal Commissioner
  2. the Product
  3. CTI
  4. the Tariff Act

60,11,615/- under section 28(4) of the Customs Act, 1962<sup>5</sup> for the three Bills of Entry, each dated 22.12.2017, with interest has been directed to be recovered from the appellant.

2. The issue that arises for consideration in this appeal relates to classification of the Product imported by the appellant through the three Bills of Entry. The appellant described the Product in the Bills of Entry as MP071025 CISCO BOQ-19 4\*10G PRE-AGG 1B Router Line Card (Part of Router) (Non-WPC) (For Cellular Telephony Network) and claimed classification under CTI 8517 70 90. The appellant also claimed exemption from payment of duty under serial no. 5 of the notification no. 57/17-Cus dated 30.06.2017<sup>6</sup>.

3. A show cause notice dated 04.10.2018 was, however, issued to the appellant inter alia proposing to re-classify the Product under CTI 8517 69 90 and consequently, differential customs duty of Rs.60, 11, 615/- was proposed to be demanded under section 28(1) of the Customs Act. The show cause notice mentions that the imported 'Product' is a communication apparatus in itself and, therefore, would not be classifiable as parts of Router under CTI 8517 70 90.

4. The Principal Commissioner held that the imported Product is classifiable under CTI 8517 69 90 for the reason that though the line cards cannot function on their own and infact work as a component to extend the functionality of Router, but as these cards are used for providing network connectivity to the Router, they act as an interface between the network and the Router and, therefore, would be covered under the category of 'other communication apparatus' explained in

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5. the Customs Act  
6. the notification

the Harmonized System of Nomenclature <sup>7</sup> Explanatory Notes to Heading 85.17. The Principal Commissioner further held that even if the Product is in the nature of a Populated Print Circuit Board <sup>8</sup> assembly, it would be an essential part of the Router and cannot be classified as 'parts' as it would be covered under 'other apparatus' and classifiable under CTI 8517 69 90.

5. Shri B.L. Narasimhan, learned counsel for the appellant challenged the findings recorded by the Principal Commissioner and made the following submissions:

- (i) Line Cards of Routers are parts/components and not apparatus of HSN Heading 85.17. Therefore, they are correctly classifiable under Sub-Heading 8517.70 which covers 'parts';
- (ii) HSN Explanatory Note 2 of Section XVI states that an item will not be considered as a 'part' if, on a standalone basis, it can be considered as an article classifiable under its own appropriate heading. In this connection reliance has been placed on the decision of the Tribunal in **Commissioner of Cus., Bangalore vs. Modicom Network Pvt. Ltd.**<sup>9</sup>;
- (iii) Line Cards do not have separate identifiable / individual function from that of a Router and are incapable of operating independently. Therefore, they are only parts / component of a Router;

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7. HSN  
8. PCB  
9. 2005 (185) E.L.T. 333 (Tri.-Bang.)

- (iv) Even otherwise, the Product is in the nature of a PCB and, therefore, correctly classifiable under CTI 8517 70 10;
- (v) In fact, PCB is specifically mentioned under Sub-Heading 8517.70 which covers Parts. PCB appears in the Customs Tariff at CTI 8473 30 30, 8517 70 10 and 9027 90 20. All the above Tariff Items are entries for parts. Hence, it is clear that PCB is considered as parts;
- (vi) Matter of classification of cards/modules is concluded by various decisions in favour of appellant in:
- a. **Commissioner of Custom0073 vs. N.I. Systems (India) P. Ltd.**<sup>10</sup>;
  - b. **Indcheom Electronics vs. Commissioner of C.Ex., chennai**<sup>11</sup>;
  - c. **Vintron Electronics vs. Commissioner of C.Ex., Delhi**<sup>12</sup>; and
- (vii) Analogy drawn in the show cause notice and the impugned order between the aforementioned Router Line cards and Network Interface Cards<sup>13</sup> is incorrect and is not supported by the technology driving them.

