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**Datasheet for the decision
of 14 June 2023**

Case Number: T 0140/21 - 3.5.06

Application Number: 13795340.2

Publication Number: 2915041

IPC: G06F9/44, G06T11/20

Language of the proceedings: EN

Title of invention:

CROSS-PLATFORM DATA VISUALIZATIONS USING A GENERIC GRAPH
DESCRIPTION

Applicant:

Microsoft Technology Licensing, LLC

Headword:

Scene graph/MICROSOFT

Relevant legal provisions:

EPC Art. 54, 84, 111(1)
EPC R. 137(3), 137(5)
RPBA 2020 Art. 11, 12(2)

Keyword:

Claims - feature allegedly relevant for inventive step
actually redundant (main request) - conciseness (no)
Amendments - auxiliary request not admitted by examining
division under Rule 137(3) EPC with reference to Rule 137(5)
EPC, first sentence
Amended claim originally searched (yes)
Rule 137(5) EPC precludes consideration of amended claims (no)
Remittal for further prosecution (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 0140/21 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 14 June 2023

Appellant: Microsoft Technology Licensing, LLC
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Redmond, WA 98052-6399 (US)

Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 20 October 2020
refusing European patent application No.
13795340.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Müller
Members: T. Alecu
B. Müller

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division to refuse the application. The main request underlying the decision was refused by the Examining Division for lack of inventive step in view of

D1: US 2003/070061 A1.

The sole auxiliary request was *"not admitted into the proceedings under Rule 137(3) EPC because the subject-matter of claim 1 does not comply with the requirements of Rule 137(5) EPC"* (decision 12.1.5).

II. With the grounds of appeal the Appellant requested that the decision of the Examining Division be set aside and that a patent be granted on the basis of the requests underlying the decision under appeal.

III. In a preliminary opinion accompanying a summons to oral proceedings the Board indicated that in its view claim 1 of the main request lacked novelty and that it tended to confirm the objection under Rule 137(5) EPC.

IV. During the oral proceedings before the Board the Appellant requested on an auxiliary basis that the case be remitted to the department of first instance, "with the provision that the objection under Rule 137(5) EPC to the auxiliary request was not valid because the subject matter of the auxiliary request was not unsearched", and also filed two new amended requests by specifying the amendments made to the requests on file (point II above).

V. The Appellant's final requests were thus that the decision under appeal be set aside and a patent be granted on the basis of the claims of the main request underlying the decision under appeal, or the amended main request (auxiliary request 1) filed during the oral proceedings before the Board, or the auxiliary request underlying the decision under appeal (auxiliary request 2), or the amended auxiliary request (auxiliary request 3) filed during the oral proceedings before the Board or that the case be remitted for further prosecution.

VI. Claim 1 of the Main Request defines:

*A method for outputting a data visualization, to be performed at a computer system, the computer system including a user interface management system, the user-interface management system including a scene graph processing layer and a platform specific rendering sub-system, the scene graph processing layer aware of at least one data visualization processing technique available to the platform specific rendering sub-system, wherein the scene graph processing layer is configured for use with platform specific rendering sub-systems, the method comprising:
the scene graph processing layer accessing a generic scene graph from common code that is executable on a plurality of different technology platforms, comprising the scene graph being included in the common code and the common code is executable on a plurality of different technology platforms, the generic scene graph representing a user interface, the generic scene graph defining the data visualizations independent of any of a plurality of different platform specific rendering sub-systems, including the platform specific rendering sub-system, the generic scene graph containing scene*

graph metadata that describes one or more characteristics of the data visualizations, wherein the platform specific rendering sub-systems of different platforms vary based on the technology used to render graphics data, comprising at least two of OpenGL, XAML, DirectX, Cocoa/Quartz; wherein the scene graph is structured hierarchical and comprises one or more nodes, wherein each node represents a visual element in the user interface; wherein the scene graph further includes one or more dependency properties defining behavior attached to one or more nodes, the attached behavior defining one or more interactive properties of the user interface platform-independent; the scene graph processing layer interpreting the structure and data of one or more portions of the generic scene graph into one or more specific operations that are processed by the platform specific rendering sub-system, the scene graph processing layer makes one or more decisions on how to process one or more individual scene graph nodes or one or more groups of scene graph nodes based on the one or more characteristics of rendering subsystems a platform provides, the one or more rendering sub-system characteristics including current machine state comprising at least one of available memory and CPU speed; the scene graph processing layer sending the one or more specific operations to the platform specific rendering sub-system for processing; and the platform specific rendering sub-system outputting the one or more data visualizations by processing the specific operations.

