Internal distribution code:

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

Datasheet for the decision of 8 March 2022

Case Number: T 1290/18 - 3.5.07

Application Number: 14185267.3

Publication Number: 2851817

IPC: G06F17/50

Language of the proceedings: EN

Title of invention:
Methods and systems for generating user interface for processing building information modeling (BIM)-based data

Applicant:
Viewpoint, Inc.

Headword:
Building information modeling/VIEWPOINT

Relevant legal provisions:
EPC Art. 54
RPBA 2020 Art. 13(1), 13(2)

Keyword:
Novelty - main request and first auxiliary request (no)
Amendment after summons - exceptional circumstances - second auxiliary request (no)

Decisions cited:
T 0312/94, T 1849/08, T 1294/16

Europäisches Patentamt
European Patent Office
Office européen des brevets

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 1290/18 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 8 March 2022

Appellant: (Applicant)	Viewpoint, Inc. 1515 SE Water Avenue Suite 300 Portland, OR 97214 (US)
Representative:	DTS Patent- und Rechtsanwälte Schnekenbühl und Partner mbB Marstallstrasse 8 80539 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 15 December 2017 refusing European patent application No. 14185267.3 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair	J. Geschwind
Members:	M. Jaedicke
	R. de Man

Summary of Facts and Submissions

I. The appellant (applicant) filed an appeal against the examining division's decision refusing European patent application No. 14185267.3, which claims a priority date of 20 September 2013.

II. The documents cited in the contested decision included:

D3: "4Projects BIM in a browser", AECMAGAZINE, published 9 April 2013, pp. 1-4, retrieved from http://aecmag.com/technology-mainmenu-35/559-4projects-bim-in-a-browser.

III. The examining division refused the application for lack of novelty of the subject-matter of independent claim 1 of the main request and the auxiliary request over the prior art disclosed in document D3.

IV. In its statement of grounds of appeal, which was filed under the RPBA 2007 on 12 April 2018, the appellant requested that the decision under appeal be set aside and that a patent be granted based on the main request and the auxiliary request considered in the contested decision.

V. In a communication under Article 15(1) RPBA 2020 accompanying the summons to oral proceedings dated 10 June 2021, the board expressed its provisional opinion that the subject-matter of claim 1 of the main request and of the auxiliary request lacked novelty in view of document D3. Moreover, the board informed the appellant that it doubted that the distinguishing features identified by the appellant for the main request contributed to solving a technical problem.

VI. By letter of 21 January 2022, the appellant submitted arguments together with an amended main request and a second auxiliary request.

VII. In the course of the oral proceedings, held as scheduled on 8 March 2022, the appellant filed new versions of its main request and first and second auxiliary requests, all requests containing the same minor amendments and replacing the corresponding prior claim requests. The appellant was heard, among other things, on novelty for the main request and the first auxiliary request and on the admissibility of its second auxiliary request. At the end of the oral proceedings, the Chair announced the board's decision.

VIII. The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the amended main request or, in the alternative, of one of the amended first and second auxiliary requests, all requests filed during the oral proceedings.

IX. Claim 1 of the main request reads as follows (itemisation added by the board):

"[A] A method for operation of a building information modeling (BIM) system, comprising:

[B] at a BIM server (202), generating a network accessible graphical user interface (GUI) (208) simultaneously displaying a 3-dimensional rendering of a building model (210), a hierarchical structure of building model data (212), and a Construction Operations Building Information Exchange (COBie) spreadsheet (214), the building model (210), hierarchical structure of building model data (212), and a COBie spreadsheet being associatively linked,

[C] further comprising at a client computing device accessing the GUI (208) over the network, and

[D] further comprising at the BIM server (202), altering data in each of the building model (210), the hierarchical structure of building model data (212), and the COBie spreadsheet (214) in response to receiving an interactive input action from the client computing device, the interactive input action indicating input device interaction with one of the building model (210), the hierarchical structure of building model data (212), and the COBie spreadsheet (214), wherein the data in data structures in each of the building model (210), the hierarchical structure of the building model data (212), and the COBie spreadsheet (214) are interactively linked to provide visual cues of the linked data."

X. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the following text (referred to in the following as feature E) was added to the end of the claim:
", wherein in the BIM system (200) a plurality of slave client computing devices (222) are included, wherein each of the slave client computing devices (222) is configured to passively access the BIM engine (204) such that the slave client computing devices (222) are inhibited from controlling the BIM engine (204)."

XI. Claim 1 according to the second auxiliary request is derived from claim 1 of the main request by adding the following text to the end of claim 1:
", wherein the COBie spreadsheet (214) includes cells populated with COBie formatted data, and
wherein the COBie spreadsheet (214) includes one or more of an equipment list, a product data sheet, a

warranty document, a spare parts list, and a preventive maintenance schedule color coded according to a predetermined standard."

XII. The appellant's arguments, where relevant to the present decision, are discussed in detail below.

Reasons for the Decision

The invention

1. The application relates to managing building information modeling (BIM) data (application as filed, paragraph [0002] of the description).

BIM data is a digital representation of physical and functional characteristics of a facility. It is a shared knowledge resource for information about a facility which forms a reliable basis for decisions during its life cycle. In addition to the geometry of a facility, BIM data can also describe additional information, such as spatial relationships, light analysis, geographical information, and quantities and properties of building components such as manufacturers' details (paragraph [0003] of the description).

Compared with known BIM software tools, the application aims to allow users to remotely view and interact with three-dimensional building models together with other data such as Construction Operations Building Information Exchange (COBie) spreadsheet data using an internet browser (paragraph [0004] of the description). Data may be altered to link data for display in the building model, the hierarchical structure of the building model and the COBie spreadsheet in order to

enable greater consistency between the data to be provided (paragraph [0006] of the description).

Main request

2. *Admissibility of the main request*

The present main request differs from the prior main request in that the text "data and data structures" in feature D was amended to "data in data structures". The appellant argued that this amendment was intended to avoid a possible issue under Article 123(2) EPC by adapting the claim wording to paragraph [0006] of the description and did not change anything regarding novelty or inventive step.

The board considers that the fact that the appellant itself raised the potential issue of Article 123(2) EPC may be considered to constitute exceptional circumstances under Article 13(2) RPBA 2020 and agrees with the appellant that the amendment made does not have a substantive impact on the board's assessment of novelty. Consequently, this late-filed minor amendment does not prevent the board from reviewing the decision under appeal in a judicial manner (Article 12(2) RPBA 2020) and is not detrimental to procedural economy. According to decision T 1294/16, point 18.3 of the Reasons, if admittance of a (late-filed) submission is not detrimental to procedural economy, it is appropriate to accept that there are "exceptional circumstances" within the meaning of Article 13(2) RPBA 2020, and it is justified to admit the submission provided that this does not adversely affect any other

party (which is evidently the case for the present *ex-parte* appeal case). Consequently, the board admits the amended main request.

3. *Novelty*

3.1 The examining division objected that the subject-matter of claim 1 of the then pending main request lacked novelty over document D3. The present main request differs only on account of a minor amendment from the main request considered by the examining division (see point 2. above) and the appellant considered this amendment to be irrelevant when assessing novelty in view of document D3.

3.2 In the following, the board summarises the relevant parts of the disclosure of D3. D3 is an article from the AEC Magazine describing 4Projects' BIM software tool. As noted on page 3 of D3 (see section entitled "4Projects acquired"), the company 4Projects was acquired by Viewpoint, i.e. the appellant. As the priority date of the present application is after the acquisition, this presumably explains the apparent similarity between D3 and the application. In fact, in its background section (see paragraph [0004]) the application itself points to the 4BIM platform produced by 4Projects.