6. Shri Ajay Jain, learned special counsel appearing for the Department, however, submitted that the contention of the appellant that the line cards should be classified as parts of HSN Sub-Heading 8517.70 is not correct for the reason that they have independent function, more in the nature of an accessory than as a part. Learned special counsel made the following submissions;

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10. 2010 (256) E.L.T. 173 (SC)  
 11. 1997 (95) E.L.T. 580 (Tri.-Mad)  
 12. 2012 (279) E.L.T. 161 (SC)  
 13. NIC

- (i) The line cards are specifically meant to provide network connectivity to the Router and they act as interface between network and Router. These allow the Router to connect to the network and receive the data packets which are again forwarded to the destination network by the Router using the line cards again for connecting to the network. The contention of the appellant that the cards should be classified as parts in HSN Heading 8517.70 is, therefore, not correct;
- (ii) Reliance on Explanatory Notes of a specific HSN Heading 84.79, which covers 'machines and mechanical appliances having individual functions, not specified or included elsewhere in this Chapter' to interpret the scope of Heading in a different Chapter i.e. 85 is incorrect;
- (iii) Straightway taking recourse to Section Note 2 (b), without exhausting Section Note 2 (a) to claim classification under CTI 8517 70 10 is also not correct;
- (iv) In arriving at classification of a particular item, HSN to be followed. HSN Explanatory Notes of Heading 8517 indicate a particular scheme of classifying goods covered under this Heading. The Indian Customs Tariff has essentially followed this scheme in terms of HSN Explanatory Notes. These line cards get covered by the group of cards which result in Network interface. The Ethernet interface card is only a type. All cards which are similar in function to Network interface cards will get covered by the category 'Other communication apparatus', which also includes 'Routers';

- (v) The contention of the appellant that NIC mentioned in HSN Explanatory Notes is different from line cards is not correct. The functions of NIC and that of a line card are almost identical. Both provide a connection between the network and the device (computer or the Router as the case may be). These work at physical layer as well as data link layer. Both are put in expansion slot of the main machine. Both convert the data received into format understood by the network. Both derive their power and intelligence from the main device;
- (vi) The contention of the appellant that a computer or a printer can work independent of NIC while Router cannot, is again fallacious; and
- (vii) Even if line cards are in the nature of PCB assembly, they cannot be classifiable as parts in as much as these are goods covered by other apparatus and classifiable under CTI 8517 69 90. In the Bills of Entry, the appellant had declared these goods as 'Router Line Cards or Router Line Cards with Mother Boards (Part of Router)' and not as populated PCBs.

7. The submissions advanced by the learned counsel for the appellant as also the learned special counsel for the Department have been considered.

8. The appellant claims that the Product deserves classification under CTI 8517 70 90 or in the alternative under CTI 8517 70 10, while the Department claims classification of the Product under 8517 69 90.

