

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [] To Chairmen
(D) [X] No distribution

**Datasheet for the decision
of 21 September 2011**

Case Number: T 1243/07 - 3.5.04

Application Number: 00911548.6

Publication Number: 1234305

IPC: G11B 11/00

Language of the proceedings: EN

Title of invention:
A portable data storage device

Applicant:
Trek 2000 International Ltd

Opponent:
-

Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 54, 56

Keyword:
"Novelty - no (main request, auxiliary requests 1, 2 and 4)"
"Inventive step - no (auxiliary request 3)"

Decisions cited:
-

Catchword:
-



Case Number: T 1243/07 - 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 21 September 2011

Appellant: Trek 2000 International Ltd
30 Loyang Way No. 07-13/14/15
Loyang Industrial Estate
Singapore 508769 (SG)

Representative: Howe, Steven
Reddie & Grose
16 Theobalds Road
London WC1X 8PL (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 1 February 2007
refusing European patent application
No. 00911548.6 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: F. Edlinger
Members: A. Dumont
C. Vallet

Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 00 911 548.6.
- II. The examining division decided *inter alia* that the subject-matter of claim 1 according to the main request and according to the third auxiliary request then on file lacked inventive step.
- III. The prior-art documents cited in the decision included the following:

D6: WO 99/45460 A2;
D14: Universal Serial Bus Specification Revision 1.1, 23 September 1998; and
D19: US 5,375,243 A.
- IV. With the statement of grounds of appeal the appellant filed amended application documents according to a main request and according to first to fourth auxiliary requests.
- V. In an annex to the summons to oral proceedings the board *inter alia* informed the appellant that the subject-matter of independent claims 1 and 10 according to the main request appeared to lack novelty over D6 (see points 4.1.1 and 4.1.2 of the annex).
- VI. With a reply letter of 19 August 2011 the appellant filed amended claims for the third auxiliary request and informed the board that the appellant did not intend to attend the oral proceedings.

VII. Oral proceedings took place on 21 September 2011 in the absence of the appellant.

VIII. The appellant requested in writing that the decision under appeal be set aside and a patent granted on the basis of the main or one of the first and second auxiliary requests filed with the statement of grounds of appeal, the third auxiliary request filed with the letter of 19 August 2011, or the fourth auxiliary request filed with the statement of grounds of appeal.

IX. Independent claim 10 according to the main request reads as follows:

"A combination of a computer and a portable data storage device which is directly introducible into and removable from a USB socket of a computer to permit the transfer of data from one computer to another, and which is capable of storing software for installation to the computer and of receiving and storing user's data, and which comprises a coupling device which is a USB plug (1) for coupling directly to a USB socket on a computer, an interface device (2) coupled to the USB plug (1), a memory control device (3) and a non-volatile solid-state memory device (4); the memory control device (3) being coupled between the interface device (2) and the memory device (4) to control the flow of data from the memory device (4) to the USB plug (1), the computer being loaded with driver software for the portable data storage device."

Claim 9 according to the first auxiliary request, claim 10 according to the second auxiliary request and claim 8 according to the fourth auxiliary request are

identical to independent claim 10 according to the main request.

- X. Independent claim 9 according to the third auxiliary request reads as follows. It differs from claim 10 according to the main request in the added feature in bold:

"A combination of a computer and a portable data storage device which is directly introducible into and removable from a USB socket of a computer to permit the transfer of data from one computer to another, and which is capable of storing software for installation to the computer and of receiving and storing user's data, and which comprises a coupling device which is a USB plug (1) for coupling directly to a USB socket on a computer, an interface device (2) coupled to the USB plug (1), a memory control device (3) and a non-volatile solid-state memory device (4); the memory control device (3) being coupled between the interface device (2) and the memory device (4) to control the flow of data from the memory device (4) to the USB plug (1), **wherein the memory control device (3) is operative to receive a password stored in the memory device (4) to determine whether access to the contents of the memory device (4) is authorised**, the computer being loaded with driver software for the portable data storage device."

