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**Datasheet for the decision  
of 11 April 2019**

**Case Number:** T 2546/17 - 3.3.08

**Application Number:** 07840465.4

**Publication Number:** 2049674

**IPC:** C12P7/06

**Language of the proceedings:** EN

**Title of invention:**  
CONVERSION SYSTEMS FOR BIOMASS

**Applicant:**  
Xyleco, Inc.

**Headword:**  
Transportable bioreactor/XYLECO

**Relevant legal provisions:**  
EPC Art. 54(2), 56

**Keyword:**  
State of the art - document published before the relevant date  
(no) - insufficient proof

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 2546/17 - 3.3.08

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.08**  
**of 11 April 2019**

**Appellant:**  
(Applicant)

Xyleco, Inc.  
360 Audubon Road  
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**Representative:**

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**Decision under appeal:**

**Decision of the Examining Division of the  
European Patent Office posted on 18 July 2017  
refusing European patent application No.  
07840465.4**

**Composition of the Board:**

**Chairman**            B. Stolz  
**Members:**         D. Pilat  
                           D. Rogers

## **Summary of Facts and Submissions**

- I. European patent application No. 07 840 465.4 with the title "Conversion systems for biomass" was published as international patent application WO 2008/011598 (hereinafter "the application"). The examining division found that the main request and the auxiliary request before it did not fulfil the requirements of Article 56 EPC and, accordingly, refused the application.
- II. The examining division, in its decision, considered document D7 to represent the closest prior art with regard to claim 1 of both the main request and of the auxiliary request.
- III. Document D7 was introduced by the examining division into the examination proceedings with a communication. The appellant argued in its reply that document D7 became only available to the public on 2 September 2007. This was after the filing date of the present application, i.e. after the 20 July 2007. Hence, document D7 did not represent prior art in accordance with Article 54(2) EPC 1973.
- IV. Document D9 was adduced by the examining division to prove that document D7 was publicly available on 25 September 1983. Moreover, an enquiry about the publication date of document D7, was made by the examining division to the publisher of document D7 (DOE OSTI). The result of this enquiry, an email exchange, was presented as document D11.
- V. The information in documents D9 and D11 was regarded as providing sufficient evidence by the examining division to establish the publication date of document D7 as 25 September 1983. Thus, the examining division

considered document D7 to form part of the state of the art pursuant to Article 54(2) EPC 1973.

- VI. Together with the statement setting out the grounds of appeal, the applicant (appellant) filed a main and an auxiliary claim request identical to the main and the auxiliary claim request underlying the decision under appeal. As a subsidiary request, the appellant requested oral proceedings.
- VII. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal, the board informed the appellant of its provisional, non-binding opinion on the issues to be discussed at the oral proceedings.
- VIII. In the light of the conclusions drawn by the board in its communication, the appellant requested the proceedings to be continued in writing and withdrew its request for oral proceedings.
- IX. Claim 1 of the main request reads as follows:

"1. A method of producing an energy source from biomass, comprising: producing a first energy source from sheared cellulosic or lignocellulosic biomass at a first site with a fermenter, reactor or a converter;

transporting the fermenter, reactor or converter to a second site; and

producing a second energy source from sheared cellulosic or lignocellulosic biomass at the second site with the fermenter, reactor or converter,

wherein the energy source is selected from the group consisting of fermentable sugars."

Claim 1 of auxiliary request 1 reads:

"1. A method of processing biomass, comprising:  
processing sheared cellulosic or lignocellulosic  
biomass at a first site with a fermenter, reactor or a  
converter;

transporting the fermenter, reactor or converter to a  
second site; and

processing sheared cellulosic or lignocellulosic  
biomass at the second site with the fermenter, reactor  
or converter,

wherein the sheared cellulosic or lignocellulosic  
biomass is converted into fermentable sugars."