9. The relevant tariff entries are reproduced below:

Tariff Item	Description of goods	Unit	Rate of Duty	
(1)	(2)	(3)	(4)	(5)
<b>8517</b>	<b>Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525,8527 or 8528</b>			
	- Telephone sets, including telephones for cellular networks or for other wireless networks:			
8517 11	-- Line telephone sets with cordless handsets:			
8517 11 10	--- Push button type	u	Free	-
8517 11 90	--- Other	u	Free	-
8517 12	-- Telephones for cellular networks or for other wireless networks:			
8517 12 10	--- Push button type	u	10%	-
8517 12 90	--- Other	u	10%	-
8517 18	-- Other:			
8517 18 10	--- Push button type	u	Free	-
8517 18 90	--- Other	u	Free	-
	- Other apparatus for transmission or reception of voice, images or other data including apparatus for communication in a wired or wireless network (such as a local or wide area network):			
8517 61 00	-- Base stations	u	10%	-
8517 62	-- Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus:			
8517 62 10	--- PLCC equipment	u	Free	-
8517 62 20	--- Voice frequency telegraphy	u	Free	-
8517 62 30	--- Modems (modulators-demodulators)	u	Free	-
8517 62 40	--- High bit rate digital subscriber line system (HDSL)	u	Free	-
8517 62 50	--- Digital loop carrier system(DLC)	u	Free	-
8517 62 60	--- Synchronous digital hierarchy system(SDH)	u	Free	-
8517 62 70	--- Multiplexers, statistical multiplexers	u	Free	-
8517 62 90	--- Other	u	10%	-
8517 69	-- Other:			
8517 69 10	--- ISDN System	u	Free	-
8517 69 20	--- ISDN terminal adaptor	u	Free	-
8517 69 30	--- Routers	u	Free	-
8517 69 40	--- X 25 Pads	u	Free	-
8517 69 50	--- Subscriber end equipment	u	Free	-
8517 69 60	--- Set top boxes for gaining access to internet	u	Free	-
8517 69 70	--- Attachments for telephones	u	Free	-
<b>8517 69 90</b>	<b>--- Other</b>	<b>u</b>	<b>10%</b>	<b>-</b>
8517 70	- Parts:			
<b>8517 70 10</b>	<b>-- Populated, loaded or stuffed printed circuit boards</b>	<b>u</b>	<b>Free</b>	<b>-</b>
<b>8517 70 90</b>	<b>-- Other</b>	<b>kg</b>	<b>10%</b>	<b>-</b>

10. As the issue relates to classification of the Product, it would be appropriate to understand what a 'Router' is, before proceeding to examine the contentions that have been made.

11. A Router is defined in Webster's New World Telecom Dictionary as 'An intelligent switch capable of deciding where to forward packets based on a view of the network as a whole. A Router is a programmable device that works with other Routers, via a routing protocol, to establish the best path on which to forward a packet with a given address.'

12. Routers have interfaces (e.g. optical interfaces) which are used to physically connect with the network (for instance, through optical fibre cables). A Router has the following components:

- (i) **Routing processor:** The Routing Processor is where the CPU of the Routing function resides. The routing processor runs a software where functions such as IP Lookups are invoked. This leads to the creation of a routing table which is based on the routing-protocols implemented in the software. The routing processor is in the nature of a PCB. It is plugged into a slot in the router's chassis from where it sources power and intelligence;
- (ii) **Line cards/ Input & Output ports:** These Line Cards are also in the nature of a PCB. It houses the socket or port into which the transceivers are plugged. It is itself plugged into a slot in the router's chassis from where it sources power and intelligence;



- (iii) **Switch processor board:** The switch processor board is a fixed component of the complete router chassis. Its function is to interface multiple line cards including the routing processor within the router. It is plugged into a slot in the router's chassis from where it sources power and intelligence; and
- (iv) **Transceivers:** A transceiver is an integral and critical part of a router, enabling it to interface with the optical fibre connectivity. Since the routing processor performs processing in the electrical domain (and not the optical domain), the router would not be able to function without a transceiver to connect to the optical fibre network.

13. It has further been stated that these components are integral and inseparable parts of a Router and together form the complete Router. These components / parts operate and communicate in pure proprietary format within the box and are interdependent on each other for their functioning.

14. The HSN Explanatory Notes to Heading 85.17 provide that the Heading covers apparatus for the transmission or reception of speech or other sounds, images or other data between two points by variation of an electric current or optical wave flowing in a wired network or by electro-magnetic waves in a wireless network.

15. The goods covered under HSN 85.17 have been divided into the falling two categories:

- (I) Telephone sets, including telephones for cellular networks or for other wireless networks; and

- (II) Other apparatus for transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network).

16. The aforesaid category II has further been divided into the following groups:

- (A) Base station;
- (B) Entry-phone systems;
- (C) Videophones;
- (D) Apparatus for telegraphic communication other than facsimile machines of Heading 84.43;
- (E) Telephonic or Telegraphic Switching Apparatus;
- (F) Transmitting and receiving apparatus for radio-telephony and radio-telegraphy; and
- (G) Other communication apparatus.