3.2.1 Document D3 discloses a cloud-based collaboration tool for BIM including BIM viewing and data management (page 1, first five paragraphs). D3 discloses that 4Projects introduced new software in 2012 called "BIM in a browser", adding BIM viewing, reviewing,

reporting, and COBie data management tools to its cloud-based service (page 2, section entitled "BIM in a browser", first paragraph).

3.2.2 The board considers that page 2 of D3 shows a screenshot of the BIM software showing a three-dimensional building model (on the top left-hand side of the screenshot), a hierarchical structure of building model data (on the top right-hand side of the screenshot) and a COBie spreadsheet (table in the bottom of the screenshot; see also section entitled "COBie data management" on page 3, third paragraph).

3.2.3 D3 discloses that the software supports a full life cycle COBie data management system. The disclosed system is designed to enable authorised members of the supply chain to add, edit, categorise, or validate COBie data to ensure its accuracy. A UK COBie template can be used to extract information from the IFC (Industry Foundation Classes) model, which is then presented in a spreadsheet-like table at the bottom of the screen. Clicking on a component in the COBie table will highlight the related information in the model, and vice versa. A direct link between the COBie spreadsheet data and the IFC model makes it possible to put everything in context (D3, page 3, section entitled "COBie data management", paragraphs 1 to 5).

Finally, D3 discloses on page 2, last two paragraphs, that the software system also supports real-time collaboration through screen sharing. One person 'drives' the model, while the other collaborators follow it in real time on their own screens. Models can only be navigated by the leader, who is in control.

3.2.4 In view of the above, the board agrees with the examining division and the appellant that document D3 discloses features A and C of claim 1.

3.3 However, the appellant contested that features B and D were disclosed.

3.3.1 Regarding feature B of claim 1, the appellant argued that the screenshot on page 2 of D3 (see the top right-hand side of the screenshot) only showed a white panel with lines, which did not directly and unambiguously disclose feature B either implicitly or explicitly. In particular, this screenshot did not disclose any display of a hierarchical structure of building model data, let alone one that was associatively linked to a COBie spreadsheet. It argued that, according to well-established case law, the novelty of a feature was prejudiced by a prior-art document only if the feature was directly and unambiguously described in the prior art, either explicitly or implicitly. Consequently, an image that merely showed a white panel with lines did not disclose a hierarchical structure of building model data as required by feature B.

3.3.2 Regarding the established case law of the boards of appeal, the board agrees with decision T 1849/08, point 2.1.3 of the Reasons, that what the skilled person reading a prior-art document would understand from it is decisive for the information content of the document. Furthermore, according to decision T 312/94, point 2.2 of the Reasons, for the interpretation of any document in order to determine its true meaning and thus its content and disclosure, it is a general legal rule that no part of such a document should be construed in isolation from the remainder of the document; on the contrary, each part of such a document

must be construed in the context of the content of the document as a whole.

3.3.3 In the present case, as explained by the board in the oral proceedings, the skilled person knows that BIM data is hierarchical in general since buildings are constructed hierarchically by adding components (see also D3, page 3, section entitled "COBie data management", third paragraph). Furthermore, in the oral proceedings the board pointed out to the appellant that the screenshots on page 1 of D3 both showed a list of hierarchically organised data on the right-hand side, since these screenshots not only showed lines, but also showed a structure on the left-hand side of these lines that was standard in graphical user interfaces for hierarchical data. The same structure could also be seen in the screenshot on page 2 of document D3. The appellant argued that the screenshots on page 1 differed from the screenshot on page 2, but the board considers that the skilled person understands that similar parts in the graphical user interface shown in the different screenshots correspond to the same functionality. In particular, the skilled person reads document D3 in view of their common general knowledge of building information systems and understands the screenshots in the context of the further details disclosed in the text of document D3. In the oral proceedings, the board also explained that document D3 discloses on page 2, seventh paragraph from the bottom, that users can inspect the properties of any component and add or edit attribute data as required. Consequently, the board considers that the list displayed on the top right-hand side of the screenshot

on page 2 of document D3 supports this software functionality by providing a hierarchical list of components of the BIM data.

