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**Datasheet for the decision
of 26 May 2023**

Case Number: T 2751/18 - 3.5.01

Application Number: 14160379.5

Publication Number: 2779041

IPC: G06Q10/04

Language of the proceedings: EN

Title of invention:

Systems, devices, components and methods for dynamically displaying performance scores associated with the performance of a building or structure

Applicant:

United States Green Building Council (USGBC)

Headword:

Building sustainability score/USGBC

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - providing a sustainability score for a building based on water and energy consumption (no - not technical) - the use of water and energy meters to acquire data on the water and energy consumption (no - obvious)

Decisions cited:

T 0362/90, T 0641/00, T 1670/07



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Case Number: T 2751/18 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 26 May 2023

Appellant: United States Green Building Council
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 26 June 2018
refusing European patent application No.
14160379.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Höhn
Members: W. Zubrzycki
C. Schmidt

Summary of Facts and Submissions

- I. This is an appeal against the decision of the examining division to refuse European patent application No. 14160379.5 for lack of inventive step (Article 56 EPC).
- II. The examining division held that the main and auxiliary requests lacked an inventive step over a notoriously known networked information system, especially considering the disclosures of D1 (US2010/107076 A1) and D2 (US2007/219645 A1).
- III. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of these requests, both re-filed with the statement setting out the grounds of appeal dated 5 November 2018.
- IV. Claim 1 of the main request reads:

"A system comprising a remote central web server (CWS) and a plurality of devices connected to the server, each device being configured to display at least one of building or structure (1) performance data and building or structure performance scores associated therewith, the data and scores corresponding to a predetermined building or structure (1) within which the device is mounted, with which the device is associated, or to which the device is operably connected, comprising:

at least one processor (112);

first storage means for storing the building or structure performance data and the building or structure performance scores, the first storage means being operably connected to or included in the processor (112);

second storage means for storing display programming code or instructions corresponding to at least one of the building or structure performance data and the building or structure performance scores, the second storage means being operably connected to or included in the processor (112), and

a display (27) operably connected to the processor (112);

wherein the device is connected to at least three of:

- a water meter,*
- an energy meter,*
- a waste meter or waste data inputs entered by a user,*
- a human experience meter or human experience data inputs entered by a user,*
- a transportation meter or transportation data inputs entered by a user,*

each meter being located in the predetermined building or structure

wherein the CWS is programmed to perform a benchmark analysis based on the performance data of similar buildings or structures, and to calculate in accordance therewith a performance score of the predetermined building or structure,

wherein the device, including the processor (112), the first storage means, the second storage means, and the display (27), is configured to visually show on the display (27) to a building or structure user (28, 37) or manager (30) the performance scores and the benchmark data."

V. Claim 1 of the first auxiliary request adds the following two features at the end of claim 1:

"the system being further programmed to:

- periodically upload the performance data of the similar buildings or structure to the CWS, performing benchmark analysis and sending the benchmark analysis to the dynamic plaque or dashboard of the predetermined building or structure,

- if the building performance score falls below a predetermined threshold or expected level, the system notifies an owner or manager of the predetermined building or structure of the recommended corrective action(s) to be taken."

- VI. In the communication accompanying the summons to oral proceedings, the Board set out its preliminary opinion that the main and auxiliary request lacked an inventive step over D2.
- VII. The oral proceedings took place per videoconference on 26 May 2023. They were held jointly with oral proceedings for related case T 1439/20.
- VIII. The appellant argued that claim 1 of the main request and the auxiliary request involved an inventive step. Their relevant arguments are discussed below.

Reasons for the Decision

1. The invention
- 1.1 The claimed invention concerns evaluating whether a building complies with sustainability criteria (published application, paragraphs [3] and [4]).
- 1.2 Claim 1 of both requests concerns a system performing such evaluation. Looking at Figure 3, a processor-based device 22 in a building ("device" in claim 1) collects data which relates to at least three of the following

five categories: the use of water, the use of energy, the amount of waste produced, commuting methods used by occupants ("transportation data") and the occupants' experience, see [17], [24] and [25]. The data on water and energy use is obtained from meters 38. The other three data categories can be either provided by meters or input by the building's occupants into digital surveys 36, see [22], [25] and [31].