17. The aforesaid Group G relates to "other communication apparatus" and is reproduced below:

"(G) Other communication apparatus.

This group includes apparatus which allows for the connection to a wired or wireless communication network or the transmission or reception of speech or other sounds, images or other data within such a network.

Communication networks include, inter alia, carrier-current line systems, digital-line systems and combinations thereof. They may be configured, for example, as public switched telephone networks, Local Area Networks (LAN), Metropolitan Area Networks (MAN) and Wide Area Networks (WAN), whether proprietary or open architecture.

This group includes:

- (1) Network interface cards (e.g., Ethernet interface cards).
- (2) Modems (combined modulators-demodulators).
- (3) Routers, bridges hubs, repeaters and channel to channel adaptors.
- (4) Multiplexers and related line equipment (e.g., transmitters, receivers or electro-optical converters).
- (5) Codecs (data compressors/decompressors) which have the capability of transmission and reception of digital information.
- (6) Pulse to tone converters which convert pulse dialed signals to tone signals."

18. What has to be determined in this appeal is as to whether line cards of Router are parts/components of a Router or apparatus of Heading 85.17. According to the appellant Router Line Cards are parts/components of a Router and are not apparatus of Heading 85.17.

19. It would also be useful to refer to Note 2 of Section XVI of the Tariff Act which provides for rules to be followed while classifying 'parts of machines' falling under Chapters 84 and 85. It provides that parts which are goods included in any of the Heading of Chapters 84 or 85, other than certain specified Chapter Heading, are in all cases to be classified in their respective headings. Section Note 2 (b) is to be applied only in cases where such parts cannot be classified as per Section Note 2 (a). Rule 2 is reproduced below:

"2. Subject to Note 1 to this Section, Note 1 to Chapter 84 and Note 1 to Chapter 85, parts of machines (not being parts of the articles of heading 8484, 8544, 8545, 8546 or 8547) are to be classified according to the following rules:

- (a) parts which are goods included in any of the headings of Chapter 84 or 85 (other than headings 8409, 8431, 8448, 8466, 8473, 8487, 8503, 8522, 8529, 8538 and 8548) are in all cases to be classified in their respective headings;
- (b) other parts, if suitable for use solely or principally with a particular kind of machine, or with a number of machines of the same heading (including a machine of heading 8479 or 8543) are to be classified with the machines of that kind or in heading 8409, 8431, 8448, 8466, 8473, 8503, 8522, 8529 or 8538 as appropriate. However, parts which are equally suitable for use principally with the goods of headings 8517 and 8525 to 8528 are to be classified in heading 8517;
- (c) all other parts are to be classified in heading 8409, 8431, 8448, 8466, 8473, 8503, 8522, 8529 or 8538 as appropriate or, failing that, in heading 8487 or 8548."

20. The HSN Explanatory Notes to Note 2 of Section XVI are reproduced below:

"(II) **PARTS** (Section Note 2)

In general, parts which are suitable for use solely or principally with particular machines or apparatus (including those of heading 84.79 or heading 85.43 ), or with a group of machines or apparatus falling in the same heading, are classified in the same heading as those machines or apparatus subject, of course, to the exclusions mentioned in Part (I) above.

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The above rules do **not** apply to parts which in themselves constitute an article covered by a heading of this Section (**other than** headings 84.87 and 85.48); these are in all cases classified in their own appropriate heading even if specially designed to work as part of a specific machine."

**(emphasis supplied)**

21. A perusal of the aforesaid would indicate that an item will not be considered as a 'part' if, on a standalone basis, it can be considered as an article classifiable under its own appropriate heading. It would, therefore, have to be seen whether a Router Line Card can be considered to constitute an article covered by Heading 85.17. To appreciate this, reference can be made to HSN Explanatory Notes to Heading 84.79 which deals with machines having individual functions. The inference that can be drawn from the above is that HSN itself considers an article which has an individual function as an 'independent machine' and not as a 'part'. This is clear from the examples provided therein. In the case of a carburetor for an internal combustion engine, it is explained that the function performed by carburetor is distinct from that of the engine. However, the said function is not an individual function as the operation of the carburetor is inseparable from that of the engine. Hence, the carburetor is considered as a part of the engine as opposed to an independent machine.