- XI. The reasoning in the decision under appeal as far as it relates to D6 and D19 may be summarised as follows.

D6 discloses a portable data storage device, directly introducible into and removable from a USB socket of a

computer, comprising a USB plug for coupling directly to a USB socket on a computer, an interface device coupled to the USB plug, a memory control device and a non-volatile solid-state memory device.

The device of D6 comprises a cable as an integral part. However, the formulation of the claims does not imply the absence of a cable and USB plug for connecting to the USB socket of a computer, or that the claims relate to a non-separable combination of devices provided inside a single housing.

The sole differences of the invention as claimed over the known device consist in the memory control device being coupled between the interface device and the memory device to control the flow of data from the memory device to the USB plug, and the device being capable of receiving and storing data to and from the computer. These differences do not imply an inventive step.

D19 discloses a memory control device being operative to receive a password stored in the memory device (an IDE storage device) to determine whether access to the contents of the memory device is authorised. It solves the same problem as the present invention of protecting data stored in the memory device. The solution of D19 for an IDE storage device is obviously applicable to the non-volatile memory of D6.

XII. The appellant's arguments may be summarised as follows.

The claims of the present application should be construed through the eyes of a person skilled in the

art at the time of filing. According to the invention, the device as a whole can be directly introduced into and removed from a USB socket without the use of a trailing cable. A physical introduction into or removal from a USB socket is distinct from a usual electrical connection by "plugging" or "unplugging" the device using USB cables. Moreover, the data storage device is described as having no moving parts and as being more compact than conventional storage devices such as magnetic diskettes and CD-ROMs. This excludes the presence of the trailing cable used in the data storage device of D6.

The layout of the components in figure 1 of the present application corresponds to the physical mounting of the components on a circuit board, showing a USB plug ("USB Connector") and an "Additional USB port" connected by a signal line as well as the different sizes which represent different pieces on the circuit board. This teaches a person skilled in the art that the USB plug is an integral part of the device 10, and that the device is one without a trailing cable.

Although the USB standard does not require the use of a trailing cable, the USB standard does not suggest devices not being connected to hosts through cables, either detachable or captive. The appellant's device is an inventive departure therefrom.

The data storage device according to the invention is no bigger than a thumb. It was placed on the market as the "ThumbDrive" a few days after the filing date of the present application, as is apparent from press reports annexed to the statement of grounds of appeal.

The device of D6 is not around the size of a thumb and cannot fit into one's pocket. Moreover, the device of D6 is not intended to be transported away from the host computer, although it might be of a size that would in principle allow that. It is thus not truly portable and self-contained within the meaning of the present invention.

The device of D6 is not used to transfer data between two computers.

These views are supported by two witness statements given by an expert in connection with the present invention in proceedings before the UK Patent Office, and filed as annexes to the statement of grounds of appeal.

As a result, the device of claim 10 is novel over D6. There is also nothing in the prior art that would lead the skilled person to modify the cumbersome device of D6 so as to arrive at the invention as claimed.

D19 relates to a hard disk drive mounted within a computer. The drive is thus not removable. The skilled person would not have any expectation of finding in D19 a solution to security issues specific to a portable memory device, which can be easily lost, misplaced or stolen.

Reasons for the Decision

1. The appeal is admissible.

2. Main request

2.1 Claim interpretation

2.1.1 In the following, references to the present application relate to the description and drawings as filed and published under WO 01/61692 A1, since the appellant referred to these documents and the amendments to the description on file do not affect the content which is relevant for the interpretation of claim 10, as derivable by the skilled person at the filing date.

2.1.2 Claim 10 sets out that the portable data storage device is "directly introducible into and removable from a USB socket of a computer" and comprises "a coupling device which is a USB plug (1) for coupling directly to a USB socket on a computer". The appellant construes these formulations as implying that the device does not comprise a connecting cable and that the USB plug is an integral part of the device.