- 1.3 The device periodically uploads building performance data to a central web server (CWS). While not clearly claimed, but disclosed in the application, the building performance data being uploaded is the collected data, see [26] and [32], last sentence. The CWS performs benchmark analyses based on corresponding data received from multiple similar buildings and determines a building's performance score. The claim does not give any details about the benchmark analysis performed and the score computation. From the application, the Board understands that the benchmarks and score are intended to reflect the building's sustainability, see [3] and [57].
- 1.4 The application provides no details regarding the benchmarking process, and says that the performance score is the sum of points assigned to the above five data categories, see [58] to [66], without discussing the criteria used.
- 1.5 The CWS transmits the generated benchmark data and the score back to the building for display to the building's manager or user ([27], and [42]).
- 1.6 Claim 1 of the auxiliary request adds that the uploading of performance data occurs periodically, and the display is in the form of a dashboard (penultimate

claim feature), see [47]. It also adds that, if the performance score falls below a predefined threshold, the system recommends corrective actions to be taken (last feature), see [84]. The application does not provide any examples of such recommendations.

2. Auxiliary request, Article 56 EPC

2.1 The Board finds it convenient to analyse the more specific auxiliary request first.

2.1.1 The examining division found that the subject-matter of claim 1 lacked an inventive step starting from a notoriously known networked information system.

2.1.2 However, the Board judges that D2 is closer to the invention and a more appropriate starting point.

2.1.3 As mentioned in the decision, D2 discloses a remote building management system analysing sensor measurements (decision, points 2.2.17, 2.2.18 and 3.3.9). The Board starts from the embodiment in D2 which relates to Figure 2. In this embodiment, building controllers 28 and 40 located in different buildings (paragraphs [27] and [28]) collect data from sensors and regularly upload it to a central building control processor 44. The central building control processor analyses the received data ([52] and [53]) and shows results on a workstation 50 ([35], first sentence, [39] and [41]).

2.1.4 It is common ground that the subject-matter of claim 1 differs from D2 in that:

A) The central building control processor is implemented as a central web server (CWS).

B) The device is connected to at least three of: a water meter, an energy meter, a waste meter or waste data inputs entered by a user, a human experience meter or human experience data inputs entered by a user, a transportation meter or transportation data inputs entered by a user, each meter being located in the predetermined building or structure.

C) The central web server performs a benchmark analysis based on the performance data of similar buildings or structures and calculates in accordance therewith a performance score of the predetermined building.

D) The device is configured to visually show the performance scores and the benchmark data on a dashboard to a building user or manager.

E) If the building performance score falls below a predetermined threshold or expected level, the system notifies a manager of the predetermined building or structure of the recommended corrective action(s) to be taken.

2.1.5 In its preliminary opinion, the Board considered that feature A was an obvious design option, especially considering that D2 discloses in a further embodiment a building management system which comprises a web server (D2, paragraph [106]). The appellant did not take issue with this.

2.1.6 The appellant's arguments and discussion at the oral proceedings concentrated on features B to E.

2.1.7 The appellant argued on the use of the water and energy meters' measurements for benchmarking and the calculation of the building performance score. However, the Board notes that the claim does not specify that data provided to the CWS includes any measurements. Moreover, the expression "*at least three of*", used in

distinguishing feature B, covers the case in which the device is not connected to any meters, but only receives data input by the user.

However, for the sake of efficiency, given that this issue could be overcome by a straightforward amendment, the Board construed the claim as meaning that the CWS used the received meters' measurements, together with the other three data categories, to perform benchmark analysis and to compute the performance score. Clearly, if this more narrow subject-matter is found to lack an inventive step, so does any broader subject-matter.

2.1.8 The Board agrees with the decision (see points 2.2.3 to 2.2.7, 3.2.3 and 3.2.4) that the distinguishing features implement a non-technical method combining administrative steps with presentation of information (Article 52(2)(c) and (d) EPC). The Board judges that this method comprises following steps:

- A building's performance is benchmarked based on data describing energy consumption, water consumption, the amount of waste generated, commuting methods used by the occupants and their overall experience, wherein the data is collected from the building concerned and other anonymous similar buildings.
- A performance score is calculated for the building in accordance with the benchmark data.
- The benchmark data and the building performance score are presented to a building manager on a dashboard.
- Corrective actions are recommended to the building manager when the building performance score falls below a predetermined threshold.

2.1.9 The appellant disputed this finding in the decision and argued that the above method provided a technical

contribution for the following reasons.

- 2.1.10 Firstly, the benchmark analysis and building performance score were based on measurements carried out by meters located in the building. The meters were technical entities and obtaining data from them was a technical process.