22. It, therefore, transpires that the true test for determining whether an item is classifiable as parts/components is as follows:

- (i) Whether the item has a separate identifiable/individual function of its own, when compared to the main machine;  
and
- (ii) Whether the item is capable of operating independently of the main-machine on its own.

23. If the answer to both the aforesaid questions is in the negative, the item would be classifiable as parts and in that case the item will

not be classifiable as an apparatus falling under its own appropriate heading.

24. A perusal of the catalogue of Router Line Cards shows that these cards/modules are only parts of the existing Routers which have already been imported or installed by the appellants. The Router chassis has dedicated slots marked for these line cards, switch cards and router processor cards. The line cards are simply inserted in these slots in the existing Routers. These line cards become functional only when plugged into the said slots in the Router chassis. The line cards source intelligence from control and processor module of the Router. These line cards cannot perform its function on a stand-alone basis in the imported condition. Further, communication between the line cards and the other components of the Router, most importantly, the switch processor board, is in the electrical domain and in completely proprietary data protocols. These facts are decisive to conclude that the line card/modules in question are parts, as they cannot perform independently of the Router because unless and until the said cards/modules are slotted into the dedicated slots into the chassis of the equipment, the said cards/modules cannot function. The cards/modules are dependent on the intelligence (i.e. timing information) provided by the control and timing modules. The timing information provided by the control and timing modules is essential for the proper functioning of these cards. Without connection to the overlying software of the equipment and the control/timing information being provided to them, the said line cards are incapable of operation. The line cards are proprietary of the Original Equipment Manufacturer. These line cards are, therefore, not cross compatible with devices of

other manufacturers but are only usable for the purpose for which they are designed for e.g., a line card manufactured by Cisco would be usable only in a Cisco Router and nowhere else. In other words, these cards/modules possess no functionality other than when used in the dedicated slot designed for them in the primary equipment chassis. Each primary equipment will possess dedicated and proprietary slots into which alone the said cards/modules must be inserted. Thus, there is no individual and separable function performed by line cards.

25. In this connection reference can be made to the decision of the Tribunal in **Commissioner of Cus., Bangalore vs. Modicom Network Pvt. Ltd.**<sup>14</sup>. The Tribunal examined whether modules can be considered as an apparatus or parts. It was held that the modules on their own do not have an independent function and each module remains as part of the Main Switching Centre. The relevant portion of the decision is reproduced below:

"2. This issue relates to the classification of modules (Main Switching Centre Hardware Upgrades) imported by the respondents. The original authority classified the goods under 8517.90 as 'Parts'. However, Revenue held the view that the goods should be classified under 8517.80 as 'Other apparatus'. The Commissioner (Appeals) rejected Revenue's appeal with the following observations.

"To be classified as apparatus, the goods must have a separate identifiable function on its own. These being components going into switching centers, cannot be treated as other apparatus. The Deputy Commissioner Customs has in his order pointed out that the main switching center is a complete machine with a provision for expansion of the switching capacity. The impugned imported goods called modules are basically inserted as essential parts into the main switching center to enhance the capacity for which a provision is always made. These

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14. 2005 (185) E.L.T. 333 (Tri. – Bang.)

modules therefore do not have any independent function, and cannot be treated as an 'Apparatus'. I find merit in the argument of the Deputy Commissioner of Customs. I therefore find that given the facts of the case, the impugned goods called modules are more appropriately classified as 'Parts' under 8517.90 rather than as 'Other Apparatus' falling under 8517.80. I therefore uphold the order of the Deputy Commissioner of Customs (Air Cargo Complex) and reject the Departmental Appeal."