3.3.4 In view of the above, the board is not convinced by the appellant's arguments and considers that feature B is disclosed in document D3.

3.4 Regarding feature D, the appellant argued that document D3 did not disclose that "the hierarchical structure of the building model data and the COBie spreadsheet were interactively linked". D3 did not disclose a hierarchical structure, interactive linking or an interactive input action as claimed. D3 did not disclose that the data in data structures of each of the building model, the hierarchical structure of the building model data and the COBie spreadsheet were interactively linked to provide visual cues of the linked data. Moreover, D3 failed to disclose any steps carried out on the server side.

3.4.1 However, the board cannot see what specific features feature D should imply beyond what is disclosed in document D3. This prior art explicitly discloses that the software is cloud-based (see point 3.2.1 above), which implies that the data is stored in the cloud and that changes to data made on a client are sent to the cloud, i.e. the BIM server, and applied there. Furthermore, D3 discloses that, when a user clicks on a component in the COBie spreadsheet, the model is highlighted, and vice versa. Moreover, "a direct link [from the COBie spreadsheet] to the IFC model puts everything in context" (see point 3.2.3 above). Consequently, the skilled person reading document D3 would understand that the software disclosed in document D3 has to use some kind of "link" to enable

the highlighting functionality and, given the amount of data in a BIM, the only practical implementation is indeed to use some kind of link. In other words, the BIM model and the visual representation of the model disclosed in document D3 are linked to support highlighting when clicking on a component. The same must also be the case for the COBie spreadsheet, which is data derived from the BIM model (IFC model), in view of the disclosure in D3, page 3, section entitled "COBie data management", paragraph 3 ("A COBie template can be used to extract information from the IFC model, ..., and vice versa").

3.4.2 Furthermore, the board is not convinced by the appellant's argument that document D3 did not disclose the specific steps specified in feature D. In the board's interpretation of claim 1, feature D specifies that, first, an interactive input is received indicating interaction with the graphical user interface of one of the building model, the hierarchical structure of the building model data and the COBie spreadsheet. Second, this input is used to alter data in each of the building model, the hierarchical structure of building model data and the COBie spreadsheet in response. This corresponds to what is disclosed when the user edits data in the COBie spreadsheet in the browser (see D3, page 3, COBie data management, paragraph 2), since the graphical building model and the COBie spreadsheet both correspond to the hierarchical building model data and a practical application needs to keep all the data shown in the browser consistent with the model data. Hence, the board is not convinced that D3 fails to disclose steps performed on a server according to feature D.

The appellant's argument that document D3 does not disclose any interactive linking to provide visual cues is also not convincing as document D3 explicitly discloses using links between the building model and the COBie spreadsheet for highlighting when the user clicks on a component, i.e. for visual cues of the linked data. Consequently, feature D is also disclosed in D3.

3.5 In view of the above, the board concludes that the subject-matter of claim 1 lacks novelty over document D3 (Article 54(1) and (2) EPC).

First auxiliary request

4. *Admissibility*

The same amendment as in the main request was made in the first auxiliary request when compared with the auxiliary request already considered in the contested decision. Consequently, the reasons for admitting the main request also apply to the first auxiliary request, and the board admits this auxiliary request.

5. Claim 1 of the auxiliary request differs from claim 1 of the main request in that it additionally cites feature E (see point X. above). The board agrees with the appellant that feature E is based on paragraph [0027] of the description.

6. *Novelty*

6.1 The examining division argued that feature E was disclosed in D3. Consequently, it objected to claim 1 under Article 54 EPC.

6.2 The appellant argued that feature E was not directly and unambiguously derivable from the last paragraph on page 2 of D3, as argued by the examining division. D3 did not disclose a master/slave configuration for the client devices which required a dedicated function for client devices. D3 did not disclose setting a specific rule between a master device and a plurality of slave devices in which the slave devices were specifically inhibited from controlling the BIM engine. Instead, D3 explicitly mentioned that any client could take control of the BIM server. Hence, the subject-matter of claim 1 was novel.