- VII. Claim 1 of the first auxiliary request differs from claim 1 of the main request by deletion of the clause

wherein the platform specific rendering sub-systems of different platforms vary based on the technology used to render graphics data, comprising at least two of OpenGL, XAML, DirectX, Cocoa/Quartz;

- VIII. Claim 1 of the first auxiliary request differs from claim 1 of the main request by adding at the end the following features:

wherein the attached behavior specifies how input gestures including at least one of touch, mouse, keyboard, voice, video are to be handled and behavior that represents specific gestures including at least one of a tap, a swipe, a click is attached to a node in the scene graph and is configured to invoke a certain command or action;
the system further comprising a recognizer adapted to detect a user input gesture and to route input gesture data to the nearest scene graph for which a suitable gesture behavior is attached and the associated command or action is then automatically invoked,
wherein gesture behaviors for different touch gestures are attached to nodes throughout the scene graph hierarchy.

- IX. Claim 1 of the third auxiliary request differs from claim 1 of the second auxiliary request by deletion of the clause

wherein the platform specific rendering sub-systems of different platforms vary based on the technology used to render graphics data, comprising at least two of OpenGL, XAML, DirectX, Cocoa/Quartz;

Reasons for the Decision

The application

1. The application relates to cross-platform data visualizations. It proposes the use of a common data description to support the visualization of data and interaction with it on various software platforms (e.g. Windows, iOS - paragraphs 2 and 6 of the description). More specifically, it proposes the use of a generic (metadata) "scene graph" to represent a user interface and of a scene graph processing layer which accesses the scene graph and renders it using platform specific rendering engines, such as OpenGL, XAML, DirectX, Cocoa/Quartz etc. (paragraphs 7 and 30).
 - 1.1 The scene graph defines behaviors attached to graph nodes. These can serve, for instance, to define node animations or styles (font, colors etc.), or to specify how input gestures are handled, e.g. by invoking a particular command or action (paragraphs 39 to 41, 44 and 45). The scene graph processing layer can route and adjust the input gesture data in a manner consistent with the scene graph metadata (paragraphs 44 and 63).

Prior art

2. Document D1 describes a scalable graphical user interface (SGUI) system. It relies on a device and a platform independent hierarchical intermediate representation (a tree - paragraphs 77 and 78) of the application GUI which is transformed into a platform device specific representation, the latter being rendered on the target device platform (paragraphs 8, 9 and 58 to 67). The SGUI also provides for GUI events,

which result from user interaction and may trigger different actions (paragraphs 52 and 96 to 100). One example implementation relies on Java and the Java Virtual Machine for portability to different platforms (paragraphs 44 and 45).

Main request

3. The Examining Division considered that claim 1 of the main request differed from D1 only *"by specifying the technology used to render graphic data: OpenGL, XAML, DirectX, Cocoa/Quartz"* (decision 11.1.7.2), that these technologies were commonly known, and that the selection of these technologies could not support the presence of an inventive step.
4. In its statement of grounds of appeal, the Appellant was of the opinion that it was not only the choice of technologies that was different. The feature *"wherein the platform specific rendering sub-systems of different platforms vary based on the technology used to render graphics data, comprising at least two of OpenGL, XAML, DirectX, Cocoa/Quartz.."* (henceforth referred to as the "wherein" clause) made independent claim 1 *"clearly restricted to platforms that at least vary with respect to the claimed technologies"* (grounds of appeal page 3), whereas D1 only considered a variation with respect of the hardware (grounds of appeal, page 4).
5. In its preliminary opinion (point 5) the Board remarked that it was unclear how the "wherein" clause restricted the claimed invention, or whether at all. Claim 1 also defined *"the scene graph processing layer accessing a generic scene graph from common code [...] the generic scene graph defining the data visualizations*

independent of any of a plurality of different platform specific rendering sub-systems". Since the scene graph was independent of any rendering sub-systems, the scene graph was not limited by the express specification of concrete rendering sub-systems that might be used.

6. During the oral proceedings before the Board the Appellant argued that the feature cited in the preceding paragraph (henceforth referred to as the independence feature) only implied some sort of "generic independence". The rendering sub-systems were defined by software and hardware and the scene graph might be independent only of hardware characteristics of the target platforms, for instance of resolution or scale of the different graphic elements, but not of the rendering software.
 - 6.1 The independence feature could also not be construed to mean an independence of everything, as this could only be achieved by an empty graph. Some dependency had to be assumed.
 - 6.2 In contrast, the "wherein" clause specified that the scene graph was independent of at least two software "technologies" used for rendering. This was effectively a limitation, because it implied that the graph could not contain any instruction related to these.
7. The Board notes that the claim is to a method "*to be performed at a*", i.e. one, "computer system" (underlining by the Board). So, irrespective of the formulation of the "wherein" clause, a *plurality* of platforms (or even two of them) is not part of the claim.
 - 7.1 The scene graph is stated to be "*independent of any of a plurality of different platform specific rendering*

sub-system". In the Board's judgment, this expressly defines general, i.e. full, independence of any rendering sub-systems, be it in terms of hardware or in terms of software. The claimed scene graph will thus also be independent of any rendering software used for rendering, and in particular of any of the claimed ones. Hence the "wherein" clause does not restrict the claim any further.

