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**Datasheet for the decision  
of 20 September 2012**

**Case Number:** T 2329/09 - 3.3.07

**Application Number:** 06014813.7

**Publication Number:** 1715089

**IPC:** D01F 8/04, D01F 1/10

**Language of the proceedings:** EN

**Title of invention:**

Multi-component fibers having reversible thermal properties

**Applicant:**

Outlast Technologies, Inc.

**Opponent:**

-

**Headword:**

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**Relevant legal provisions:**

EPC Art. 76(1), 84, 111(1), 123(2)  
RPBA Art. 13

**Keyword:**

"Late filed request - admitted"  
"Added subject-matter (no)"  
"Clarity (yes)"  
"Decision re appeal - remittal (yes)"

**Decisions cited:**

G 0001/05

**Catchword:**

-



Case Number: T 2329/09 - 3.3.07

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.07  
of 20 September 2012

**Appellant:**  
(Applicant)

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**Representative:**

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**Decision under appeal:**

Decision of the Examining Division of the  
European Patent Office posted 24 July 2009  
refusing European patent application  
No. 06014813.7 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman:** J. Riolo  
**Members:** D. Semino  
M.-B. Tardo-Dino

## Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division announced at the oral proceedings on 24 June 2009 refusing European patent application No. 06 014 813.7.
- II. The application was filed as divisional application of European patent application No. 01 973 362.5. The description of the divisional application was identical to the one of the parent apart from the addition of the claims of the parent (renamed as clauses) at its end and the drawings were identical to those of the parent. Claims 1 to 13 of the division were respectively identical to claims 15 to 25, 1 and 7 of the parent apart from their renumbering and claims 1 and 3 read as follows:
- "1. A multi-component fiber having enhanced reversible thermal properties, comprising:  
a core member comprising a first polymeric material and a temperature regulating material dispersed within the first polymeric material, wherein the temperature regulating material comprises a phase change material;  
and  
a sheath member comprising a second polymeric material, wherein the sheath member surrounds the core member."
- "3. The multi-component fiber of claim 1, wherein the temperature regulating material further comprises a containment structure that contains the phase change material, and wherein the containment structure comprises microcapsules, silica particles, zeolite particles, carbon particles, or an absorbent material."

III. The decision was based on a main request (corresponding to the first auxiliary request filed with letter of 7 April 2009) and five auxiliary requests filed during the oral proceedings on 24 June 2009.

The main request included independent claims 1 and 2 both based on claim 1 as filed and directed respectively to a first embodiment in which the phase change material was non-encapsulated and to a second embodiment in which it was contained in microcapsules. The first to third auxiliary request contained a single independent claim 1 directed to the first embodiment and further specifying the first polymeric material ("polyethylene-co-vinyl acetate" in the second and third auxiliary requests) and the phase change material ("paraffinic hydrocarbons" in the third auxiliary request). The fourth and fifth auxiliary request also included a single independent claim, wherein claim 1 of the fourth auxiliary request corresponded to claim 1 of the third auxiliary request with the addition of the features of original claim 3 while claim 1 of the fifth auxiliary request read as follows:

"1. A multi-component fiber (60) having enhanced reversible thermal properties, comprising:  
a core member (63) comprising a first polymeric material and a temperature regulating material dispersed within the first polymeric material, wherein the temperature regulating material comprises a phase change material (62); and  
a sheath member (64) comprising a second polymeric material, wherein the sheath member surrounds the core member

characterised in that the phase change material (62) is non-encapsulated and that the phase change material (62) forms a plurality of domains dispersed within the first polymeric material, and wherein the temperature regulating material further comprises a containment structure that contains the phase change material, and wherein the containment structure comprises microcapsules, silica particles, zeolite particles, carbon particles, or an absorbent material."

IV. According to the appealed decision:

- (a) The two independent claims of the main request related to two different unrelated concept (non-encapsulated phase change material and phase change material contained in microcapsules), so that they resulted in lack of unity.
- (b) Claim 1 according to the first auxiliary request was not inventive, because there was no evidence on file showing that the claimed subject-matter could be successfully worked over the whole range claimed such as to solve the problem underlying the invention.
- (c) Claim 1 of the second auxiliary request extended beyond the original disclosure, because the combination of the additional feature that the first polymeric material was polyethylene-co-vinyl acetate with the other features of that claim had no direct and unambiguous basis in the original application of the parent case. The same applied to the main claims of the third to fifth auxiliary

requests which included the same combination of features as claim 1 of the second auxiliary request and/or further added features, such as selected phase change materials (paraffinic hydrocarbons in the third auxiliary request) or a selected containment structure for the temperature regulating material (fourth and fifth auxiliary requests). The requirements of Article 76(1) EPC were therefore not met.

