

The opinion in support of the decision being entered
today is not binding precedent of the Board

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD PARKER and
WILLIAM HEWLETT

Appeal No. 2000-1132
Application 08/847,174¹

ON BRIEF

Before SCHAFER, LEE and MEDLEY, Administrative Patent Judges.
MEDLEY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the
examiner's final rejection of claims 1-14 and 18.

A. Findings of Fact

1. The applicants state that the real party in interest is
Light & Sound Design, Ltd. (Brief at 2).
2. The application on appeal contains claims 1-14 and 18.
3. Claims 15-17 have been cancelled.
4. Claims 1-14 and 18 have been rejected as being
unpatentable under 35 U.S.C. § 103 over Talor et al. (Taylor),

¹ Application for patent filed April 1, 1997.

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U.S. Patent 5,307,295, issued April 26, 1994, based on
application 07/641,031, filed January 14, 1991.

The invention

5. The disclosed invention pertains to a virtual reality stage lighting system with a memory, processor, a display unit and a virtual reality user interface in which a user may select a light. Once the light is selected a list of options appears so that the user may select the option it wants for controlling the selected light.

6. The independent claims are reproduced as follows:

1. A virtual reality stage lighting design tool comprising:

a memory storing information representing a plurality of lighting devices and lighting effects that can be produced by said lighting devices;

a processor, coupled to the memory, simulating a lighting display based on said information;

a virtual reality display unit, coupled to the processor, and displaying said lighting simulation to a user as a simulated three dimensional representation of lighting simulation; and

a virtual reality user interface, responsive to three dimensional motion of an operator, to simulate and display the operators actions and responses thereto in selecting one of the lighting devices for modification by graphical reference to one of the simulated lighting devices displayed on the virtual reality display unit, the processor modifying the simulated lighting display responsive to said modification to produce a new lighting simulation so as to reflect the selection of lighting devices and modification options, said virtual reality user interface allowing the user to select a lighting device from said plurality of lighting devices, and operating to determine, from said memory, information about the selected lighting device,

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including options which can be effected on the selected lighting device, and providing a selectable list of said options which can be effected, and allowing selection of one of said options for control.

14. A method of developing a dynamic lighting display using a virtual reality simulation comprising:

displaying a simulated view of a plurality of lighting devices that are generating a display of a simulated three-dimensional lighting display in a two dimensional display so as to simulate lighting effects in three dimensional space;

storing information for said lighting devices, said information including a list of adjustments of said lighting devices that can be controlled;

selecting, by the user, one of the lighting devices for modification in said simulated three dimensional space by means of three dimensional motion;

determining, using said information stored in said storing information, and displaying a list of all adjustments that can be controlled in said one of the lighting devices, responsive to said selecting;

detecting that an adjustment from said list has been selected; and

adjusting the lighting device as so selected.

18. A virtual reality stage lighting control element, comprising:

a database, storing information indicative of three-dimensional information related to stage lighting and characteristics of specific lights;

a virtual reality interface, including a display device and an input device, operating to simulate three dimensional effect based on said three dimensional information, and to allow input of information using a three dimensional interface, said information changing information in said database, and said interface including a user interface production element,

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selecting a light whose effect is to be modified, displaying a first menu of possible adjustment types based on said light that is selected, and responsive to selection of one of said adjustment types to display a second menu of options within said adjustment type.

The Taylor reference

7. Taylor describes a modeling and control system for creating lighting designs off-line and for controlling the on-line operation of the lighting system (Taylor, abstract, lines 1-3).

8. Taylor describes that the modeling system functions to store characteristics of each of the lighting instruments, including the location of the lights and parameter data describing the values of the lighting parameters. (Taylor, col. 33, lines 42-51, col. 35, lines 13-19).

9. Taylor describes that the modeling system can be replaced by a 3-D display, in which the user is represented by a "virtual self." (Taylor, col. 32, lines 45-49).

10. The user can "pick up" and "manipulate" light beams in the model. (Taylor, col. 32, lines 57-64).

11. Taylor further describes that the user can control the lights and lighting effects. The user can also write, store and recall cues. (Taylor, col. 32 line 65 - col. 33, line 3).

The examiner's rejection and the applicant's arguments

12. In the final rejection, the examiner relies on Taylor to teach all of the recited features in independent claims 1, 14, and 18, except for displaying a list of options that can affect a selected lighting device upon selection of the lighting device as follows:

Taylor et al fail to clearly teach the determining information about a selected lighting device and displaying a list of options that can affect a selected lighting device upon selecting of the option. However, implementation of displaying multi-level list of options associated with a selected object is well known. It would have been obvious to one of ordinary skill in the art, at the time the invention was made to implement the displaying list of options associated with a selected object to [the] Taylor lighting system. Motivation of the implementation is for providing a menu contextually associated to the selected lighting device. In light of the rejection set forth above the storing information about the devices would have been obvious so that the contextual menu can be implemented. (Emphasis added) (Final rejection at 3).

