

**Internal distribution code:**

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

**Datasheet for the decision  
of 27 November 2023**

**Case Number:** T 1666/21 - 3.5.05

**Application Number:** 15718011.8

**Publication Number:** 3123382

**IPC:** G06F19/28, G06F19/22, G06F19/26

**Language of the proceedings:** EN

**Title of invention:**  
METHODS AND SYSTEMS FOR KNOWLEDGE DISCOVERY USING BIOLOGICAL  
DATA

**Applicant:**  
Life Technologies Corporation

**Headword:**  
Still associated with the same data point/LIFETECHNOLOGIES

**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**  
Inventive step - (no)

**Decisions cited:**  
T 1681/18, T 1762/18



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1666/21 - 3.5.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.05**  
**of 27 November 2023**

**Appellant:** Life Technologies Corporation  
(Applicant) 5823 Newton Drive  
Carlsbad, CA 92008 (US)

**Representative:** Hoffmann Eitle  
Patent- und Rechtsanwälte PartmbB  
Arabellastraße 30  
81925 München (DE)

**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 6 May 2021  
refusing European patent application No.  
15718011.8 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chair** K. Kerber-Zubrzycka  
**Members:** E. Konak  
P. Tabery

## Summary of Facts and Submissions

I. The appeal is against the examining division's decision to refuse the application. The examining division decided *inter alia* that auxiliary request 1 and auxiliary request 2 did not meet the requirements of Articles 54 and 56 EPC, respectively, in view of the following document:

D2: US 2010/318528 A1

II. In the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of auxiliary request 1 (main request in appeal) or 2 (auxiliary request 1 in appeal) on which the contested decision is based.

III. The board summoned the appellant to oral proceedings. In a communication pursuant to Article 15(1) RPBA, it gave its preliminary opinion that the appeal had to be dismissed.

With a letter dated 23 November 2023, the appellant filed auxiliary request 2.

Oral proceedings were held before the board. During the oral proceedings, the appellant withdrew auxiliary request 2.

IV. Claim 1 of the main request reads as follows:

"A system (500, 600) for analyzing biological data, comprising:

a storage (506) configured to store information related to a plurality of various types of data files (102, 104, 106, 108, 110, 112, 152, 154, 156, 160, 158), said data files corresponding to respectively different biological types;

a server (622) configured to:

host a plurality of applications, each configured to be implemented on the server (622) and to provide analysis, manipulation, comparison, visualization, or a combination thereof, of the biological data included in the data files,

create tags associated with the information included in the plurality of data files and store the tags in the storage (506); and

a search engine configured to enable the tags to be search and build associations between the tags, wherein the server (622) is further configured to associate at least some of the plurality of applications with certain of the plurality of data files based on the tags,

wherein a tag is created for data in a first application of the plurality of applications and stored with an underlying data point so that when that data point is pulled up in a different second application, the tag is still associated with the a same data point in the data generated by the different second application."

Claim 1 of auxiliary request 1 reads as follows:

"A system (500, 600) for analyzing biological data, comprising:

a storage (506) configured to store information related to a plurality of various types of data files (102, 104, 106, 108, 110, 112, 152, 154, 156, 160, 158), said

data files corresponding to respectively different biological types;

a server (622) configured to:

host a plurality of applications, each configured to be implemented on the server (622) and to provide analysis, manipulation, comparison, and visualization, of the biological data included in the data files, create tags associated with the information included in the plurality of data files and store the tags in the storage (506); and

a search engine configured to enable the tags to be search and build associations between the tags, wherein the server (622) is further configured to associate at least some of the plurality of applications with certain of the plurality of data files based on the tags,

wherein a tag is created for data in a first application of the plurality of applications and stored with an underlying data point so that when that data point is pulled up in a different second application, the tag is still associated with the same data point in data generated by the different second application, wherein the biological data includes at least one of technology vectors, biological molecule vectors, and the output data of various applications configured to work on these vectors, wherein the technology vectors include at least two of CE sequencing, NGS sequencing, qPCR, dPCR, melt, microArrays, and wherein the biological molecule vectors include at least one of DNA, RNA, proteins, and miRNA.

wherein the applications that produce output data based on the technology vectors or biological molecule vectors include at least one of genotyping applications, gene expression applications, absolute quantification applications, Copy Number Variation (CNV) analysis applications, Single Nucleotide

Polymorphism (SNP) array analysis applications, High Resolution Melt (HRM) analysis applications, and presence-absence analysis applications, and wherein the server is further configured to host a user interface dashboard configured to display the data files and the plurality of applications, allow users to create projects consisting of several of the plurality of data files and launch applications related to those data files."

## **Reasons for the Decision**

### 1. Main request

1.1 The contested decision found that the subject-matter of claim 1 of the main request lacked novelty over D2. The appellant contested this finding and argued that the following features were not disclosed by D2.

