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Datasheet for the decision
of 16 July 2010

Case Number:	T 1196/07 – 3.5.05
Application Number:	03771777.4
Publication Number:	1540548
IPC:	G06F 19/00
Language of the proceedings:	EN

Title of invention:
System and method for remotely operating a peristaltic pump

Applicant:
Curlin Medical Inc.

Headword:
Remote programming of a peristaltic pump/CURLIN

Relevant legal provisions (EPC 1973):
EPC Art. 56, 106, 107, 108

Keyword:
"Inventive step - no (main and auxiliary request)"

Decisions cited:
J 0010/07, T 1194/97, T 0641/00

Catchword:
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Beschwerdekammern   Boards of Appeal   Chambres de recours

Case Number: T 1196/07 **-** 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 16 July 2010

Appellant: Curlin Medical Inc.
                        Seneca Street & Jamison Road
                        East Aurora
                        New York 14052   (US)

Representative: Barnfather, Karl Jon
                        Withers & Rogers LLP
                        Goldings House
                        2 Hays Lane
                        London SE1 2HW   (GB)

Decision under appeal: **Decision of the Examining Division of the
                        European Patent Office posted 26 February 2007
                        refusing European application No. 03771777.4
                        pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: A. Ritzka
Members: M. Höhn
                  G. Weiss

Summary of Facts and Submissions

I.   This appeal is against the decision of the examining
      division dispatched 26 February 2007, refusing European
      patent application No. 03771777.4 because of lack of
      inventive step (Article 52(1) EPC and Article 56 EPC
      1973) having regard to the disclosure of prior art
      document:

      D1: US 2001/031944 A1.

II.   The notice of appeal was filed with letter received on
      13 April 2007. The appeal fee was paid on 24 April 2007.
      The statement setting out the grounds of appeal was
      received on 26 June 2007. The cancellation of the
      appealed decision was requested. The appellant argued
      on the basis of the claim sets of the main request and
      first to third auxiliary requests on which the decision
      under appeal was based. Oral proceedings were requested
      on an auxiliary basis.

III. A summons to oral proceedings to be held on 16 July
      2010 was issued on 1 April 2010. In an annex
      accompanying the summons the board expressed the
      preliminary opinion that the subject-matter of the
      independent claims of the main request and of the
      auxiliary requests did not fulfil the requirements of
      Article 56 EPC 1973 having regard to the disclosure of

      D2: US 6 269 340 B1,

      which had been cited in the first instance proceedings.
      Further, the subject-matter of the independent claims
      of all requests appeared to lack an inventive step

(Article 56 EPC 1973) having regard to the disclosure
of D1 when combined with the skilled person's common
general knowledge, as argued by the examining division.
The board gave its reasons for the objections and
stated that the appellant's arguments were not
convincing.

IV.   With a letter dated 13 June 2010 the appellant
        submitted two independent claims 1 according to a
        primary request and an auxiliary request named
        auxiliary position together with arguments that these
        claims were novel and met the requirements of
        Article 56 EPC 1973. With a further letter dated
        14 June 2010 the appellant filed two amended sets of
        claims named primary request and auxiliary request and
        amended pages 3, 3a and 3b.

V.   At oral proceedings, held on 16 July 2010, the requests
        submitted with letter dated 14 June 2010 were discussed.

VI.   Independent claim 10 according to the primary request
        reads as follows:

        "10. A system for storing protocol information for a
        drug for administration to a patient via a
        peristaltic pump on a remote storage device, the system
        comprising:
        - a peristaltic pump with a keypad and logic software
        and the remote storage device;
        - a communications path between the peristaltic pump
        and the remote storage device;
        - a keypad for entering the protocol information for
        the drug into the peristaltic pump;

- means for storing a protocol file of data and keypad
commands;
- means for transferring the protocol file as protocol
information from the peristaltic pump to
the remote storage device;
- means for storing the protocol information for the
drug on the remote storage device;
- means for editing a precautions field associated with
the protocol information;
- means for enabling communication of the edited
protocol information to the peristaltic pump which
causes a precaution window to display the precaution
information for the protocol via a display; and
- a noted button, wherein the administrator of the drug
protocol is required to review the precautions and
indicate that the precautions have been reviewed by
processing the noted button."

Independent claim 9 according to the auxiliary request
differs from claim 10 of the main request by the
following additional feature:

"- a single therapy button enabling a user to restrict
the use of the peristaltic pump to a single therapy by
disabling all but one therapeutic mode on the
peristaltic pump."

Independent claims 1 of both requests are directed to a
corresponding method, respectively.

VII.   The appellant requested that the decision under appeal
be set aside and that a patent be granted on the basis
of one of the two sets of claims filed with letter
dated 14 June 2010 as primary and auxiliary requests.

