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(54) **Ergonomic computer desk and worksurface therefor**

(57) The invention relates to a desk, particularly intended as workplace for a user of a computer system with data input means and/or cursor control means, which desk (3) is provided with a work surface (4) for placing of at least the data input means and/or the cursor control means, characterized in that the work surface comprises one or more recesses (7,8,9) for receiving the data input means and/or the cursor control means.

The invention also relates to a work surface as described as part of a desk according to the invention.

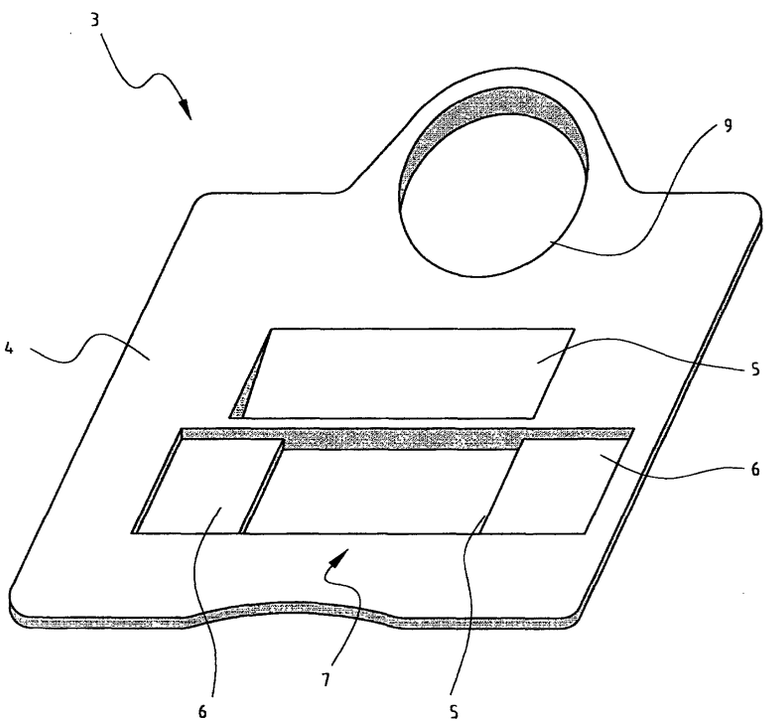


Fig. 2

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## Description

**[0001]** The present invention relates to a desk, particularly intended as workplace for a user of a computer system with data input means and/or cursor control means, which desk is provided with a work surface for placing of at least the data input means and/or the cursor control means.

**[0002]** Such a computer desk is known in the field. A good deal of attention is paid nowadays to preventing symptoms caused by Repetitive Strain Injury (R.S.I.), also known as "mouse-arm" among computer users. This is possible for instance by adding accessories to the computer desk, such as by placing a wrist support in front of the keyboard or integrated into the mouse mat. In a completely different approach, different assist means are attached to the computer desk, for instance adjustable supports for placing of the keyboard or the monitor. A proviso for successful use of these assist means however is that they are optimally adjusted to the individual user. This is generally a time-consuming activity, wherein some knowledge of ergonomics is required. It is therefore often found in practice that the assist means are not used in the correct manner, especially when a workplace is used by turns by different users.

**[0003]** The invention has for its object to provide a desk of the type stated in the preamble which obviates this drawback.

**[0004]** For this purpose the desk according to the invention has the feature that the work surface comprises one or more recesses for receiving the data input means and/or the cursor control means.

**[0005]** The desk according to the invention has the advantage that the data input means, such as the keyboard, and/or the cursor control means, such as the mouse, will automatically be in the correct position during use, this being indicated by the recesses. Furthermore, the data input means and/or the cursor control means are automatically received in the work surface in slightly recessed manner owing to the depth of the recesses. This has the immediate consequence that the forearms of the user are supported as much as possible by the work surface. Excessive strain on shoulders, arms and wrists with repetitive movements is thus prevented. The chance of symptoms such as R.S.I. occurring hereby decreases considerably.