3. Shri R.V. Ramakrishnappa, the learned JDR, appeared for the Revenue who is the appellant and Ms. Rukmani Menon, the learned advocate appeared for the respondent.

4. The learned advocate for the respondent stated that the original authority has dealt with elaborately on the issue before coming to a conclusion. Our attention was brought to the decision in *Indchem Electronics Ltd. v. CC, Chennai - 1997 (95) E.L.T. 580 (Tribunal)*, wherein it has been held that Add-on Cards and Mother Boards, which are capable of use only when linked up with certain other components, cannot be classified as automatic data processing machines but parts of machines falling under 84.71 of Central Excise Tariff Act, 1985. On the same analogy the impugned goods, which are in the nature of complete set of PCBs, are only Parts and cannot be treated as Other Apparatus.

5. The learned JDR reiterated the grounds of appeal. According to the grounds of appeal the impugned goods are described as Mobile Telephone Equipment in the invoice. The various kinds of modules imported are meant for functions such as receiving, transmission, message distribution, group processing and line interface, programme execution, input/output processing, signalling, etc.

6. We have gone through the rival submissions. We find that the Main Switching Center consists of various modules in the form of PCBs. Each module will have its own function. The modules are all of standard format. There is a face plate on the front of each module with display elements, with controls and access to front connectors. The PCBs of the modules are of multi layer design and the components with which they are



equipped are mainly surface mounted devices. The Main Switching Center is a machine with the provision for expansion. The modules are inserted as essential parts to attain a particular capacity. The modules on their own do not have any independent function and they cannot be dis-assembled further. Even though the numbers of modules are variable depending on capacity, each module remains as a part of the main machine, i.e. Main Switching Center. In view of the above, the Original Authority's finding that the modules cannot be considered as apparatus is correct. Hence there is no infirmity in the Order-in-Appeal confirming the Original order. Therefore the appeal of the Revenue is devoid of any merit. Hence we reject Revenue's appeals."

26. There is, therefore, no difficulty in holding that Router Line Cards are classifiable under CTI 8517 70 90 in view of Note 2 (b) of Section XVI of the Tariff Act.

27. Learned counsel for appellant, in the alternative, submitted that even otherwise imported Router Line Cards are in the nature of a PCB and, therefore, classifiable under CTI 8517 70 10 and not CTI 8517 69 90.

28. The term 'printed circuit' is defined in **Webster's New World Telecom Dictionary** as:

**Printed Circuit:** An electrical circuit, generally of copper foil, printed on a substrate dielectric material. A sheet of copper foil is adhered to the substrate and the unwanted portions of the foil are then removed by a process of silk screen printing, photoengraving, or mechanical milling. The remaining traces of copper foil form the circuit that connects components such as silicon chips mounted on the board. See also printed circuit board.

29. The same dictionary defines the term 'printed circuit board' as:

**Printed Circuit Board (PCB):** A substrate of dielectric material on which a printed circuit, silicon chips, and other components are mounted, and to which connectors are affixed so that the board can plug into a system chassis. A PCB serves a defined purpose. In telecommunications systems, for example, a PCB may provide the physical and logical interface to one or 'more digital or analog lines or trunks, may provide voice mail service, or may provide call processing logic. See also printed circuit.

30. A similar definition of PCB Assembly is available on website accessible at <https://www.customdesigntechnologies.com/custom-assembly/custom-printed-circuit-board-pcb-assembly-glossary/> as:

- a) **Printed circuit board assembly:** Printed circuit board assembly, also known as PCBA, is the process of soldering or assembly of electronic components to a PCB or printed circuit board.
- b) **Circuit board assembly:** Printed circuit board assembly, also known as printed circuit board assembly (PCBA), is the process of soldering or assembly of electronic components to a PCB or printed circuit board. The electronic components connect with the wirings of printed circuit boards. The traces or conductive pathways engraved in the laminated copper sheets of PCBs are used within a non-conductive substrate to form the assembly. Lastly attaching the electronic components with the

printed circuit boards is the final element before the electronic device is fully operational.

