

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HEWLETT PACKARD
DEVELOPMENT COMPANY, LTD.

Appeal 2007-4532
Application 10/066,132
Technology Center 2100

Decided: 15 January 2008

Before JAMESON LEE, RICHARD TORCZON, and SALLY C.
MEDLEY, *Administrative Patent Judges*.

TORCZON, *Administrative Patent Judge*.

DECISION ON APPEAL

The invention on appeal relates to a system and method for displaying the status of an application program.¹ Claims 1-18, all of the pending claims, have been rejected. Claims 1, 4, 5, 7, 8, 11, 13, and 16 stand rejected

¹ Specification (Spec.) at 0009-0010.

for anticipation under 35 U.S.C. 102(b),² while the rest stand rejected for obviousness under 35 U.S.C. 103.³ The appellant (HP) seeks review of the rejections. The anticipation rejection is REVERSED, the obviousness rejection is AFFIRMED, and a new ground of rejection is entered for certain claims.

THE CLAIMED INVENTION

The independent claims

There are three independent claims—1, 7, and 13—which differ principally in claiming the invention as a method, a system, and media with software, respectively.⁴ Claim 1 defines the claimed method—

A method of generating a visually perceptible output indicative of a status of an application program comprising steps of:

receiving a first data stream having a first format;
encapsulating said first data stream in said first format into a predetermined second format;

aggregating information contained in said first data stream output in said second format by applying a first set of rules organizing said information into a plurality of categories;
and

displaying a graphical representation of parameters relating to each of said categories in response to changes in said information contained in said first data stream.

² Supplemental Examiner's Answer (Ans.) at 4.

³ Ans. at 6.

⁴ All references to the claims pertain to the claims appearing in Appendix A of the Appeal Brief (Br.).

During examination, a claim must be given the broadest construction reasonable in view of the specification.⁵ We focus our analysis on the contested limitations.⁶

The examiner notes that while independent claims 7 and 13 require the first data stream to be from "an" application program, claim 1 does not.⁷ We note that claims 7 and 13, say from "said" application program, thus linking the source of the first data stream to the application program of the preamble. While claim 1 only mentions the application program in the preamble, claim 1 is a method claim. In all cases, the preamble states the intended purpose of the invention is to display the status of the application program itself rather than the status of a device monitored by the program.

The import of a preamble must be determined from the facts of the case: there is no absolute rule for evaluating a preambular statement of intended use.⁸ Two instances in which it is particularly difficult to ignore a preambular statement of intended use are (1) when the preamble element is incorporated into the body of the claim⁹ and (2) when the claimed invention is a method.¹⁰ For claims 7 and 13, which each involve an incorporation into the body of the claim, the broadest reasonable construction is limited to

⁵ *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007).

⁶ *Aero Prods. Int'l, Inc. v. Intex Rec. Corp.*, 466 F.3d 1000, 1012 n.6 (Fed. Cir. 2006).

⁷ Ans. at 8.

⁸ *Bell Commuc'ns Research, Inc. v. Vitalink Commuc'ns Corp.*, 55 F.3d 615, 621 (Fed. Cir. 1995).

⁹ *Id.* (noting "said packet" in the claim body incorporated the packet in the claim preamble).

¹⁰ *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003).

inventions involving the status of an application program. For claim 1, in which the steps do not explicitly incorporate application program status, the claim could be construed broadly to cover a method that both includes the listed steps and displays the status of an application program. We do not see, and the examiner has not explained, why on the facts of this case we should ignore the intended function performed by a method simply because the function is stated in the preamble.

Artistic graphical representation limitation

Claims 5 and 11 add a further limitation for which we take claim 5 to be representative:

The method of claim 1, further including the step of:
creating an artistic graphical representation for presentation of
information to a user.

HP does not point to a specific definition of "artistic graphical representation" in its disclosure. The closest approach to a definition that we could locate¹¹ is not very specific:

This information may be presented in an artistic (visually pleasing and informative), meaningful manner using, for example, a computer display representing various program parameters and/or conditions.

While "informative" and "meaningful" have a functional meaning, they add little to the requirement that the "display represent[] various program parameters and/or conditions" since achieving the latter satisfies the former. The phrase "visually pleasing", however, is extremely problematic since it is widely acknowledged that beauty is in the eye of the beholder. The visual

¹¹ Spec. at ¶0017.

arts broadly embrace Marcel Duchamp's *Fountain* (1917) (a commonplace urinal displayed on its back) and Robert Rauschenberg's conceptually challenging *Erased de Kooning Drawing* (1953) (an erased drawing of Willem de Kooning). HP's FIG. 6 looks strikingly like the Neo-Plasticism works of Piet Mondrian. The examiner urges that any graphical representation is artistic.¹² We adopt an only slightly narrower construction that a graphical representation must be designed or otherwise selected to be artistic.

Sound and color limitations

For the obviousness rejection, the claims are grouped according to two limitations that of which claims 2 and 3 are representative:

2. The method of claim 1 further including the step of: encoding an aural representation of parameters relating to each of said categories in response to changes in said information contained in said data stream in said second format.