13. The applicant argues that the Taylor reference does not teach or suggest a menu of options as claimed or storing data as defined in the claims as follows:

The final rejection states that "implementation of the displaying multi list of options associated with a selected object is well known". However, it is respectfully suggested that this statement is based on hindsight; not on what Taylor teaches. Taylor does not teach a menu of the type defined according to the claimed invention, nor does he teach storing the kind of data defined as being stored in the memory according to the present claims.

The present claims define that the memory stores "information representing a plurality of lighting devices and lighting effects that can be produced by said lighting

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device", and using that to produce a list of "options" when the light is selected. Taylor does not teach this. (Brief at 5).

According to the present claims, when the specific light is selected, drop-down menus provide context on what parameters, e.g. colors, are available. Claim 1 specifies that when the light is selected, the user interface determines "from said memory" information about the selected lighting device including options which can be effected on the lighting device and providing a selectable list of said options which can be affected...". Since a list is provided based on context, the user is automatically told this kind of information. In the example described above, the Artisan has a different color palette than others, and hence this different color palette could be displayed. (Brief at 6-7).

14. In response to the applicants' arguments that Taylor fails to teach storing and retrieving of options related to a selected light, the examiner directs the applicants to passages in Taylor which teach storing and retrieving of information of individual lights. Specifically, the examiner argues:

Per Taylor et al, the system recognizes the type of the object selected and retrieves from memory any previously stored characteristics or other information describing that object (col. 17, lines 45-52). Once the user has selected a light to be defined as part of the model, the particular type of light that has been selected is known (col. 28, lines 52-56). (Answer at 6).

15. In the Answer, the examiner maintains that Taylor fails to teach providing a selectable list of lighting options to the user for effecting a selected light, but argues that such would have been obvious as follows:

As for claim 1: In response to the argument that the rejection is based on hindsight reasoning, the suggestion

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and motivation for [sic] combine is explicitly disclosed by Taylor et al in col. 4, lines 33-35 and in col. 9, lines 16-18. Furthermore, implementation of displaying a list of options contextually associated with a selected object is clearly known in the art, as is disclosed in figure 4D of the cited US patent #5,689,669... As for the appellants' comment that Taylor's system does not know the type of the selected light, a review of Taylor's disclosure shows that the system recognizes the type of the object selected and retrieves from memory any previously stored characteristics or other information describing that object (col. 17, lines 45-52). Once the user has selected a light to be defined as part of the model, the particular type of light that has been selected is known (col. 28, lines 52-56). In one example, a color palette contextually appropriate for a selected object is displayed to the user for modifying the object's color (col. 28, line 54-59). (Answer at 7-8).

B. Discussion

The applicant in its brief indicates that claims 1-8 stand or fall together and that claims 9-14 and 18 do not stand or fall together. (Brief at 8-9).

We sustain the rejection of claims 1-8, 9, 10, 14, and 18 as being unpatentable under 35 U.S.C. § 103 over Taylor. We reverse the rejection of claims 11-13 as being unpatentable under 35 U.S.C. § 103 over Taylor.

Our affirmance of the prior art rejection as it applies to claims 1-8, 9, 10, 14, and 18 is based only on the arguments presented by appellants in their brief. Arguments not raised in the briefs are not before us, are not at issue, and are not considered.

A reversal of the rejection on appeal of claims 11-13

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should not be construed as an affirmative indication that the applicants' claims are patentable over prior art. We address only the positions and rationale as set forth by the examiner and on which the examiner's rejection of the claims on appeal is based.

Claims 1-8

The Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. The patent applicant may then attack the Examiner's prima facie determination as improperly made, or the applicant may present objective evidence tending to support a conclusion of nonobviousness. In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (quoting In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)).

Applicants argue that Taylor fails to teach or suggest storing information representing a plurality of lighting devices and lighting effects that can be produced by the lighting device and using that information to produce a list of "options" for controlling the selected light (Finding 20). In response, the

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examiner directs the applicants to portions in Taylor which describes storing information and retrieving information, but not retrieving the information through a list of options.

Taylor describes storing lighting parameters associated with a selected light (Taylor, e.g., col. 3, lines 54-68, and col. 33, lines 42-52) and being able to retrieve the information associated with a selected light (Taylor, e.g., col. 17, lines 45-52, col. 34, lines 22-24 and lines 52-54). Applicants have failed to demonstrate otherwise.