VIII. After deliberation the board announced its decision.

Reasons for the Decision

1.   Admissibility

       The appeal complies with the provisions of Articles 106
       to 108 EPC 1973, which are applicable according to
       J 0010/07, point 1 (see Facts and Submissions, point II
       above). Therefore the appeal is admissible.

       Inventive step (Article 56 EPC 1973)

       Primary request

2.   D2 discloses an infusion pump with an electronically
       loadable drug library. The pump may be operated
       according to a drug entry selected from the drug
       library or according to data entered by the user by
       means of an empty template. Pump events recorded in an
       event log may be downloaded from the pump to a personal
       computer (see column 8, lines 4 to 7; column 11,
       lines 64 to 66; column 20, line 67 to column 21, line 4
       and column 28, line 15 to 34). Therefore, the board
       considers D2 to be the most relevant prior art document.

2.1   D2 discloses a portable infusion pump with an internal
       memory for storing an electronically loadable drug
       library (see column 8, lines 4 to 7). A user can
       electronically load a customized drug library and
       supplementary configuration data into the pump from an
       external computer source, e.g. a PC (see column 10,

line 64 to column 11, line 4). The drug library may be stored in the memory of the PC or on a disk storage (see column 11, lines 16 to 19). Thus, D2 discloses a system for storing protocol information for a drug for administration to a patient via an infusion pump on a remote storage device, as claimed in claim 10. The system comprises a pump (figure 1, column 8, lines 4 to 7) with a keypad (figure 3, column 8, lines 7 and 8).

The internal circuit of the infusion pump includes microprocessors and various memories (RAM 44, ROM 46, EEPROM 48) into which the pump operating system and executable code are loaded (see figure 2, column 9, lines 1 to 4 and 19 to 21, column 10, lines 10 to 17). Thus, the system comprises logic software.

The PC's memory or the disk storage storing the drug library (see figure 5, column 11, lines 16 to 19) correspond to the remote storage device, required in claim 10.

The user can electronically load the drug library from the PC, i.e. the PC's memory, into the pump (see figure 5 and column 10, line 64 to column 11, line 1). This implies a communications path between the pump and the PC, i.e. the remote storage device.

The keyboard on the front of the pump (see column 21, lines 2 to 4; figure 19a, step 302; figure 25, steps 419 and 420) represents a keypad for entering the protocol information for the drug into the pump.

The pump includes program code that generates an event log in the pump's EEPROM (see column 28, lines 15 to 34

and column 16, lines 33 to 39), implying means suitable
for storing a protocol file of data and keypad commands.

The event log can be retrieved from the pump,
downloaded into the PC and stored on disk (see
column 28, lines 27 to 32 and column 6, lines 51 to 55),
implying means for transferring the protocol file as
protocol information from the pump to the remote
storage device and means for storing the protocol
information for the drug on the remote storage device.

D2 discloses that a drug entry may be modified (see
column 12, lines 7 to 10) and that the user can read a
selected configuration file into active memory on the
PC for further editing (see column 16, lines 23 to 25),
implying means for editing said protocol information.
D2 discloses that a user can electronically load a
customized drug library and supplementary configuration
data into the pump, implying means for sending the
edited protocol information to the pump for
administration to the patient (column 10, lines 64
to 67; column 16, lines 26 to 30). In addition, D2
discloses a variety of security features (see column 18,
line 59 onwards). In particular, D2 teaches measures in
order to prevent loading unapproved drug libraries to
the pump (see column 18, lines 60 to 64). For this
purpose, *inter alia*, an "approval field" 264 is used in
which a person having supervisory access level has to
indicate that this configuration has been approved. The
approval field also contains information about date and
time of the approval (see column 19, line 48 to
column 20, line 49). If a newly created or modified
configuration of the pump has not been approved, it is
not permitted to load the configuration file to the

pump. Only if the file received its approval after the
last change to the file, does the program allow the
user to proceed with loading the file. The board judges
that this approval process represents a precaution
measure. Since the precaution field according to
claim 10 is not limited to a special type of precaution
information, the board considers the approval field
disclosed in D2 to be a precaution field associated
with the configuration of the pump, i.e. the protocol
information, which can be edited as required according
to the further feature of claim 10. The edited protocol
information can also be communicated to the pump, as
claimed according to claim 10.

2.2   The appellant interpreted claim 10 at oral proceedings
        as meaning that the means for enabling such a
        communication cause a precaution window to display the
        precaution information at the remote device. The board
        judges that the approval field 264 in D2 has to be
        displayed at the remote device in order that the
        supervisor can input the required approving information.
        The use of a window is regarded as an obvious standard
        implementation of displaying any kind of information on
        displays. The supervisor necessarily has to operate at
        least one key or button to input the corresponding
        approval. This key or button corresponds to a "noted
        button" required according to the last feature of
        claim 10.