3. The method of claim 1 further including the step of: defining a color palette, wherein colors of the color palette are associated with human recognized process status conditions and represent the status conditions.

We construe "aural representation" to include any tone or sound capable of distinguishing between two or more information states. We construe "color palette" to mean a set of two or more colors used to distinguish between two or more status conditions.

¹² Ans. at 10.

ANTICIPATION

The anticipation rejection is based on a patent to Martinez.¹³ Martinez relates to a system and method for automatically determining the physical location and operational status of components in a computer system, and mapping, monitoring, and controlling the same through a graphical user interface.¹⁴ The examiner relies on the operations illustrated in Figures **7** and **8** to explain how Martinez anticipated the claimed invention.¹⁵ In step **106**, information is received that, in step **110** is encapsulated in a data structure. The initial status information is displayed in step **112**, but updated information is displayed in step **130** as a result of changes detected in steps **122-128**. Although step **106** lists "positional" rather than "status" information, the disclosure explains that status information is received in step **108**.¹⁶ In both cases, however, the information relates to a device rather than an application program.

To the extent the rejection depends on a claim construction ignoring the intended use of displaying the status of an application program, the rejection must be reversed in view of our claim construction above. Alternatively, the examiner urges that Martinez "does in fact display the status of the application program, especially in the case of the user-controlled component parameters, while reflect[ing] values set by way of the

¹³ R. Martinez et al., *Automatic mapping, monitoring, and control of computer room components*, US 5,956,665 (issued 21 September 1999) ("Martinez").

¹⁴ Martinez at 1:29-34.

¹⁵ Ans. 4-5, citing Martinez at 10:4-31 and 11:18-30.

¹⁶ Martinez at 10:12-19.

component control GUI [i.e., graphical user interface]."¹⁷ The examiner does not identify where Martinez discloses displaying the status of an application program and it is not apparent to us from the examiner's description. In any case, the independent claims require more than simply displaying a status. The portions of Martinez cited for the other limitations are directed to device status, not program status. Whether it would have been obvious to extend a hardware monitoring solution to a software monitoring problem is not a question we can answer in the context of an anticipation rejection.

Martinez does not anticipate independent claims 1, 7, and 13 or claims 4, 5, 8, 11, and 16, which depend from them. The anticipation rejection is REVERSED.

OBVIOUSNESS

In analyzing obviousness, the scope and content of the prior art must be determined, the differences between the prior art and the claims ascertained, and the ordinary level of skill in the art resolved. Objective evidence of the circumstances surrounding the origin of the claimed subject matter (so-called secondary considerations) may also be relevant. One function of secondary considerations is to guard against the employment of impermissible hindsight.¹⁸

¹⁷ Ans. at 9.

¹⁸ *Graham v. John Deere Co.*, 383 U.S. 1, 17, 36 (1966), *cited with approval in KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). The record on appeal does not contain objective evidence of secondary considerations.

Scope and content of the prior art

The examiner relies on two patents as evidence of obviousness:¹⁹ the Martinez patent and a patent to Jancke.²⁰ As discussed above, Martinez teaches a system for monitoring the status of electronic devices on a network that includes steps of retrieving device-status information, building a data structure representing that information, and displaying updated information in response to changes in device status.²¹

Jancke addresses the problem of monitoring computer network status, particularly "a system for obtaining, concurrently displaying, and dynamically updating, an operational state indicator for a plurality of nodes in a computer network."²² Although Jancke does not explicitly define "node", hardware devices are used in the detailed description as examples of nodes.²³

Both Martinez and Jancke teach the use of displays to show status information. In Martinez, FIG. 6 (right) illustrates "a graphical representation of a single shelf, along with...the status of the components located within the shelf".²⁴ Jancke teaches the use of operation state icons to represent the operational state of nodes. For example, in FIG. 4 (left), Jancke illustrates the use of an icon representing the familiar red/yellow/green traffic signal to indicate whether a node is stopped, paused,

¹⁹ Ans. at 6.

²⁰ G. Jancke & C.L. Kiernan, *Computer network status monitoring system*, US 5,764,913 (issued 9 June 1998).

²¹ Martinez at 10:4-11:42.

²² Jancke at 1:5-9.

²³ Jancke at 2:23-26.

²⁴ Martinez at 9:21-24.

or running. An unknown state could be represented with blinking lights.²⁵ Additionally, other sensory stimuli, such as an audio tone or wave file could be generated to notify a human user of the operational state of a node.²⁶

Differences between the prior art and the claims

The examiner concedes two differences: encoding a sound representing information changes²⁷ and defining colors representing process state conditions.²⁸

HP also urges that Martinez does not address all of the limitations in the independent claims and that the examiner has not relied on Jancke to meet these deficiencies.²⁹ For the independent claims, HP urged that Martinez did not expressly or inherently teach displaying an application-program status.³⁰ HP also urged that Martinez does not teach aggregation of information by applying a first set of rules with respect to information contained in the first data stream output in a second format.