The applicants argue that the examiner's reasoning for providing a list of options for a selected lighting device is based on hindsight. Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." In re McLaughlin, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

The examiner argues that providing a multi-level pull-down menu to retrieve information of a selected object was well known at the time of the invention, and that such knowledge is not based on hindsight. The examiner, in its answer cites to US Patent 5,689,669 for the proposition that such teaching was well

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known in the art. That reference teaches, in Fig. 4D, a menu of options for a selected object.

The examiner took the position, in the final rejection, that providing a multi-level pull-down menu to retrieve information of a selected object was well known at the time of the invention. The applicants challenged that assertion and the examiner responded by supporting its finding of fact with a reference that demonstrates that at the time of the invention, providing a multi-level pull-down menu to retrieve information of a selected object was well known.

Applicants failure to respond to the examiner's supporting evidence of its finding of fact that providing multi-level menus to retrieve information of a selected object was well known is fatal to it. The examiner's findings stand unchallenged based on the record before us. For this reason alone, we affirm the examiner's rejection of claims 1-8.

Furthermore, the examiner argues that the motivation to retrieve the lighting parameter information via a menu or lists comes from Taylor itself. Taylor recognizes the advantages of entering data into the modeling system using menus and dialogue boxes in order to enter valid data in valid sequences (col. 4, lines 33-35) and to present to the programmer the only legitimate alternatives available, thereby precluding invalid

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choices (col. 9, lines 16-18). Likewise, when a user retrieves the information stored in the modeling system, the use of menus would facilitate accuracy and prevent invalid choices. The users choices are limited to only those seen on the menu.

Taylor even goes one step beyond the above noted suggestions, and provides a specific example of retrieving at least one stored "parameter" using a "list" or "menu" of colors for the selected light. Taylor states:

When the programmer is specifying the color for a particular light or group of lights, he may select the color in a number of ways. Once the programmer has selected a light to be defined as part of the model, the particular type of light that has been selected is known. Correspondingly, the color palette appropriate for that type of lighting instrument can be presented to the programmer in a dialogue box. The programmer can use the palette to select the color. (Emphasis added). (Taylor, col. 28, lines 52-60).

The examiner directed the applicants to the above passage in the examiner's Answer (Finding 14). The applicants have not challenged the examiner's explanations, or rationale that the motivation for displaying the lighting parameter options when retrieving information would be for preventing mistakes during the selection of available options.

Accordingly, for this additional reason, we sustain the examiner's rejection of claims 1-8 as being unpatentable under 35 U.S.C. § 103 over Taylor.

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Claims 14 and 18

Although independent claims 14 and 18 are argued separately by the applicants, the arguments made are essentially the same as those made regarding independent claim 8. Specifically, applicants argue that:

Claim 14 should be allowable for similar reasons to those discussed above. Claim 14 specifies storing information from the lighting device, including a list of adjustments, and displaying that list of adjustments. This enables the user to automatically view these adjustments within the virtual reality environment. Nothing in the cited prior art is in any way suggestive of such a feature, as described above. (Brief at 9).

And:

Claim 18 specifies a database which stores information and characteristics of specific lights and the virtual reality interface which is based on the characteristics of the specific lights. The use of such characteristics should be allowable for reasons discussed above.

Specifically, nothing in Taylor teaches storing the specific characteristics of the specific lights and using them in a virtual reality environment as claimed. Taylor certainly does not display a menu with these specific characteristics since Taylor does not even teach storing those specific characteristics. (Brief at 9-10).

Claim 14 recites storing a list of adjustments of lighting devices, and displaying a list of adjustments of a lighting device. Claim 18 recites storing characteristics of specific lights. As discussed above, Taylor describes storing lighting parameters, e.g. "adjustments" or "characteristics" associated with a selected light (Taylor, col. 3, lines 54-68 and col. 33,

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lines 42-52) and being able to retrieve the information associated with a selected light (Taylor, col. 17, lines 45-52, col. 34, lines 22-24). It is the examiner's position that the manner in which the "characteristics" or "adjustments" are retrieved is not specified in Taylor, but that retrieving such information using lists or menus for a selected object is well known and would have been obvious.

Applicants' arguments add nothing new to their argument presented regarding claim 1.

For the reasons stated above in connection with claims 1-8, we sustain the examiner's rejection of claims 14 and 18 as being unpatentable under 35 U.S.C. § 103 over Taylor.