- 7.2 A different way of looking at the matter is to note that here "independent of" is effectively a negative feature, which here has the function of a disclaimer: "not dependent" of. So the graph is first defined to be a scene graph, but not one of a first set constituted by the scene graphs dependent on any type of rendering technologies. The "wherein" clause then defines a scene graph, but not one of a second set constituted by the scene graphs dependent on some specific type of software rendering technologies. The second set is included in the first set, hence the second negative feature actually defines a broader set of possible scene graphs than the first one.
8. In conclusion, the "wherein" clause does not restrict claim 1. It is therefore redundant, which means that claim 1 lacks conciseness. In addition, as the preceding discussion has shown, redundancy of the wherein clause or its possible meaning within claim 1 is not self-evident and concerns a feature argued to be central for novelty and inventive step. Therefore, claim 1 does not comply with Article 84 EPC.

First auxiliary request

9. The Appellant argued novelty and inventive step (of the main request) in comparison with D1 only in view of the

feature discussed above (the "wherein" clause), the other features being known from D1 (see 3 and 4 above). This feature being deleted, the Board thus finds the subject matter of claim 1 to lack novelty over D1.

Second auxiliary request

10. Claim 1 of this request also contains the "wherein" clause. It therefore does not comply with Article 84 EPC for the same reasons as those given in respect of claim 1 of the main request.

Third auxiliary request

11. This auxiliary request is based on the auxiliary request underlying the decision, which was *"not admitted into the proceedings under Rule 137(3) EPC because the subject-matter of claim 1 [did] not comply with the requirements of Rule 137(5) EPC"* (decision, reasons 12.1.5). As a reason it is stated (reasons 12.1.2) that *"the amendment introduces features related to unsearched subject matter which does not combine with the originally claimed invention to form a single general inventive concept"*, and reference is made to the Guidelines for Examination, H-II, 6.2. So the Examining Division apparently meant to refer to Rule 137(5) EPC, first sentence.
 - 11.1 Further, in its reasons the Examining Division argued that *"original claim 1 was concerned with solving the problem of platform-independent graphics rendering, but the amended features are concerned with solving the different problem of handling and processing input gestures"* (underlining by the Board). It is clear that this argument is not affected by the deletion of the

"wherein" clause in the present third auxiliary request.

12. Rule 137(5) EPC, first sentence, states that "Amended claims may not relate to unsearched subject-matter which does not combine with the originally claimed invention or group of inventions to form a single general inventive concept." For this rule to apply, it must thus be shown (i) that the amended claims relate to unsearched subject-matter and (ii) that they lack unity with the originally claimed invention or group of inventions".
 - 12.1 The reasoning of the Examining Division is deficient at least in what regards the question whether the amended claims were searched. The Examining Division stated that *"original claim 1 was concerned with solving the problem of platform independent graphics rendering, but the amended features are concerned with solving the different problem of handling and processing input gestures"* and that *"These amended features could not have been expected to be searched since they do not relate to the originally claimed invention nor are they disclosed in combination with the originally claimed invention in a specific embodiment of the originally filed description"*.
 - 12.2 The latter two assertions are inaccurate. Although the International Search Authority had identified three separate inventions, only the second and third of which contained the gesture-related features, all were eventually searched (see the Written Opinion of the International Search Authority, 5 June 2014, Box No. IV and Box No. V). Moreover, original claim 10 contained both the gesture-related features and referred to *"platform independent graphics rendering"* (reciting a *"generic*

scene graph [...] executable on a plurality of different technology platforms").

- 12.3 Original claim 10 having been searched, the Board has no doubt that the subject-matter of the claims of the third auxiliary request was also searched.
13. The Board concludes that Rule 137(5) EPC, first sentence, does not preclude consideration of the third auxiliary request. As the Examining Division justified their denial of consent under Rule 137(3) EPC merely with reference to Rule 137(5) EPC, this decision cannot stand.

Remittal

14. The Board notes that no claim with the new, gesture-related features has as yet been considered by the Examining Division in substance. In view of the primary object of the appeal proceedings to review the decision under appeal, Article 12(2) RPBA 2020, the Board considers that this first substantive assessment should be carried out by the Examining Division and deems this to constitute special reasons for remittal under Article 11 RPBA 2020.
- 14.1 At the same time, the Board notes that by setting aside the decision for the above reasons, it has not itself given consent to the present third auxiliary request. It is therefore up to the Examining Division during the further prosecution to decide again on their consent under Rule 137(3) EPC to this amendment.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution.

The Registrar:

The Chairman:



L. Stridde

Martin Müller

Decision electronically authenticated