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**Datasheet for the decision
of 30 April 2008**

Case Number: T 1567/05 - 3.5.01

Application Number: 99938530.5

Publication Number: 1049033

IPC: G06F 17/50

Language of the proceedings: EN

Title of invention:

Apparatus for indicating strength of building structure, and recording medium for strength indication program

Applicant:

Kabushikikaisha Enu•Shi•Enu

Opponent:

-

Headword:

Designing of building structures/ENU

Relevant legal provisions:

EPC Art. 52(2)

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Colour selection - technical effect (no)"
"Inventive step (no)"

Decisions cited:

T 0115/85, T 0119/88, T 0833/91, T 0154/04

Catchword:

See point 3 of the reasons.



Case Number: T 1567/05 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 30 April 2008

Appellant: Kabushikikaisha Enu•Shi•Enu
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 28 July 2005
refusing European application No. 99938530.5
pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chairman: S. Steinbrener
Members: S. Wibergh
P. Schmitz

Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division to refuse European patent application No. 99938530.5.
- II. According to the decision appealed, the invention was obvious having regard to the closest prior art document, D1: JP-A-08 022479.
- III. With the statement setting out the grounds of appeal dated 7 December 2005 the appellant requested that the decision be set aside and a patent be granted based on one of the sets of claims 1-8 (main request) or 1-12 (auxiliary request) filed with the same letter. An English translation of D1 was filed.
- IV. Claim 1 of the main request reads:
- "A strength display device for displaying strength of a building structure, said strength display device comprising:
- a storage means (14) for storing shape data and relative position data of building structural components of said building structure;
- a two-dimensional diagram constructing means for constructing a two-dimensional diagram, wherein said two-dimensional diagram constructing means is configured to first construct a virtual three-dimensional model of assembled building structural components based on said shape data and said relative position data retrieved from said storage means and then to construct said two-dimensional diagram by

projecting selected building structural components, which are selected from said building structural components of said virtual three-dimensional model, onto a plane;

a display means (17) for displaying said two-dimensional diagram constructed by said two-dimensional diagram constructing means on a display screen; and a stress computing means for computing stress values of said building structural components based on stress computational data of said building structural components consistent with attributes of said building structural components;

characterized in that

the stress computing means computes a stress value for each of a plurality of different stress types under a plurality of different load condition settings, for each of said structural components,

and said strength display device further comprises:

a selecting means for selecting a predetermined strength level display colour from a plurality of strength level display colours for said respective building structural components based on the largest stress value for each of said building structural components computed by said stress computing means, wherein said plurality of strength level display colours are provided for each of said building structural components arranged in said two-dimensional diagram; and

a strength display means (17) for displaying said predetermined strength level display colour corresponding to the largest stress value of each of said building structural components selected by said selecting means on said display screen as said strength level display colours of said building structural

- components arranged in said two-dimensional diagram, and wherein said strength level display colour of each of said building structural components is a single colour and each of said building structural components is displayed wholly in its single colour."
- V. Claim 1 of the auxiliary request differs from the main request mainly by the information displayed. Instead of selecting the colour on the basis of the largest stress value, it is selected "based on a stress value for each of said building structural components computed by said stress computing means based on a stress type selected by a user from the plurality of different stress types or a load condition selected from the plurality of different load condition settings by a user".
- VI. Oral proceedings were held on 30 April 2008. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request (claims 1-8) or the auxiliary request (claims 1-12), all claims filed with the statement setting out the grounds of appeal dated 7 December 2005.
- VII. At the end of the oral proceedings the Board announced its decision.

Reasons for the Decision

1. *The invention*

The invention as described (cf paragraphs [0001], [0007] and [0008] of the published patent application EP-A-1 049 033) is a strength display device, which is

a design tool for displaying the strength of a building structure. Stress values associated with each building structural component (column, beam or brace) are computed from stored component data. On the basis of these stress values the strength display means selects a predetermined strength level display mode from a plurality of modes for the respective building structural component in a two-dimensional diagram displayed on a display screen. Different display colours are used. For example, if the component has a small stress value (indicating a high safety level), a colour conveying an idea of safety, such as blue, is used to indicate the component. If its stress value is high (indicating a low safety level), a colour conveying an idea of a danger, such as red, is chosen.

2. *The prior art*

As explained by the appellant in the grounds of appeal, D1 describes a computer-based system which allows a customer, rather than a designer, to design a building. The strength of the structure is automatically checked based on the plan data. If there is a strength problem, an error list is output. The only graphical display of the building design is carried out after the design has been completed. Apart from not being capable of "displaying strength of a building", this system corresponds to the preamble of claim 1.