However, the Board is not persuaded and agrees with the decision (see point 2.2.7) that collecting and analysing water and energy consumption in a building is a non-technical business operation performed as part of building management.

The Board agrees with the appellant to the extent that the use of meters to acquire data about water and energy consumption is a technical feature, but a business step does not become technical by virtue of its technical implementation (see T 1670/07 - *Shopping with mobile device/NOKIA*, reasons, point 9).

- 2.1.11 Secondly, the building was a technical system and the benchmark data and performance score indicated its internal states. This was all the more so considering that the benchmark data and the score were based on data obtained from the meters. As set out in decision T 362/90 and decisions following it, visualising internal states of a technical system had technical character. Furthermore, the indication that the building performance score fell below a predetermined threshold indicated a technical malfunction. It was comparable to an alarm indicating overheating of an engine. Providing such an alarm had technical character, even in the absence of an indication of the action to be taken by the user.

The Board does not dispute that giving visual indications about internal states of a technical system is in principle a technical effect. However, the Board disagrees that the information output by the claimed system indicates such states.

Beginning with the building performance score, the disclosed example expresses it as a natural number of arbitrarily assigned points (see point 1.4 above). Even assuming that some technical information about the building was used to obtain this score, such information is subsequently removed from the score due to its nature as a natural number.

Like the decision (see point 3.3.5), the Board cannot see that informing the user that the performance score fell below some arbitrary threshold is comparable to an indication that an engine was overheated or to the case underlying T 362/90 in which a vehicle indicated to the driver the engaged and optimal gears. The fundamental difference between those cases and the claimed invention is that while the gear in use and engine overheating are clearly technical conditions and the optimal gear is precise and credible technical guidance, the building performance score conveys no technical information.

The "*benchmark data*" and the "*recommended corrective action(s)*" do not convey technical information either. As was set out at point 3.2.4 of the contested decision, at the general level at which they are claimed and disclosed, these terms cover non-technical notifications, for example "Your building seems to perform worse than other buildings. Hire someone to improve this".

2.1.12 Thirdly, the crucial idea of the invention was its community aspect, namely that the basis for assessing the building's performance was a comparison with other similar buildings. In view of the complexity of a building, it would have been too limiting to claim a specific benchmarking algorithm or a specific way of calculating the performance score. Nevertheless, even at the general level claimed, the distinguishing features enabled the building manager to recognise how his building performed compared to the other buildings and to improve its performance, for instance by saving water and energy. This was a technical effect.

The Board is not convinced and notes that the system of D2 already collects data on multiple buildings and analyses it. The actual distinction is the nature of analysis performed and its input. It might well be that the appellant had good reasons for not disclosing those aspects in more detail. However, as set out above, in the absence of further details, the method, set out in point 2.1.8 above, lacks technical character.

The Board is not convinced by the argument attempting to prove that this method derives technical character from (unclaimed) actions of the building manager. In addition to being speculative, this argument is a typical example of the "broken technical chain fallacy" in the sense of T 1670/07 *supra*, reasons, point 11.

2.1.13 Applying the COMVIK approach (decision T 641/00 - *Two identities/COMVIK*), this method is provided to the technically skilled person as a requirement specification to be implemented.

2.1.14 Starting from D2 and facing the problem of implementing this requirement, it would have been obvious to connect

the building controllers to water and energy meters and provide a user interface enabling the user to input waste, transport and experience data.

Furthermore, it would have been self-evident to upload the collected building performance data to the building control processor and to adapt it to calculate benchmark data and the building performance score. It would have been equally obvious to configure the building control processor to generate the indication that the building performance score fell below a predetermined threshold, to recommend unspecific corrective actions and to provide the generated information to the workstation for display.

2.1.15 Incidentally, while not claimed, the application discloses that the display might be physically located in the building (published application, [9] and [45]). Interpreted in the light of this disclosure, the claim is still obvious over the combination of the Figure 2 embodiment in D2, which serves as the starting point, and an embodiment relating to Figure 1 which uses a workstation located in the building (D2, [25]).

2.1.16 Hence, claim 1 lacks an inventive step (Article 56 EPC).

3. Main request

Independent claim 1 of the main request is broader than claim 1 of the auxiliary request and therefore lacks an inventive step for the same reasons.

4. Since none of the appellant's requests is allowable, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



T. Buschek

M. Höhn

Decision electronically authenticated