Claim 9

Claim 9 depends on claim 1 and recites "wherein said lighting devices include portable lighting devices, removably attached to temporary support structures." In his final rejection, the examiner directed the applicants to portions in Taylor that describe lighting objects attached to support objects that are movable. See paper 8 at 4.

In the brief the applicants argue that "claim 9 specifies the lighting devices being attached to temporary support structures. This is not disclosed by the reference." (Brief at 8). The applicants fail to sufficiently rebut the examiner's

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prima facie case of obviousness regarding claim 9. The applicants provide no explanation as to why the cited portions in Taylor fail to meet claim 9.

Accordingly, we sustain the examiner's rejection of claim 9 as being unpatentable under 35 U.S.C. § 103 over Taylor.

Claim 10

Claim 10 depends on claim 9 and further recites "wherein the modification options include the selection and movement of said temporary support structures." In the examiner's final rejection the examiner directed the applicants to portions in Taylor that support the finding that Taylor teaches moving the lights and supporting structures (Taylor, e.g. col. 18, lines 60-62).

In the brief, the applicants argue that "claim 10 defines that the virtual reality system is used to select and move the temporary support structures. Such is not in any way taught or suggested by Taylor." (Brief at 8). Again, the applicants fail to sufficiently explain why the examiners finding that Taylor does teach moving the temporary support structures is erroneous. Applicants should have explained why the cited portion in Taylor does not meet the limitation set forth in claim 10.

Accordingly, we sustain the examiner's rejection of claim 10 as being unpatentable under 35 U.S.C. § 103 over Taylor.

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Claim 11

Claim 11 depends on claim 10 and recites "wherein the processor calculates allowable parameters that are a function of the weight of the lighting devices." In the final rejection, the examiner argues that:

Taylor et al fail to explicitly teach the calculation of allowable weight of the lighting device, however suggested that CAD program can be used to obtained [sic] other attributes of the model elements. Since allowable weight is an element of the designing process, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implement the calculation of the allowable weight of the lighting devices. Motivation of the implementation is for avoiding stage collapse. (Paper 8 at 4).

Here, the examiner does not indicate that determining the weight of the lighting device was well known, but rather that it simply would have been obvious, based on no supporting evidence, to calculate allowable parameters that are a function of the weight of the lighting device. With respect to claim 11, the examiner has failed to make out a prima facie case of obviousness.

The examiner fails to provide sufficient findings of fact that would support the conclusion that calculating the weight of the lighting device by the processor to determine allowable parameters would have been obvious. The examiner fails to direct us to supporting evidence that would demonstrate that avoiding

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stage collapse is a known concern, or that the problem even exists.

The examiner's unsupported reasoning can only be based on impermissible hindsight. To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Accordingly, we reverse the examiner's rejection of claim 11 as being unpatentable under 35 U.S.C. § 103 over Taylor.

Claims 12 and 13

Claim 12 depends on claim 10 and recites "wherein the modification options includes the routing of cables connected to the lighting devices." Claim 13 depends on claim 12 and recites "wherein the display unit displays the cables in a selected routing option."

The examiner finally rejected claim 12 by arguing that "since the lighting device can be moved, it is implicitly included that the cables connected to the devices are rerouted." The examiner, in finally rejecting claim 13 argued that:

Taylor et al fail to explicitly teach the displaying of the

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routing of cable connected to the lighting devices however it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implement the displaying of cable routing to Taylor system. Motivation of the implementation is for visualizing the lighting devices' cables. (Paper 8 at 4).

Regarding claims 12 and 13, the examiner has not made out a prima facie case of obviousness in the first instance. The examiner provides no supporting evidence to demonstrate that routing of cables and displaying the cables would have been obvious at the time of the invention. Without such supporting evidence, the examiner's rejection can only be made with the applicants' own disclosure. As stated above, such hindsight reasoning is impermissible.

Accordingly, we reverse the examiner's rejection of claims 12 and 13 as being unpatentable under 35 U.S.C. § 103 over Taylor.

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C. Decision

The examiner's rejection of claims 1-8, 9, 10, 14 and 18 as being unpatentable under 35 U.S.C. § 103 over Taylor is affirmed.

The examiner's rejection of claims 11-13 as being unpatentable under 35 U.S.C. § 103 over Taylor is reversed.

AFFIRMED-IN-PART

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RICHARD E. SCHAFER)	
Administrative Patent Judge)	
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JAMESON LEE)	INTERFERENCES
Administrative Patent Judge)	
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SALLY C. MEDLEY)	
Administrative Patent Judge)	

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Scott C. Harris
Fish & Richardson P.C.
4225 Executive Square
Suite 1400
La Jolla, CA 92037