- V. The applicant (appellant) filed a notice of appeal against the above decision. With the statement setting out the grounds of appeal, the appellants submitted six sets of claims as main and first to fifth auxiliary requests.

Independent claim 1 of the main and first to fifth auxiliary requests were largely based on claim 1 according to the second to fifth auxiliary requests on which the decision under appeal was based. In particular, claim 1 of the fifth auxiliary request corresponded to claim 1 of the previous fifth auxiliary request with minor amendments, namely the addition of few further reference signs and the specification that the containment structure "**encapsulates**, contains, **surrounds or absorbs**" the phase change material (the terms in bold have been added).

- VI. In a communication sent in preparation to oral proceedings the Board made an objection under Article 123(2) related to the objection under Article 76(1) EPC which caused the refusal of the second to fifth auxiliary requests in the appealed decision and valid for the main and first to third

auxiliary requests on file and an objection of lack of clarity of claim 1 of the second to fifth auxiliary requests related to the presence of the mutually contradicting features that "the phase change material (62) is non-encapsulated" and that "the temperature regulating material further comprises a containment structure that contains the phase change material".

VII. With letter of 29 August 2012 the appellant filed further amended second to fifth auxiliary requests to take into account the objection of lack of clarity in the communication of the Board.

VIII. Oral proceedings were held on 20 September 2012. During the oral proceedings, the appellant filed a new main request, wherein claim 1 of that request read as follows:

"1. A multi-component fiber (60) having enhanced reversible thermal properties, comprising: a core member (57, 63) comprising a first polymeric material and a temperature regulating material dispersed within the first polymeric material, wherein the temperature regulating material comprises a phase change material (62); and a sheath member (58, 64) comprising a second polymeric material, wherein the sheath member surrounds the core member, characterised in that the temperature regulating material further comprises a containment structure that contains, surrounds or absorbs the phase change material, wherein the containment structure comprises silica particles, zeolite particles, carbon particles, or an absorbent material."

IX. As far as relevant to the present decision, the appellant argued essentially that the main request filed during the oral proceedings was based on the fifth auxiliary request filed with the statement of grounds and included with respect to that request a few amendments which took account of the objections raised in the communication of the Board. On that basis it should be admitted into the proceedings in spite of its late filing. It contained no contradictory features and resulted from the combination of claims 1 and 3 as originally filed with a further amendment based on paragraph [0043] of the original description. In view of the lack of an analysis in the appealed decision on novelty and inventive step of the embodiment which was now the subject of the main request a remittal to the first instance on the basis of that request would be reasonable.

X. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request submitted during the oral proceedings or, alternatively on the basis of the first auxiliary request filed with the statement of grounds of appeal, or of one of the second to fifth auxiliary requests filed with letter of 29 August 2012.



## Reasons for the Decision

1. The appeal is admissible.

### *Main Request*

2. *Admissibility*

- 2.1 The main request, having been filed during the oral proceedings before the Board, is late filed, so that its admissibility needs to be decided upon.
- 2.2 This request is based on the fifth auxiliary request filed with the statement of grounds (corresponding with minor amendments to the fifth auxiliary request analysed in the appealed decision, see point V, above) and includes with respect to it a number of amendments which are mainly meant to overcome the objections under Articles 84 and 123(2) EPC raised by the Board in its communication (deletion of contradictions and adaptation of the wording to a combination of claims as originally filed).
- 2.3 The filing of that request can therefore be seen as a reaction to the communication of the Board. Moreover, this request clearly solves the deficiencies under Articles 84 and 123(2) EPC which were present for all the requests on file (see points 3 and 4, below) and does not change the object of the invention with respect to the fifth auxiliary request filed with the statement of grounds.
- 2.4 Under such circumstance, the Board while exercising its discretion for the admission of late filed amendments

(Article 13(1) and (3) of the Rules of Procedure of the Boards of Appeal) considers that the main request was filed in due time with respect to the principle of procedural economy, bearing in mind the chronology of the objections raised by the Board and the time at which the amendments were filed in reply. The main request is therefore admitted into the proceedings.

3. *Articles 76(1) and 123(2) EPC*

3.1 Due to the correspondence of the documents of the divisional application on filing (description, claims and drawings) to the documents of the parent application (with the addition of the claims of the parent to the description of the divisional and a renumbering of the claims, see point II, above), the requirements of Article 76(1) EPC were met by the divisional application as filed.