With regard to claims 5 and 11, which depend from claims 1 and 7, respectively, and from which claims 6 and 12 respectively depend, HP argues that Martinez fails to teach an artistic graphical representation for presentation of information to a user.

²⁵ Jancke at 3:24-36. HP discloses a very similar color scheme in its specification. Spec. at ¶0023.

²⁶ Jancke at 3:54-56.

²⁷ Ans. at 6.

²⁸ Ans. at 7.

²⁹ Br. at 9.

³⁰ Br. at 5-6.

The ordinary level of skill

We look to the evidence of record—the applicant's disclosure, the cited references, and any declaration testimony—in resolving the ordinary level of skill in the art. We focus on what those of skill in the art know and can do.³¹

HP discloses that those in the art are familiar with conventional storage mechanisms,³² with analog representations of data (which they would apparently consider sufficiently "artistic"),³³ the use of colors "to portray any information",³⁴ and a variety of methods for signaling warnings to a user³⁵ or presenting information generally.³⁶ Those in the art knew when rules-based aggregation would be necessary without guidance from the specification.³⁷

Martinez shows that those in the art were concerned about the inefficiency and error inherent in trying to manually monitor the components of a complex computer environment.³⁸

Jancke shows that those in the art were aware of a need (by both administrators and users) for detailed information about the status of different components in a complex computer environment.³⁹

³¹ *Ex parte Jud*, 2006 WL 4080053 at *2 (BPAI) (rehearing with expanded panel).

³² Spec. at ¶¶0020 & 0027.

³³ Spec. at ¶0023.

³⁴ Spec. at ¶0025.

³⁵ Spec. at ¶0027.

³⁶ Spec. at ¶¶0028 & 0030.

³⁷ Spec. at ¶0021.

³⁸ Martinez at 1:55-2:3.

³⁹ Jancke at 1:13-45.

Finally, we note that those in the art would have considered software and hardware to be broadly interchangeable.⁴⁰ Similarly, those in the art would have known that both software and hardware can be a source of a "computer problem".

Synthesis

The first issue we must confront is whether the cited prior art, both directed to software monitoring the status of hardware, would have had relevance to software monitoring the status of software. By the filing date of the application on appeal,⁴¹ there can be no serious question that software for monitoring and displaying status would be applicable to a wide range of underlying systems be they hardware, software, biological, geological, etc. Thus, while it might have been cleaner for the examiner to provide a reference in the same field, we cannot ignore a reference from a closely allied field that solves a similar problem.

Although the encapsulation of the first data stream in a second format that is then aggregated and organized is urged as a difference, the examiner is correct that Martinez teaches this step. Martinez must take raw monitoring data and produce a graphical output. To do so, Martinez builds a data structure (the second format) and manipulates (organizes) it to produce useful output for the graphical user interface.

The "artistic graphical representation" is readily met by the icons and other designed graphical elements of both Martinez and Jancke. Similarly,

⁴⁰ *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339-40 (Fed. Cir. 2005).

⁴¹ 30 January 2002.

Jancke teaches the use of colors and sounds in essentially the same terms and for essentially the same reasons that HP gives in its specification.

As of HP's filing date, a person having ordinary skill in the art would have considered the use of an artistic graphical interface employing sounds and colors to represent status changes to be routine. The need for and application of such an interface to application programs would have been readily apparent. The encapsulation, aggregation, and organization of raw data into a form that the interface could use would have called for no more than the routine application of old computing elements to produce a predictable result.

The obviousness rejection of claims 2, 3, 6, 9, 10, 12, 14, 15, 17, and 18 is AFFIRMED.

NEW GROUND OF REJECTION

If the subject matter of a properly dependent claim would have been obvious, it ordinarily follows that the subject matter of any parent claim was obvious as well.⁴² Unfortunately, we have no obviousness rejection for claims 1, 5, 7, 11, and 13. Consequently, we enter a new ground of rejection for these claims under § 103 in view of Martinez and Jancke for the reasons provided above.

⁴² *Aventis Pharma Deutschland GmbH v. Lupin, Ltd.*, 499 F.3d 1293, 1300 (Fed. Cir. 2007); *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1319-20 (Fed. Cir. 2007); *In re Muchmore*, 433 F.2d 824, 824-25 (CCPA 1970) ("Since we agree with the board's conclusion of obviousness as to these narrow claims, the broader claims must likewise be obvious.").

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HOLDING

The anticipation rejection of claims 1, 4, 5, 7, 8, 11, 13, and 16 is REVERSED. The obviousness rejection of the other claims is AFFIRMED. A new ground of rejection is entered for claims 1, 5, 7, 11, 13, and 16.

AFFIRMED-IN-PART
NEW GROUND OF REJECTION

For Hewlett Packard Development Company, Ltd., R. Ross Viguet,
Fullbright & Jaworski, LLP, of Dallas, Texas.

For the Commissioner of Patents, Michael Roswell with Tadesse Hailu and
Kristine Kincaid.