**[0006]** In a first preferred embodiment the depth of the recesses is adapted to the height of the data input means and/or the cursor control means such that the forearm(s) and hand(s) of the user lie as much as possible in one line while working with the data input means and/or cursor control means. The user hereby assumes a natural position. The depth of the recesses is preferably substantially equal to or larger than the height of the cursor control means and/or the data input means. The user hereby adopts an ergonomically safe posture, in which the hands as it were drop onto the cursor control means and/or the data input means without the user having to hold them unawares in an unnatural position directed slightly upward.

**[0007]** In a practical preferred embodiment of the invention the work surface comprises a recess for receiving a keyboard and/or a mouse. The work surface preferably comprises two recesses for receiving a mouse which are situated on either side of the recess for the keyboard.

**[0008]** In an elegant embodiment the work surface comprises one recess which is provided in the centre with a deepened portion for receiving the keyboard, wherein on either side of the central deepened portion are situated two further deepened portions in slightly higher position for receiving the mouse. A uniform desk is hereby created which is suitable for both left-handed and right-handed users.

**[0009]** According to a further preferred embodiment the dimensions of the recesses in longitudinal direction are greater than the corresponding dimensions of the data input means and/or cursor control means for receiving therein such that the workplace can be adjusted to the individual user by displacing the data input means and/or the cursor control means in the respective recesses. The desk according to the invention is thereby optimally adjustable for any user in simple manner.

**[0010]** According to another preferred embodiment, there is provided a set of mats for receiving in the recesses, wherein the dimensions of the mats in length and width direction are substantially equal to the corresponding dimensions of the respective recesses. Undesired shifting of the data input means and/or the cursor control means out of position is prevented by using the mats.

**[0011]** The set of mats preferably comprises mats of different height. The data input means and/or the cursor control means can now be adjusted to the correct height in simple manner. The set of mats preferably comprises one or more mouse mats.

**[0012]** According to a further preferred embodiment the work surface comprises a further recess for receiving a monitor and/or a further recess for receiving one or more sheets of text. When these embodiments are used the head and neck of the user also automatically assume a correct posture.

**[0013]** The invention also relates to a work surface as described as part of a desk according to the invention.

**[0014]** The invention will now be discussed in more detail with reference to the drawings, in which

Figure 1 shows a schematic three-dimensional view of an office furnishing, of which the desk according to the invention forms part;

Figure 2 shows a schematic three-dimensional view of the desk of figure 1 in more detail; and

Figure 3 is a schematic three-dimensional view of the desk of figure 2 fitted as workplace with computer and office materials.

**[0015]** Figure 1 shows a schematic three-dimensional view of an office furnishing 1. Office furnishing 1 comprises two tables 2 which are placed in an angular arrangement. Computer desk 3 according to the invention is arranged in the angle. The desk further comprises a support frame, of which only legs 10 are shown schematically.

**[0016]** Figure 2 shows computer desk 3 in more detail. Desk 3 has a work surface 4 which is provided with different recesses for components of a computer system and for office materials. There is a recess 7 for receiving data input means, such as a keyboard, and cursor control means such as a mouse. Recess 7 consists of a central deepened portion 5 for the keyboard. On either side of the central deepened portion 5 are situated further deepened portions 6 for receiving a mouse.

**[0017]** A recess 8 is provided for receiving sheets of text. Recess 8 has an inclining surface, so that the text lies at an angle such that the user assumes an ergonomically safe posture of his or her head during reading of the text. This preferably lies at between 20 and 50 degrees and more preferably approximately 30 degrees. Adjusting means are preferably provided in recess 8 for adjusting the relevant angle, for instance in the form of a tiltable insert for the sheets of text.