X. The following documents are cited in this decision:

D7: "Proposal #81-PA-0303-P-33,276 Grant #DE FG  
43-81 R308093", pages 1-10, retrieved from the  
internet:  
<http://www.osti.gov/biblio/6052193-gxSAHt/>  
(on 18 February 2013)

D9: K.C. Glenn, "(Design and operation of a  
portable ethanol plant). Final report.  
[Small-scale (5-10 gal/h)], retrieved from the  
internet: [http://www.osti.gov/scitech/biblio/  
6052193-gxSAHt](http://www.osti.gov/scitech/biblio/6052193-gxSAHt) (on 3 December 2015);

D11: E-mail from Ms. Cathrine Pepmiller  
<[pepmiller@osti.gov](mailto:pepmiller@osti.gov)> to Dorothee Schönwasser,

dated 16 September 2016, Subject: Question  
regarding publication date;

XI. The submissions made by the appellant concerning issues  
relevant to this decision, were essentially as follows:

*Article 54(2) EPC*

Document D7 had

- (a) four different dates mentioned on the front page,
- (b) applied an unclear date format and
- (c) displayed handwritten figures, which could be read  
as either 1 or 7.

The only meaningful and reasonable interpretation of  
the various dates shown on the front page of document  
D7 was as follows:

- On September 25, 1983, the author had finished his  
research report i.e. this was the date when the  
document was prepared.
- On October 3, 1983, the sponsor of this work, the  
DOE, received the report. However, the report was  
illegible and could not be reproduced.
- On 2.7.2007 (July 2, 2007) the Dept, of Energy  
decided that the report could be made available to  
the public. Thus, before that date, the report was  
not available to the public.
- On 09-02-2007 (September 2, 2007) a PDF file was  
created from document D7 and was subsequently  
published on the Internet.

In view of the rationale developed above, document D7  
could not have been made available to the public before  
2 September 2007, that is after the filing date of the

present application, i.e. after 20 July 2007. Hence, document D7 was not prior art in accordance with Article 54(2) EPC.

Document D9 was an internet citation indicating that document D7 was published on 25 September 1983. Document D9 stated further that document D7 was available as a paper copy only, as the copy did not permit microfiche production. This information was probably derived from document D7's footnote pointing out that "This report is illegible to a degree that precludes satisfactory reproduction".

Document D11, written by a librarian at the DOE OSTI, described situations using conditional tenses, which usually describe what should, might or would have happened. The assumption made by the DOE OSTI librarian in document D11, that a microfiche of document D7 had been produced and sent to depository libraries for public ordering, could not be correct, as the poor paper copy quality of the report was explicitly indicated in document D9 as preventing microfiche production. Document D11 stated further that document D7 was published on 1 May 1985, but did not provide any evidence for this. Finally, document D11, last paragraph, indicated that document D7 was published on 25 September 1983. Since the technical report D7 was only received by the responsible department of the DOE/PSO on 3 October 1983, this was not possible.

Thus, in contrast to the examining division's conclusion based on the statements made by the DOE OSTI librarian in document D11, the appellant maintained that document D7 could only have been available to the public on either 13 February 2007, (based on a single statement in document D11 alone), or on



2 September 2007, according to the front page of document D7.

XII. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of either

- the main request filed with letter of 31 March 2017;
  - description: pages 1-29 as originally filed and page 1a filed with letter of 21 December 2010 and Figure 1/2-2/2 as originally filed,
- or
- the auxiliary request filed with letter of 31 March 2017;
  - description: pages 1-29 as originally filed and page 1a filed with letter of 21 December 2010 and
  - Figure 1/2-2/2 as originally filed.

### **Reasons for the Decision**

*Main request (claims 1-14)*

*Article 56 EPC*

1. In the decision under appeal, the examining division concluded that both the claims of the main Request and of the auxiliary Request lacked an inventive step in view of document D7. Document D7 was considered to disclose a method for producing energy sources like ethanol or the fermentable sugar glucose by using milled and shredded cellulosic or lignocellulosic biomass, e.g. cardboard, sawdust, leaves, hay or cracked corn as a starting material in a fermentation tank which is described as a multi-functional vessel mounted on a trailer.