2.1.3 The board agrees that according to claim 10 the USB plug is comprised in the device which forms part of the claimed combination.

2.1.4 In the board's view, claim 10 further sets out that the USB plug is suitable of being directly introduced into, removed from, or more generally directly coupled to a USB socket of an external computer. This is in principle the case with any standard-compliant USB plug, regardless of whether it is mounted at the end of a cable or as an integral part of a self-contained device. These formulations thus set out a relationship between the USB plug and a USB socket mounted on the external

host computer and exclude further components between the plug and socket, but do not impose any limitation on the physical construction of the plug as part of the device or on the connection of the USB plug to other components within the data storage device, such as the interface device which is "coupled to the USB plug" according to claim 10. Such a coupling does not exclude the presence of a cable.

2.1.5 The appellant stresses that the device being "introducible" and "removable" would imply a physical connection of the device as a whole and also the absence of a cable. However, according to the description (page 1, lines 6 to 11), a "removable" device is opposed to a device fitted within the computer, such as conventional random access memory (RAM). The description further states that the device of the invention may either be "removed" from or conversely be "plugged" into the USB socket of the computer (see for instance page 5, lines 18 to 21; page 6, lines 7 to 9; or page 7, lines 19 to 22). These references are made in the context of establishing or terminating (electrical) communication between the computer and the device. A skilled person would thus draw no distinction between removing and unplugging a device (or conversely between introducing and plugging a device), or any conclusion as to the presence or absence of a connecting cable.

2.1.6 The appellant provides further arguments relating to the disclosure of the invention in the description. These arguments do not affect the interpretation of claim 10 for the following reasons.

Apart from the USB plug, the description (page 5, lines 11 to 14) mentions an additional USB socket (or "Additional USB port" in figure 1) coupled directly to the USB plug. The various components of the data storage device are described as being "coupled" to each other, without further detail about the physical construction of the device, in particular as regards a housing or the presence or absence of a USB cable.

Moreover, figure 1 is described as "a schematic block diagram" (see page 3, line 15) showing the components of the device, in particular the USB plug/connector (1) and the USB socket/port (8), as functional blocks. The schematic diagram of figure 1, in the absence of a more detailed description, does not make it possible to directly and unambiguously derive any information as to the relative scale or position of the components on a circuit board, or as to the presence or absence of a USB cable.

More generally, the description does not mention any USB cable. If the appellant's argument is accepted that the USB standard normally implies the use of a connecting cable, either detachable or captive, then one would expect either the description to expressly mention that the invention departs from the standard, or at least such a non-obvious departure to be apparent from the figures, for instance by showing a housing or the physical construction of the device. This is not the case.

2.1.7 The appellant further refers to (post-published) reports relating to a specific product, the "Thumbdrive", put on the market by the appellant

shortly after the filing date of the present application. The board cannot see the relevance of these reports for determining the disclosure of the present application or the subject-matter of claim 10, since the present application does not refer to the specific product.

2.1.8 In conclusion, the board, in view of what can be directly and unambiguously derived from the application as filed, does not share the appellant's opinion as supported by expert witness statements that a person skilled in the art would have understood the present application as relating to a departure from the USB standard in that it did not use a connecting cable. Therefore, the portable data storage device of claim 10, also when interpreted in the light of the description, is not limited to a device without a connecting USB cable.

2.2 Novelty

2.2.1 It is uncontested that D6 discloses a combination of a computer (330 in figure 3) and a data storage device (300), comprising a coupling device (USB plug 50 in figure 1A), an interface device (310 in figure 3) coupled to the USB plug, a memory control device (327) and a non-volatile solid-state memory device (326). The appellant also does not contest that the computer is loaded with driver software for the portable data storage device, as required by the USB standard (see also D14, section 5.2.1 on page 27: "USB System Software").

2.2.2 The board does not agree with the examining division's identification of two differences over the disclosure of D6, for the following reasons.