**[0018]** The position of recess 8 is advantageously chosen between recess 5 for the keyboard and recess 9 for the monitor. The field of view of the user can be moved from the monitor to the text, and optionally to the keyboard or the mouse, with minimal head movements. The optimal position for the monitor in recess 9 is at arm's length from the user.

**[0019]** For the purpose of illustration figure 3 finally shows work surface 4 adapted as workplace with the above mentioned computer components and office materials. A keyboard 11 is received in recess 5. A mouse 12 lies on a mouse mat 13 in right-hand recess 6. The left-hand recess 6 is used in this example for placing of a document file 14. Sheets of text 15 lie in recess 8. The foot of monitor 16 is placed in recess 9.

**[0020]** The correct position of keyboard 11 is simple to adjust by shifting the keyboard in longitudinal direction, i.e. away from or toward the user, depending on the length of his or her arms. For this purpose the dimensions of recess 5 in longitudinal direction are greater than the dimensions of keyboard 11 in longitudinal direction.

**[0021]** In order to prevent undesired shifting out of position, one or more mats are provided for recesses 5, 6 and 7 (not shown). A set of mats of different height is preferably provided. Through a correct choice of the mat height the computer desk according to the invention can be adjusted to the individual user as an ergonomically safe workplace.

**[0022]** Means are preferably arranged in recess 9 for height adjustment of monitor 16. Such a height adjustment can be realized in many ways, and comprises for instance a carrier which is height-adjustable in mechanical, electrical or hydraulic manner.

**[0023]** It is noted, perhaps unnecessarily, that the invention is expressly not limited to the shown and described embodiment, but extends generally to any embodiment which falls within the scope of the appended claims as seen in the light of the foregoing description and drawings.

## Claims

1. Desk, particularly intended as workplace for a user of a computer system, with data input means and/or cursor control means, which desk is provided with a work surface for placing of at least the data input means and/or the cursor control means, **characterized in that** the work surface comprises one or more recesses for receiving the data input means and/or the cursor control means.

2. Desk as claimed in claim 1, wherein the depth of the recesses is adapted to the height of the data input means and/or the cursor control means such that the forearm(s) and hand(s) of the user lie as much as possible in one line while working with the data input means and/or cursor control means.

3. Desk as claimed in claim 1 or 2, wherein the depth of the recesses is substantially equal to or larger than the height of the cursor control means and/or the data input means.

4. Desk as claimed in claim 1, 2 or 3, wherein the work surface comprises a recess for receiving a keyboard.

5. Desk as claimed in any of the foregoing claims, wherein the work surface comprises a recess for receiving a mouse.

6. Desk as claimed in claims 4 and 5, wherein the work surface comprises two recesses for receiving a mouse which are situated on either side of the recess for the keyboard.

7. Desk as claimed in claim 6, wherein the work surface comprises one recess which is provided in the centre with a deepened portion for receiving the keyboard, wherein on either side of the central deepened portion are situated two further deepened portions which are at a slightly higher position for receiving the mouse.

8. Desk as claimed in any of the foregoing claims, wherein the dimensions of the recesses in longitudinal direction are greater than the corresponding dimensions of the data input means and/or cursor control means for receiving therein such that the

workplace can be adjusted to the individual user by displacing the data input means and/or the cursor control means in the respective recesses.

**9.** Desk as claimed in any of the foregoing claims, which desk is provided with a set of mats for receiving in the recesses, wherein the dimensions of the mats in length and width direction are substantially equal to the corresponding dimensions of the respective recesses.

**10.** Desk as claimed in claim 9, wherein the set of mats comprises mats of different height.

**11.** Desk as claimed in claim 10, wherein the set of mats comprises one or more mouse mats.

**12.** Desk as claimed in any of the foregoing claims, wherein the work surface comprises a further recess for receiving a monitor.

**13.** Desk as claimed in any of the foregoing claims, wherein the work surface comprises a further recess for receiving one or more sheets of text.