2. The examining division held that document D7 was made available to the public on 1 May 1985 (cf. page 2 of the decision under appeal). It based this conclusion on the evidence provided by documents D9 and D11.
3. In the light of the arguments submitted by the appellant, the board has to determine first whether document D7 was made available to the public before the filing date of the patent application, i.e. before 20 July 2007, before assessing whether the claimed subject matter lacks an inventive step or not.
4. Document D7 shows four different dates on its cover. Insofar as the DOE is a United States governmental agency, it is inferred that dates are written in the format "month-day-year" (mm/dd/yyyy) and that separators are either a slash (/), hyphen (-) or period (.).
  - The first date is stamped: "OCT 03 1983" in the middle of the upper part of the document. It belongs to a "RECEIVED" stamp of the department of Energy of the Princeton Site Office (DOE/PSO).
  - The second date "September 25, 1983" is typewritten and is located underneath a postal address.
  - The third handwritten date is located on the upper left corner of the document and indicates that it was "PUBLICLY RELEASABLE" on "2. 7. 07", (which the Board reads as 7 February 2007). It fills a gap left by said stamp.
  - The fourth date on the cover is automatically generated and states that the pdf file of the document was created and modified on "09-02-2007" (which the Board reads as 2 September 2007).

5. Document D7, includes on the upper right corner the author's return address, which provides the recipient of the postal mail with means to respond to the sender's message if needed. The last line of the postal return address is a typewritten date, "September 25, 1983", using the same font. It seems reasonable to assume that this date corresponds to the date at which the author sent the technical report D7 to the DOE/PSO.
- 5.1 Another stamped date and time, "OCT 03 1983", is found on the upper middle part of document D7, which shows when the report was received. It thus seems reasonable to conclude that the DOE/PSO could not have published the report D7 before 3 October 1983 (i.e. on 25 September 1983).
- 5.2 Document D7 includes two more dates. On the upper left corner of the report, information is provided as to when document D7 was considered publicly releasable and who authorized its release, while in the center of the front page, the date when the pdf file of document D7 was created and modified is given.
- 5.3 Thus, the authorizing official considered the technical report D7 to be "publicly releasable" on "2. 7. 07" , i.e. on 7 February 2007 , which most probably led to its conversion into a pdf file on "09-02-2007", i.e. on 2 September 2007.  
The board considers the "publicly releasable" status not to be an indication that a document was actually publicly released, but merely that it was in a state to be so released. It derives also from this statement that any earlier publication date of this report is implausible.

6. The additional evidence provided by documents D9 and D11 is either incomplete or in contradiction with information in document D7 and with each other.
  - 6.1 Document D9 states, for example, that document D7 has a publication date 1983-09-25, although the DOE/PSO agency only received it on 3 October 1983. Document D9 further states in the field "Resource Relation" that the report is a paper copy only, and that the copy does not permit microfiche production.
  - 6.2 Document D11 states that the record metadata was first announced on 1 May 1985, at which time document D7 would have been available via microfiche. It further states that document D7 was available from the OSTI online database in pdf form on 13 February 2007 and that it was first published by the author on 25 September 1983.
7. The board considers that since the copy of document D7 did not permit microfiche production it cannot have been made publicly available on 1 May 1985. This contradiction between the information in documents D7 and D9 when compared with document D11 casts a general doubt on the reliability of document D11, which is an email written 9 years after the last date mentioned on document D7 and which was written by a person who is not mentioned in document D7. The date 13 February 2007, is only found in document D11. It identifies the time point where the full text of this report was allegedly first available in online PDF form from OSTI. Document D11 does not provide any explanation for this date and it contradicts the 2 September 2007 date identified in document D7. Finally, how, where and for whom the author of document D7 is supposed to have published document D7 on the

25 September 1983 is unknown. Such a publication date contradicts the information found in document D7.

7.1 In the light of the above considerations and evidence on file, the board considers document D7 to have been made available to the public at the earliest on 2 September 2007. Hence, the board considers that the public did not have access to document D7 before the filing date of 20 July 2007 of the patent application. For these reasons, the board concludes that said document does not belong to the state of the art within the meaning of Article 54(2) EPC 1973.

7.2 Since, document D7 does not belong to the relevant state of the art for the assessment of inventive step, the reasons for refusing the patent application based on said document no longer apply.

## **Order**

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

The decision under appeal is set aside.

The case remitted to the examining division for further prosecution.

The Registrar:

The Chairman:



M. Kiehl

B. Stolz

Decision electronically authenticated