As is apparent from figure 3 of D6, the memory control device (327) is located between the interface device (310) and the memory device (326). The memory control device is (directly) coupled to the memory device to control the flow of data from the memory device, in particular when executing read or write operations (see D6, page 7, lines 22 to 27). It is coupled to the interface through a connector (325), so that the data can be transferred to the USB plug. As a result, the memory control device is coupled between the interface device and the memory device to control the flow of data from the memory device to the USB plug, as set out in claim 10.

The USB standard was designed for easy expansion of a computer, by plugging/unplugging peripheral devices without the need to turn the computer off ("hot plug"). Furthermore, the data storage device of D6 is of the read/write type (see D6, page 1, line 29 to page 2, line 1; and page 7, lines 23 to 25). It is thus capable of storing and receiving data to and from the host computer and it permits the transfer of data from one computer to another, as set out in claim 10. In this context, the user's data is not distinguishable from software data for installation on the computer, so that the device of D6 permits the transfer of both types of data.

2.2.3 The board also does not agree with the appellant's argument that the device of D6 is not portable, for the following reasons.

The data storage device of D6 consists of two parts: a memory card (90 in figure 1A) expressly described as being portable (see D6, page 2, line 1), and an interface device (essentially a housing (20) with a slot (30) for receiving the memory card and an integral USB cable and plug assembly (40, 50)). The device of D6 is itself expressly mentioned as an attachable/detachable peripheral device which can be easily coupled to the USB socket of a computer (see D6, page 1, lines 21 to 24 and page 2, lines 23 to 30). It is thus designed to be portable between computers.

The appellant further argues that the device of the invention is a self-contained device which is "truly portable", being around the size of a thumb. There is no element in claim 1, and no information in the application documents, justifying such a restrictive interpretation of the "portable data storage device" of claim 10.

2.2.4 Furthermore, the board does not agree with the appellant's argument that the device of D6 is not "directly introducible into and removable from" the USB socket (335 in figure 3) of the external host computer, since this does not exclude the presence of the connecting USB cable (40 in figure 1) of D6, as explained in section 2.1 above.

2.2.5 As a result, the subject-matter of claim 10 according to the main request lacks novelty over D6 (Article 54

(1) and (2) EPC 1973), and the main request is not allowable.

3. First, second and fourth auxiliary requests

3.1 Claim 9 according to the first auxiliary request, claim 10 according to the second auxiliary request and claim 8 according to the fourth auxiliary request are identical to independent claim 10 according to the main request.

3.2 As a result, these requests are not allowable for the same reasons as for the main request.

4. Third auxiliary request

4.1 Concerning claim interpretation, the same considerations apply as set out in section 2.1 above. The feature added over claim 10 of the main request (see point X above) relates to password-protected access control and has no impact on the connection of the USB plug with or without cable.

4.2 It is not contested that D19 discloses a memory device achieving data protection by an internal memory control device operative to receive a password stored in the memory device to determine whether access to the contents of the memory device is authorised (see column 9, lines 11 to 25). The memory device is an (IDE) hard disk drive which is normally mounted in a computer and not used to transfer data between computers.

4.3 However, D19 aims to achieve effective password protection in cases of misuse or theft, where the hard

disk drive is physically removed from the computer and installed in another system (see column 1, lines 53 to 61 and column 2, lines 9 to 24). D19 thus discloses a protection scheme effective against physical displacement of the memory device from one computer to another. Starting from the prior art disclosed in D6 (see section 2.2 above) and confronted with the problem of securing the data stored in the portable device, it was obvious to apply the teaching of D19, in order to achieve the same effective protection, where displacement results from the intended use as well as from a misuse.

4.4 As a result, the subject-matter of claim 9 according to the third auxiliary request lacks inventive step over a combination of D6 with D19 (Article 56 EPC 1973), and the third auxiliary request is not allowable.

5. In conclusion, none of the requests is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

K. Boelicke

F. Edlinger