6.3 The board considers that the examining division's assessment of the disclosure of document D3 was correct. In the board's view, the skilled person understands that D3 (see point 3.2.3 above) discloses cloud-based BIM software supporting multiple clients, only one of which controls the server. Therefore, the skilled person understands that the controlling client has the role of the master, whereas the other clients have the role of slaves. The fact that D3 also discloses that the clients can additionally use a live message board for communication does not change the skilled person's understanding that there is a single master client. It is also irrelevant that D3 states, in the final paragraph on page 2, that in the future any client may take control, as this is merely a possible extension concerning a transfer of the master functionality between clients.

6.4 Consequently, the subject-matter of claim 1 of the auxiliary request lacks novelty (Article 54(1) and (2) EPC) over document D3.

Second auxiliary request

7. *Admissibility*

7.1 Claim 1 of the present second auxiliary request differs from claim 1 of the present main request in that it adds the features of dependent claims 4 and 5 of the present main request (corresponding to claims 6 and 7 as originally filed; see also point XI. above).

7.2 The present second auxiliary request was filed in the oral proceedings as a minor amendment to the prior second auxiliary request that was filed in response to the board's summons. Consequently, the substance of the present second auxiliary request was filed for the first time after notification of the summons by the board.

7.3 In its summons the board explicitly drew the appellant's attention to the requirements of Article 13(2) RPBA 2020 for any amendment to its appeal case. When the appellant filed its prior second auxiliary request in response to the summons, however, it did not justify with cogent reasons that there were exceptional circumstances, as required by Article 13(2) RPBA 2020.

7.3.1 In the oral proceedings, the appellant submitted, in favour of the admissibility of the present second auxiliary request, that the statement of grounds of appeal had been filed under the RPBA 2007 and that the appellant could not have anticipated at that point in time the future restrictions in the RPBA 2020 for filing amendments, which therefore should not be applied to the present case. Moreover, the appellant's submissions had always been very streamlined, as only two requests had been filed before the submission of

the second auxiliary request and there was not an excessive number of requests. The present second auxiliary request overcame the novelty issue and thus made progress. Furthermore, the prior second auxiliary request had been filed within the time limit set in the summons by the board.

7.4 The board is not convinced that the requirements of Article 13(2) RPBA 2020 should be applied in a different manner for the present appeal case because the appeal was filed before the RPBA 2020 entered into force. The transitional provisions according to Article 25(3) RPBA 2020 explicitly define when Article 13(2) RPBA 2020 does not apply, namely where the summons to oral proceedings or a communication of the Board under Rule 100(2) EPC has been notified before the date on which the RPBA 2020 entered into force. As the appellant was notified of the summons after the RPBA 2020 entered into force, the board concludes that Article 13(2) RPBA 2020 must be applied to the present second auxiliary request.

7.5 Moreover, the board does not see any exceptional circumstances justifying the amendment made to the appellant's case by the present second auxiliary request, as, in its communication accompanying the summons, the board had informed the appellant of its preliminary opinion that the novelty objections in the contested decision were correct. Consequently, the board's communication did not raise any fresh issues which could be regarded as exceptional circumstances under Article 13(2) RPBA 2020.

In view of the above, the second auxiliary request is not admitted under Article 13(2) RPBA 2020.

7.6 The board merely remarks for completeness that admitting the present second auxiliary request would also appear to go against procedural economy (Article 13(1) RPBA 2020), as the requests are not convergent and the second auxiliary request could and should have been filed earlier, even in the first-instance proceedings, since the novelty objections did not change in the appeal proceedings.

8. Since none of the requests admitted into the appeal proceedings is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

S. Lichtenvort J. Geschwind

Decision electronically authenticated