2.3   According to a further possible interpretation of
        claim 10 the precaution information is displayed in a
        precaution window at the pump. The board notes that D2
        further discloses an additional input option according
        to which a user can input relevant information into the

pump through the touch memory contacts 33 (see
figure 1). If this option is used after the pump has
been configured, the pump performs a verification
function (see figure 26). D2 (column 28, lines 4 to 13)
reads as follows: "If inconsistencies are found, the
pump reports those inconsistencies to the user and
disables the pump from running the drug until the user
either overrides the program or in some other way
satisfactorily reconciles the inconsistency (step 434)".
Reporting inconsistencies implies a display of
corresponding information. The use of a window as
display and the use of the pump's keyboard, i.e. of at
least one key or button, for a reaction from the user
required to operate the disabled pump are regarded as
obvious standard implementations. The key or button of
the pump's keyboard corresponds to a "noted button" as
claimed according to the last feature of claim 10.

According to claim 10 the "noted button" is further
specified as follows: "the administrator of the drug
protocol is required to review the precautions and
indicate that the precautions have been reviewed by
processing the noted button". The board notes that D2
discloses that a programmed configuration has to be
reviewed and approved by a supervisor, who is
considered to be an administrator of the drug protocol,
as required according to claim 10. However, this aspect
of the claimed subject-matter does not contribute to
the solution of the underlying problem of improving
security of the infusion pump. If the noted button is
operated by either a different person or an
administrator who by error does not understand the
precaution information correctly, security of the
infusion pump will not be improved. Therefore, this

aspect of the claimed subject-matter does not
contribute to the technical character of claim 10. Thus,
it cannot support the presence of inventive step, in
accordance with established case law (see e.g.
T0641/00).

2.4   The appellant further argued that the approval field in
        D2 did not correspond to precaution information, since
        it was purely related to access control. This argument
        does not convince, because D2 discloses that relevant
        information which can be input by a user can be, for
        example, the drug expiration date (see column 27,
        line 30), which the board considers to be precaution
        information.

2.5   Furthermore, the board judges that the content of the
        data displayed in the precaution window is to be
        considered purely cognitive data which, in contrast to
        functional data (see e.g. T1194/97, reason 3.3), does
        not affect the functioning of the system and, hence,
        that the type of data does not contribute to the
        technical character of claim 10. Even if for the sake
        of argument there were such a difference in the type of
        data (see the afore mentioned disclosure in D2,
        point 2.4 above), this would not contribute to an
        inventive step of claim 10.

2.6   A technical difference between the subject-matter of
        claim 10 and the disclosure of D2 is that the type of
        pump according to claim 10 is a peristaltic pump,
        whereas D2 discloses the use of an infusion pump in
        general, in particular a syringe pump (see e.g.
        figure 1). However, the features specifying independent
        claim 10 are not linked to the internal construction of

the pump, since there is no synergistic effect between these features and the pump being a peristaltic pump. Thus, the teaching disclosed in D2 would be applied by the skilled person to a peristaltic pump without the need of inventive skills.

Thus, the subject-matter of claim 10 lacks an inventive step over the disclosure of D2.

Auxiliary request

3.   Claim 9 of this request further specifies a single therapy button enabling a user to restrict the use of the peristaltic pump to a single therapy by disabling all but one therapeutic mode on the peristaltic pump. The underlying objective technical problem is, according to the appellant's submissions, to prevent a therapy being mistakenly programmed and sent to a patient for whom only a single therapy is appropriate.

3.1   D2 suggests means for limiting the number of modes available to the user (see the table on column 25, second entry "Select Modes?" in line 60).

In the light of such a motivation in the closest prior art D2, the skilled person would look for concrete solutions in the further prior art. He would therefore consider D1, which is in the same technical field and also deals with the communication capabilities of infusion pumps.

D1 provides a solution to the objective problem by suggesting that "only one application be stored in flash memory 240 as a safety precaution against the

caregiver or the patient inadvertently running the wrong program" (see paragraph [0290]). Furthermore, D1 suggests "Also, pump 100 may be simpler to operate if only one application is stored in the memory of pump 100. With only one application program stored in the memory, it is not possible for the wrong application program to be selected, once pump 100 is properly programmed. This is a safety feature for protecting the patient from inadvertently receiving the wrong therapy…" (see paragraph [0299]).

3.2   Thus, D1 discloses the claimed solution except for the use of a dedicated button ("single therapy button") for this purpose, which, however, is considered an obvious design alternative within the routine skills. The solution according to claim 9 is therefore obvious.

3.3   The board does not agree with the appellant's argument that there is a combinative effect caused by this added feature and the afore-mentioned security measures according to claim 9.

        While these features all contribute to improving the security of the pump, there is no interaction between displaying precaution information and the use of a noted button on the one hand, and a single therapy button one the other hand. Since there is no synergistic or surprising effect which would justify an inventive activity, the subject-matter of claim 9 of this request also lacks an inventive step having regard to the disclosure of D2 combined with the teaching of D1.

4.   Thus, neither of the two requests is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz   A. Ritzka

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