3. *The main request - inventive step*

- 3.1 The first characterising feature of claim 1 states that "the stress computing means computes a stress value for each of a plurality of different stress types under a

plurality of different load condition settings, for each of said structural components". D1 does not mention different stress types (such as tensile stress, shear stress etc), but since any device used for checking the strength of a design or structure must provide all the necessary information, the computation of different stress types can be regarded as implicit. Furthermore, D1 mentions a snow load (cf p.41 of the translation), implying that also different loads are taken into consideration. Thus, this claim feature is known from D1.

3.2 The main difference between the invention and D1 is that the known system computes stress values without displaying them, whereas according to the invention the building structural components are presented in a colour indicating their "strength level". The strength level reflects the stress the components would be subjected to in the structure. Furthermore, for each component the strength level is chosen to correspond to the highest stress under a number of different load conditions (snow, wind etc).

3.3 The examining division argued that computing the largest stress value was obvious since this value would determine whether a building structural component was likely to fail or not, and the use of colours to represent ranges of values was well-known to the skilled person (decision, points 1.4 and 1.5 of the reasons).

3.4 In the Board's view, however, there is no need to assess the degree of originality of these features since they have no technical effect. Article 52(2) EPC includes

"presentations of information" in the list of subject-matters that shall not be regarded as inventions. As was noted in decision T 154/04 - Estimating sales activity/DUNS LICENSING ASSOCIATES (OJ EPO 2008,46; reasons, point 8), this list covers subject-matters whose common feature is a substantial lack of technical character. That this is true for presentations of information was observed in decision T 119/88 (OJ EPO 1990,395), which states in its point 4.2 that the classification of objects by colour represents a non-technical effect. Thus, the indication of "strength levels" in the form of predetermined display colours - which is a classification - has no technical effect and cannot contribute to an inventive step.

3.5 Nor does the choice of information to be presented have a technical effect. Article 52(2)(d) EPC does not distinguish between different kinds of information. Therefore the presentation (as such) of *any* information must be regarded as a "non-invention". It is thus irrelevant that the present invention is arranged to display the largest stress value for each building structural component (rather than some other stress value). Although relating to technical phenomena, the stress values are mere pieces of information aimed exclusively at the human mind. It follows that also the features determining the kind of information displayed do not contribute to an inventive step.

3.6 The above conclusion is supported by the observation made in the description (paragraph [0004]) to the effect that stress values displayed in the form of numerical data are difficult to understand. This will however depend on the person studying it. An engineer

would readily understand numerical values and might prefer them to colours since they are more exact and allow an in-depth analysis, whereas a layman satisfied with a quick overview might prefer colours, especially if these have been chosen in a conventional way (eg red for critical components; cf paragraph 1 above). The problem indicated in the description is thus not of a technical character because it depends on the skills and preferences of the particular group of users for whom the invention is intended.

3.7 The appellant has pointed out that according to decision T 115/85 - Computer-related invention/IBM (OJ EPO 1990,30), giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem (reasons, point 7). The question is however whether the present stress data can be said to represent "conditions prevailing in an apparatus". As noted in decision T 833/91 (dated 16 March 1993, not published in OJ EPO; reasons, point 3.7), the "conditions" referred to in decision T 115/85 are of a technical nature, such as an event calling for an error message. The present case is different in that the data presented relate to the building structure being designed, not to the technical conditions of the claimed system itself, such as an event occurring in it.

3.8 It follows that the only technical problem that the invention solves is to find suitable means for conveying colour information to the user. The solution simply consists in presenting the information on a display screen, which is trivial (especially as D1 already contains a screen). Therefore, the invention

does not involve an inventive step (Article 56 EPC 1973).

- 3.9 It may be added that the conclusion that the colouring does not solve a technical problem naturally does not exclude that the invention can be useful or commercially attractive. It only means its advantages do not have a technical character.

4. *The auxiliary request*

Claim 1 of the auxiliary request differs from the main request mainly in that the colour of a component is selected based on a stress type selected by a user from a plurality of different stress types, or a load condition selected from a plurality of different load conditions. In other words, compared with the main request, another set of stress data is displayed. Since the kind of information displayed is irrelevant for a technical effect (cf point 3.5 above), also the subject-matter according to the auxiliary request does not involve an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

T. Buschek

S. Steinbrener