3.2 As far as the subsequent amendments of the divisional application are concerned, they have to be analysed for compliance with Article 123(2) EPC to the same extent as amendments of any other non-divisional application (see G 1/05, OJ EPO 2008, 271, point 9 of the reasons).

3.3 Claim 1 of the main request corresponds to claim 3 as filed (as dependent on claim 1) with the amendment of the feature "a containment structure that contains the phase change material" into "a containment structure that contains, surrounds or absorbs the phase change material" and the deletion of "microcapsules" from the list of possible materials for the containment structure.

3.4 The embodiments including a containment structure are illustrated in paragraphs [0043] and [0044] of the A-publication (corresponding to page 15, lines 4 to 30 of the description as filed), where it is defined that "the temperature regulating material may further comprise a containment structure that encapsulates, contains, surrounds, or absorbs a phase change material" (first sentence of paragraph [0043]) and then examples of containment structures comprising microcapsules, silica particles, zeolite particles, carbon particles, or an absorbent material are illustrated (paragraph [0044]).

3.5 Claim 1 of the main request is based therefore on claim 3 as filed with the specification of the function of the containment structure according to paragraph [0043] of the description and the deletion of one alternative among the possible materials ("microcapsules") and of the verb defining its corresponding function ("encapsulates"). On this basis it is directly and unambiguously derivable from the application as filed.

3.6 Dependent claims 2 to 7 of the main request correspond to claims 4, 5 and 8 to 11 of the application as filed.

3.7 The requirements of Articles 76(1) and 123(2) EPC are therefore met.

#### 4. *Article 84 EPC*

4.1 The only objection under Article 84 EPC raised during prosecution of the application concerned the contradiction between the features "the phase change

material is non-encapsulated" and "the temperature regulating material further comprises a containment structure that contains the phase change material". Since the first feature has been deleted in claim 1 of the main request, that objection is no longer relevant.

- 4.2 The Board sees no other issues which could be relevant under Article 84 EPC.

*Remittal*

5. The examining division decided on inventive step only with respect to claim 1 of the then first auxiliary request which was directed to the embodiment in which the phase change material is non-encapsulated (and did so with no reference to any prior art document), whereas the current main request is directed to the embodiment where the phase change material is contained in a containment structure. With regards to the requests including the phase change material in a containment structure (fourth and fifth auxiliary requests on which the appealed decision was based) the examining division took position only on the requirements of Article 76(1) EPC and did not address the substantive issues of novelty and inventive step.

- 5.1 For the main request currently on file not only the requirements of Article 76(1) EPC are no longer an issue, but its claims have additionally been found to meet the requirements of Articles 84 and 123(2) EPC. It is therefore necessary to address their patentability *inter alia* in view of the available prior art.

- 5.2 Pursuant to Article 111(1) EPC the Board of Appeal may either exercise any power within the competence of the department which was responsible for the decision or remit the case for further prosecution.
- 5.3 In a case such as the one at hand, where essential questions regarding the patentability of the claimed subject-matter have not yet been examined and decided by the department of first instance, the case must normally be remitted to the first instance, so that the outstanding issues may be properly examined and the applicant's right to the double instance guaranteed.
- 5.4 This is all the more the case, since the crucial feature that "the temperature regulating material further comprises a containment structure that contains, surrounds or absorbs the phase change material, and wherein the containment structure comprises silica particles, zeolite particles, carbon particles, or an absorbent material" has not been analysed with respect to novelty and inventive step even in any of the arguments of the appellant, since the explicit possibility that the containment structure comprises microcapsules (as disclosed in D2, EP-A-0 306 202, see e.g. claim 1, and D3, WO-A-99/25549, see e.g. page 3, lines 20 to 24) has been deleted, since the possible materials used for the microcapsules of D2 are not available in the documents on file, as the numerous citations in this respect (D2, page 3, lines 25 to 51) have not been made available in the proceedings, and finally since it is not possible for the Board to evaluate whether in view of the amendments (in particular the deletion of the microcapsules from the

list of materials for the containment structure) a further search may be necessary.

- 5.5 Thus, in view of the above considerations, the Board, exercising its discretion under Article 111(1) EPC, remits the case to the Examining Division for further prosecution on the basis of the claims according to the main request.

## **Order**

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar

The Chairman

L. Fernández Gómez

J. Riolo