[1.3] host a plurality of applications, each configured to be implemented on the server and to provide analysis, manipulation, comparison, visualization, or a combination thereof, of the biological data included in the data files

[1.5] a search engine configured to enable the tags to be search [sic] and build associations between the tags

[1.5.1] wherein the server is further configured to associate at least some of the plurality of applications with certain of the plurality of data files based on the tags

[1.6] wherein a tag is created for data in a first application of the plurality of applications and stored

with an underlying data point so that when that data point is pulled up in a different second application, the tag is still associated with the same data point in data generated by the different second application

1.2 Regarding feature [1.3], the appellant argued that the contested decision regarded individual functionalities disclosed in different parts of D2 as individual computer applications, although this was not directly and unambiguously derivable from D2. The board agrees with the appellant that it is not directly and unambiguously derivable from D2 which functionalities are performed by which application(s). However, the erroneous assumption in the contested decision has no bearing on whether D2 discloses feature [1.3]. The appellant did not contest that any real-life server hosts a plurality of applications and there is no reason to assume the opposite for the server of D2. Indeed D2, [0176], last sentence discloses that the memory stores "*various routines and/or programs for importing, analyzing and presenting the data, including importing Feature Sets, correlating Feature Sets with one another and with Feature Groups, generating and running queries, etc.*" It is also disclosed that the server of D2 imports raw data from different platforms (see D2, [0037], [0058], [0081]), which implies the presence of a plurality of applications associated with these platforms. Therefore, D2 indeed discloses feature [1.3].

1.3 Regarding feature [1.5], the appellant argued that whereas D2 disclosed associations between feature sets, it did not disclose associations between tags. The board disagrees. D2, [0131] discloses that "*the knowledge base contains an ontology or taxonomy, i.e., a hierarchical structure of concepts as identified by*

tag or scientific term. [...] The tags and the categories and sub-categories in the hierarchical structure are arranged in what may be referred to as concepts. Each node of the structure represents a medical, chemical or biological concept." Therefore, D2 indeed discloses building associations between tags and hence feature [1.5].

1.4 Regarding feature [1.5.1], the appellant acknowledged itself, in its letter of reply to the board's preliminary opinion and at the oral proceedings before the board, that it was well-known to the skilled person to associate applications with data files based on various sorts of data, including file extensions, metadata, tags or file content. Selecting one of these well-known options would not contribute to an inventive step.

1.5 Regarding feature [1.6], the appellant argued that presenting a tag created for a data point in a first application in association with the same data point in a second application did away with the necessity of going back and forth between different applications. Instead, the user could readily identify the data point in the second application, which made data analysis and comparison easier, more efficient and less error-prone. The skilled person, starting from D2, would have had no motivation to implement this feature.

The board does not doubt the advantages argued for by the appellant, but is not convinced that this feature contributes to an inventive step. Whether or not, or to what extent an application supports data generated using another application does not necessarily depend on technical considerations. Software vendors often decide not to fully support files generated in



applications from competitors for business reasons. However, when two applications are developed with cross-compatibility in mind, it is obvious that they would reflect the same content when they read the same file, including any tag created in it.

1.6 Therefore, claim 1 of the main request does not involve an inventive step (Article 56 EPC).

2. Auxiliary request 1

2.1 Claim 1 of auxiliary request 1 differs from claim 1 of the main request in the following features:

[1.3'] host a plurality of applications, each configured to be implemented on the server and to provide analysis, manipulation, comparison, and visualization of the biological data included in the data files

[1.1.1] wherein the biological data includes at least one of technology vectors, biological molecule vectors, and the output data of various applications configured to work on these vectors, wherein the technology vectors include at least two of CE sequencing, NGS sequencing, qPCR, dPCR, melt, microArrays, and wherein the biological molecule vectors include at least one of DNA, RNA, proteins, and miRNA

[1.1.2] wherein the applications that produce output data based on the technology vectors or biological molecule vectors include at least one of genotyping applications, gene expression applications, absolute quantification applications, Copy Number Variation (CNV) analysis applications, Single Nucleotide Polymorphism (SNP) array analysis applications, High

Resolution Melt (HRM) analysis applications, and presence-absence analysis applications,

[1.7] wherein the server is further configured to host a user interface dashboard configured to display the data files and the plurality of applications, allow users to create projects consisting of several of the plurality of data files and launch applications related to those data files

- 2.2 Regarding the specific wording of feature [1.3'] compared to that of feature [1.3] of the main request, the board stated, in its preliminary opinion, that it cannot follow the significance of stating that "each" of the applications provides "analysis, manipulation, comparison, and visualization of the biological data". The appellant argued, in reply, that with this amendment the feature mapping in the contested decision did not work and reiterated that the examining division erred in mapping each functionality in D2 to an application.

Regarding features [1.1.1] and [1.1.2], the appellant did not contest that D2 already discloses the processing of types of biological data as indicated in feature [1.1.1] and the types of biological analysis as indicated in feature [1.1.2]. It again reiterated its argument that the examining division erred in mapping each functionality in D2 to an application.

However, this matter has already been dealt with in discussion of the main request (see 1.2 above).

- 2.3 Regarding feature [1.7], a "dashboard" is a type of GUI for providing an at-a-glance view of data and activities related to a project. A GUI does not have

any technical character. Instead, it is a non-technical matter of design. The appellant contested this and argued that it was related to "launching applications related to data files". However, all GUIs are related to some underlying application. The mere fact that a GUI launches an application does not produce any technical effect (see T 1681/18, Reasons 2 and T 1762/18, Reasons 3).

2.4 Both in its written submissions and at the oral proceedings before the board, the appellant reiterated that feature [1.6] of claim 1 of auxiliary request 1 involved an inventive step with the same arguments as for the main request. However, feature [1.6] does not contribute to an inventive step as for the same reasons given in the assessment of the main request (see 1.5 above).

2.5 Therefore, claim 1 of auxiliary request 1 does not involve any inventive step (Article 56 EPC).

**Order**

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

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Kerber-Zubrzycka

Decision electronically authenticated