- c) **PCB board assembly:** In PCB board assembly, the bare board is populated (or stuffed) with electronic components to form a functional printed circuit assembly (PCA). Sometimes also called printed circuit board assembly.

31. HSN Explanatory Notes to Heading 85.34 cover 'Printed Circuits' as follows:

"Circuits on which mechanical elements or electrical components have been mounted or connected are not regarded as printed circuits within the meaning of this heading. They generally fall to be classified in accordance with Note 2 to Section XVI or Note 2 to Chapter 90, as the case may be."

32. Explanation (b), below Notification No. 57/17-Cus dated 30.06.2017 as amended on 02.02.2018, is as follows:

(b) **"Printed Circuit Board Assembly (PCBA)" means printed circuit board assembled with electronic components such as resistors, capacitors, diodes, inductors, ICs and mechanical components such as contact springs or connectors of charger or adapter of cellular mobile phones.'**

**(emphasis supplied)**

33. Populated PCBs have connectors embedded, making them ready for use. Thus, a fully functional and ready to use Populated PCB with connectors is also a Populated PCB.

34. Router Line Cards are Populated PCBs as they are printed circuit boards mounted with various active and passive electronic elements. Therefore, these cards can be classified under CTI 8517 70 10, which

covers 'populated, loaded or stuffed printed circuit boards'. It would attract NIL rate of duty.

35. It would be useful, in this connection, to refer to the observations of the Supreme Court in **N.I. Systems** and they are as follows:

"43. On the question of Input-Output (I.O.) Modules and Chassis, the Tribunal has not given any finding whatsoever thereon. However, on-going through the technical material and the demonstration given to us in Court, we are of the view that I.O. Modules and Chassis have also been rightly classified by the Department as parts and accessories of regulating and controlling apparatus classifiable under Chapter 90. In this connection, one needs to examine the nature and function of I.O. Modules and Chassis which we have already discussed hereinabove. To put it briefly, at the cost of repetition, **we may say that the primary function of I.O. Modules (Boards) is to function as a part of measuring and control System. It is for this reason that such Modules are required to be classified as parts and accessories of regulating and measuring System.** For this purpose, it is necessary to examine each of the imported items apart from Controllers in order to see whether the hardware coupled with the pre-installed software gives it a definite identity and function. **From the catalogue and technological write-ups we find that each and every I.O. Module imported by the assessee is configured with a sensor at one end. This aspect is very important. Take the example of Data Acquisition Boards (DAQ). The purpose of DAQ Boards is to acquire data from external sensor, usually in the form of analog voltage of +/- 10 volts. This data is converted by DAQ Boards into digital signals which the personal computer can understand.** On the other hand, Instrument Control Boards which are placed inside the computer allow data required from external sensors to be communicated directly to the computer. This is called as handling of information (see Explanatory Notes of HSN at page

1575) which is different from controlling temperature, pressure etc. (see Explanatory Notes of HSN at page 1856). On the other hand, we have what is called as Analog Output Boards which are meant for converting signals from external units such as PXI. **Similarly, the Chassis provides connectivity and housing for embedded controller and the data acquisition modules, allowing them to communicate with each other. A network interface module is used to connect to a network for distributed control applications. It interconnects measuring instruments to a PC by sending and receiving messages from the two units. Thus, each I.O. Module is tailored to a specific function and is therefore a part of regulating and controlling apparatus. Handling of information under the HSN Notes is separate and distinct from regulating and measuring temperature, pressure etc."**

**(emphasis supplied)**

36. Learned special counsel for the Department, however, submitted that Router Line Cards are Network Interface Cards (NIC).
37. Newton's Telecom Dictionary defines 'Network Interface Cards' as:

**Network interface card:** Also called a NIC card. A printed circuit board comprising electronic circuitry for the purpose of connecting a workstation to LAN. NIC usually is in the form of a card that fits into one of the expansion slots inside a PC. Alternatively, it can fit into a slot of a MAU (multi-station access unit), which serves multiple and attached devices such as workstations and printers. In the context of IEEE standards, NICs operate at the MAC (medium access control) layer. In the context of the OSI reference model, NICs is operated at Layer 1 (Physical Layer) and 2 (Data Link Layer). The basic job of

the NIC is to take data from the transmitting workstation, form it into the specific packet format demanded by the LAN protocol you are running (e.g. Ethernet or Token ring), and present it to the shared medium (usually a cable). On the receiving end, the process is reversed, of course. Hard coded into the NIC at the time of manufacture is a MAC address, unique in all the world to that NIC card; the MAC address effectively identifies the LAN attached device with which it is associated. A NIC works with the network software and computer operating system to transmit and receive messages on the network.

38. Thomas' Concise Telecom & Networking Dictionary defines 'Network Interface Card' as follows:

**Network interface card (NIC):** A network interface device in the form of a circuit card that is installed in an expansion slot of a computer to provide network access. Examples of NICs are cards that interface a computer with an ethernet alien and cards that interface of computer with an FDDI ring network.

39. Thus, the NIC is effectively a translator which allows a computer to communicate with a network by translating the output of the computer into a format understandable by the network and vice versa. If a computer is not to be connected to a network, there is no need for NIC of computer to function. Computer is complete in itself and does its job of data processing without any need for NIC.

40. The function of a NIC is, therefore, distinct from that of the overall equipment (i.e. computer/data processing machine). Also, the

said NIC is also clearly separable from the overall equipment.

41. NIC, therefore, satisfies the two tests as they perform a function distinct from that of computer. Furthermore, the NIC is capable of operating on its own in conjunction with a printer, computer, etc. This is in stark contradiction with Router Line Cards, which can be only operated with a Cisco ASR router chassis and nowhere else.

42. The individual Router Cards perform functions inseparable from that of the equipment. For example, a Router requires a line card to operate as much as the line card requires the power and intelligence of the Router to operate. This is distinct from a NIC, which other than drawing power from the Automatic Data Processing (ADP) machine, operates separately and independently of the ADP machine by performing the sole function of translating the output of the ADP machine. NIC would, therefore, qualify as 'an apparatus'.

43. NIC referred to under the category of 'other communication apparatus' in the HSN Explanatory Notes are those interface cards which can perform on a standalone basis. This is a standard item which can be fitted to any computer, unlike Router Line Cards in dispute which are tailor made for CISCO ASR Routers and can only perform function when plugged into the predetermined slot of the Router chassis.

44. This is supported by illustration of network interface cards provided in the HSN Explanatory Notes. The illustration provided is of an ethernet interface card. These are cards used to provide internet connectivity to desktops/laptops. It is quite clear that the main-equipment (i.e. the desktop/laptop) can operate and function even in the absence of a NIC. This is in contrast to line cards which are

essential for the Routers to operate.

45. Even from the HSN Explanatory Notes to Heading 85.17, Category II (G), NICs have been clubbed in the same category/class of equipments such as modems, routers, hubs, repeaters, multiplexers, etc. These equipments are clearly standalone apparatus which are independently capable of performing their functionality. Thus, sub-units/sub-assemblies of equipments such as modems, routers, hubs, repeaters, multiplexers would not be apparatus and NIC (i.e. a standalone apparatus) cannot be compared with Router Line Cards.

46. The aforesaid discussion would led to a conclusion that Router Line Cards imported by the appellant would be classified under CTI 8517 70 90 and not CTI 8517 69 90.

47. The impugned order dated 27.03.2019 passed by the Principal Commissioner, therefore, cannot be sustained and is set aside. The appeal is, accordingly, allowed.

(Order Pronounced on 20.09.2022)

**(JUSTICE DILIP GUPTA)  
PRESIDENT**

**(P.V. SUBBA RAO)  
MEMBER (TECHNICAL)**