**14.** Work surface as described as part of a desk as claimed in any of the foregoing claims.

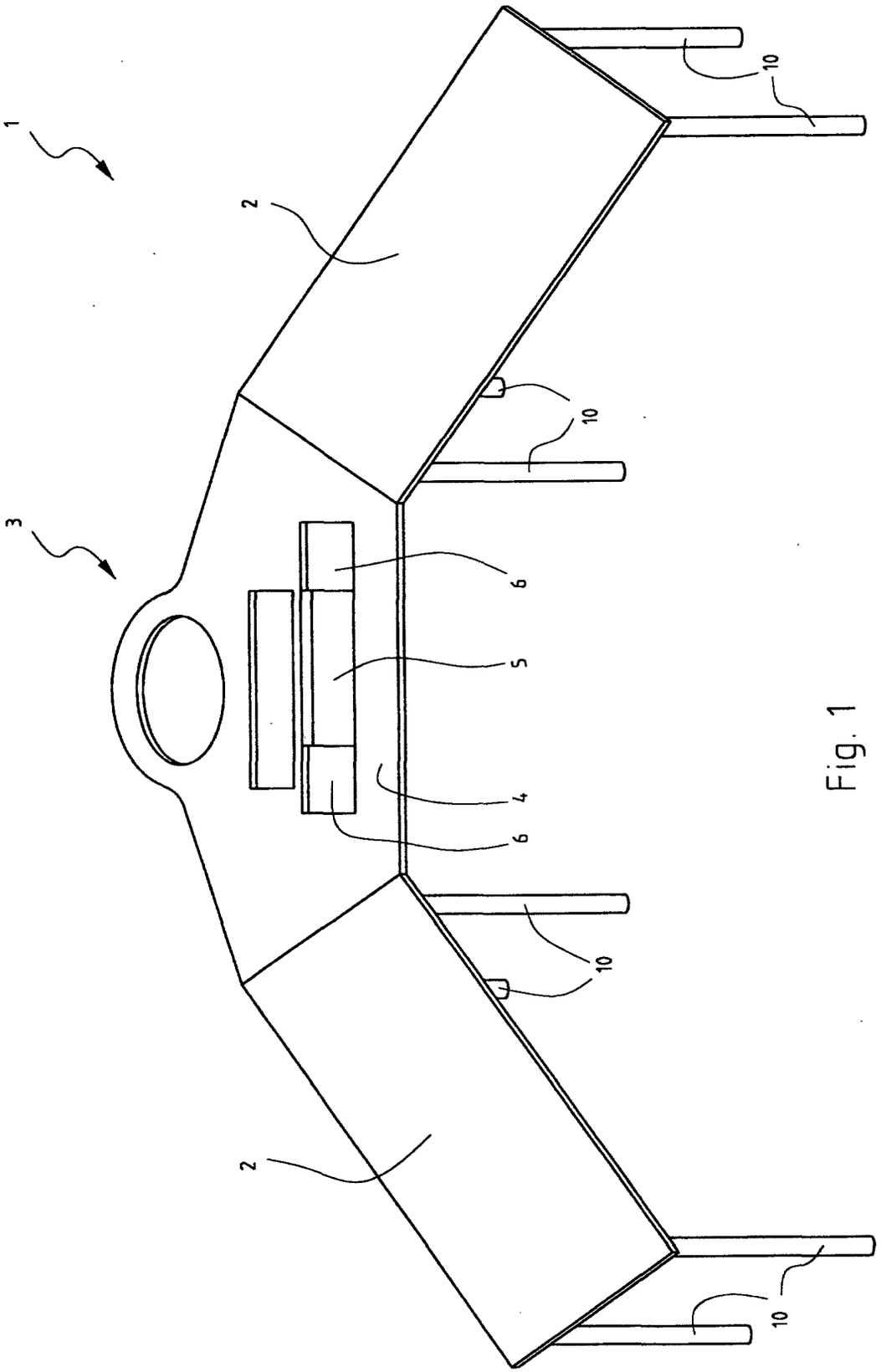


Fig. 1

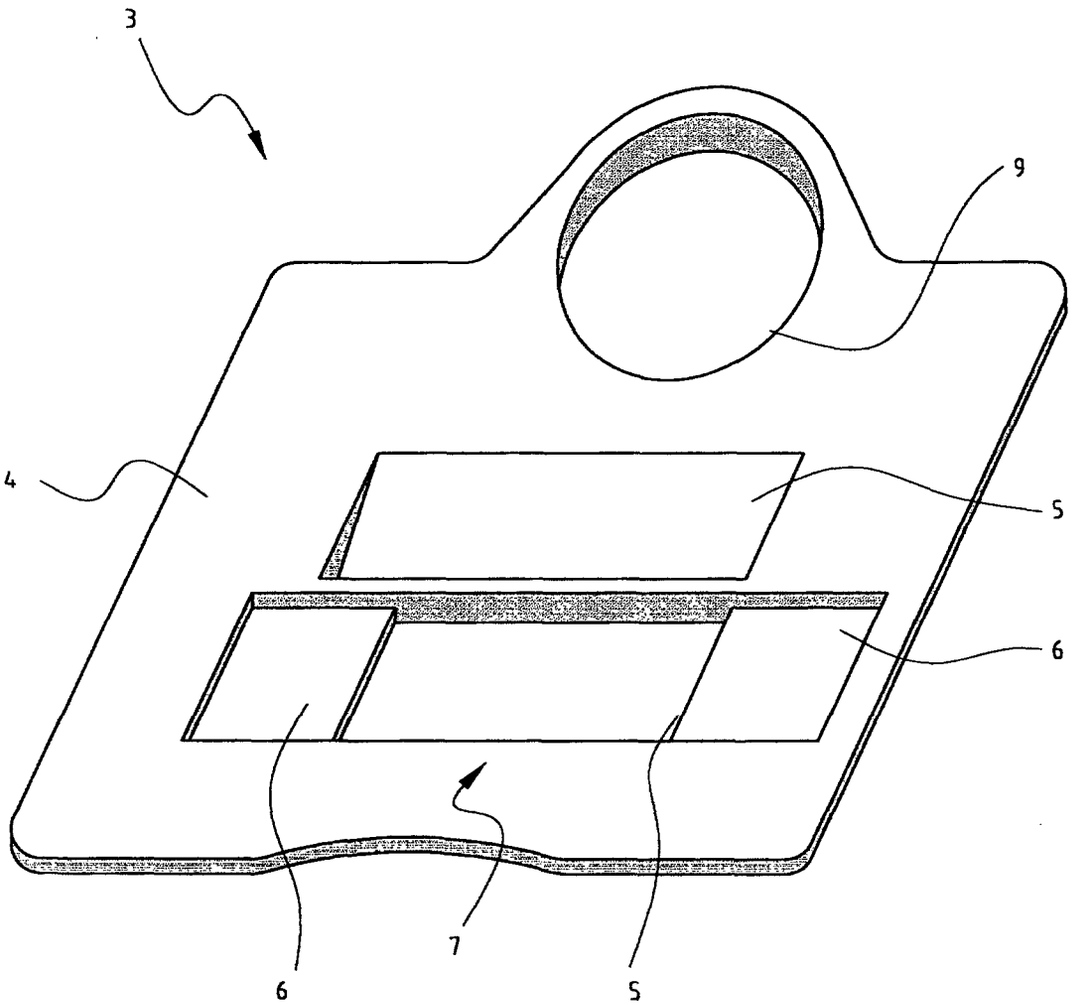


Fig. 2

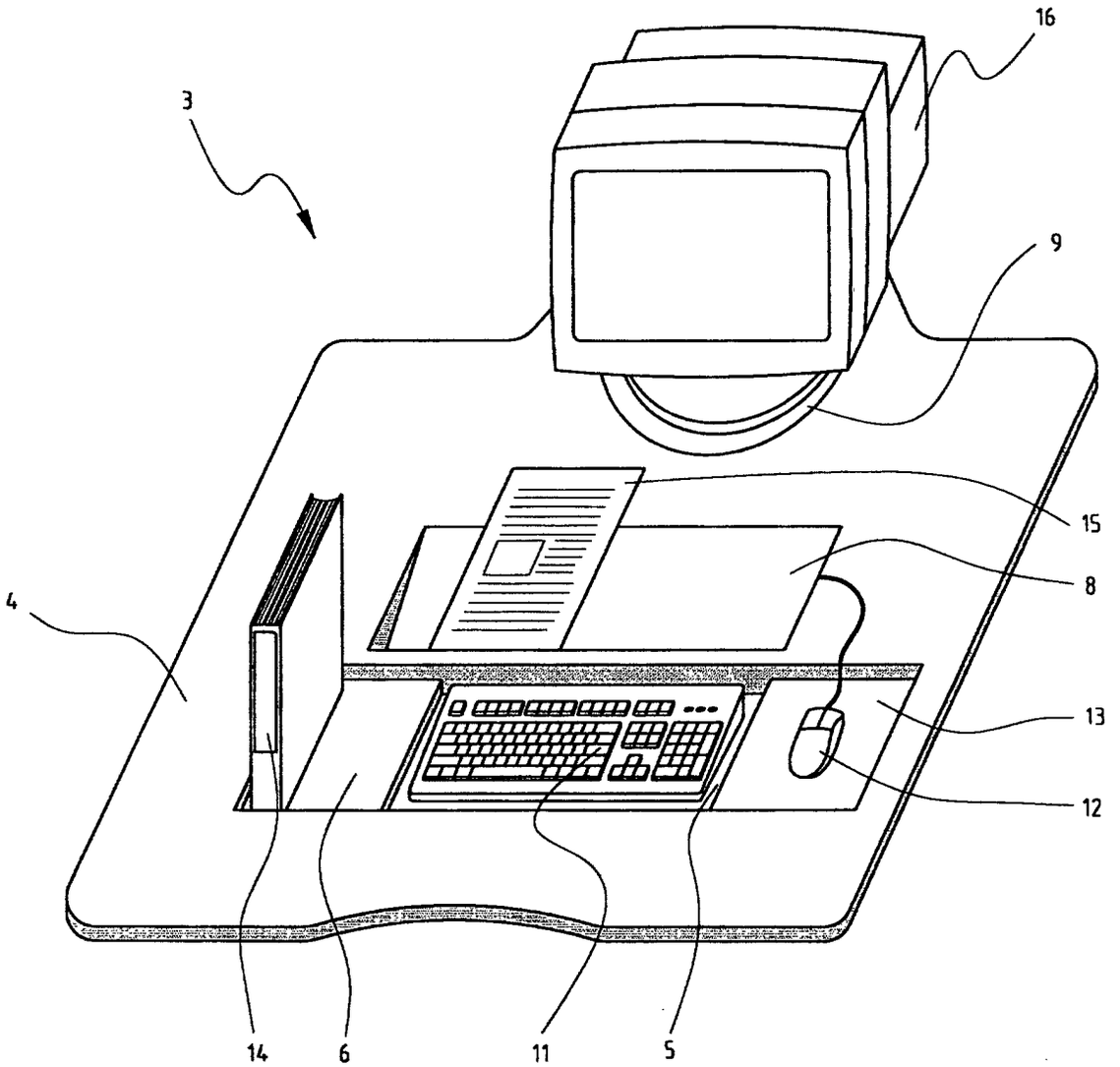


Fig. 3

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# EUROPEAN SEARCH REPORT

Application Number
EP 01 20 3731

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The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| THE HAGUE | 18 January 2002 | van Hoogstraten, S |

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Application Number
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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 20 3731

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