Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte JAKOB NIELSEN, BRUCE TOGNAZZINI, and ROBERT GLASS

Appeal No. 2000-0141
Application No. 08/673,693

ON BRIEF[1]

Before HAIRSTON, RUGGIERO, and BARRY, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

The examiner rejected the appellants' claims 1-28. They appeal therefrom under 35 U.S.C. § 134(a). We reverse.

BACKGROUND

The invention at issue here relates to communications bandwidth. The Internet offers access to the World Wide Web's

[1]An oral hearing scheduled for Dec. 11, 2001 was waived. (Paper No. 29.)

myriad of data. Access to the data is limited, however, by the bandwidth of the communication link from a user's computer to the Internet.

The limitation is exacerbated by the multiple streams of data that often flow across the communication link. A conventional Web browser allocates the bandwidth equally to all data streams destined for display. Unfortunately, such an allocation delays the receipt of data in which a user is most interested.

In contrast, the appellants' invention allocates additional bandwidth to a data stream in which a user is most interested. The data stream of interest is identified by determining the area of a display at which the user is gazing. Allocation of bandwidth to the area of interest is then increased.

Claim 1, which is representative for present purposes, follows:

> 1. A computer controlled method for altering bandwidth allocation when downloading information to a computer for display to a user; said computer having a display device, a network interface to a network, a gaze-tracking device, and a bandwidth allocation mechanism; said gaze-tracking device determining a gaze
>
> position on said display device; said computer controlled method comprising the steps of:
>
> (a) identifying an area of interest to said user on said display device using said gaze position;
>
> (b) determining an existing bandwidth allocation directed to said area of interest; and
>
> (c) increasing said existing bandwidth allocation to said area of interest.
>
> (Appeal Br. at 11.)

The prior art applied by the examiner in rejecting the claims follows:

Ruoff, Jr. (“Ruoff”)	4,513,317	Apr. 23, 1985
Bouve et al. (“Bouve”)	5,682,525 (filed Jan. 11, 1995).	Oct. 28, 1997

Claims 1-28 stand rejected under 35 U.S.C. § 103(a) as obvious over Ruoff in view of Bouve.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 1-28. Accordingly, we reverse.

We begin by noting that the references represent the level of ordinary skill in the art. *See In re GPAC Inc.*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995)(finding that the Board of Patent Appeals and Interferences did not err in concluding that the level of ordinary skill was best determined by the references of record); *In re Oelrich*, 579 F.2d 86, 91,
198 USPQ 210, 214 (CCPA 1978) ("[T]he PTO usually must evaluate ... the level of ordinary skill solely on the cold words of the literature."). Of course, "'[e]very patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that [which is] disclosed ....'"
In re Bode, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977) (quoting *In re Wiggins*, 488 F.2d 538, 543, 179 USPQ 421, 424 (CCPA 1973)). Those persons "must be presumed to know

something" about the art "apart from what the references disclose."

In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). With these principles in mind, rather than reiterate the arguments of the appellants or examiner *in toto*, we address the main point of contention therebetween.

The examiner alleges that in Ruoff "[i]t is **inherent** that by scanning the area of the video in a high resolution mode and the other area in a low resolution mode that the bandwidth in the area of interest is increased considerably." (Examiner's Answer at 6-7 (emphasis added).) He also asserts, "Bouve teaches the many different ways of increasing the bandwidth and the item of interest is one which would benefit from it (see column 14, lines 20-42)." (*Id.* at 7.) The appellants argue, "[a]n increase of resolution of an image does not imply an increase in bandwidth allocated to the transmission of this image." (Reply Br. at 2.) They further argue, "Bouve requires 'sufficient bandwidth' but nowhere

discloses increasing bandwidth during computer operations." (Appeal Br. at 5.)

In deciding obviousness, "[a]nalysis begins with a key legal question -- *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987)(emphasis in original). Here, claim 1 specifies in pertinent part the following limitations: "increasing said existing bandwidth allocation to said area of interest." Similarly, claims 8 and 15 specify in pertinent part the following limitations: "an increase bandwidth mechanism configured to increase said existing bandwidth allocation." Also similarly, claim 22 specifies in pertinent part the following limitations: "computer readable code configured to cause said

computer to effect an increase bandwidth mechanism configured to increase said existing bandwidth allocation." Accordingly, claims 1, 8, 15, and 22 require *inter alia* allocating

additional bandwidth to an area of a display in which a user is most interested.

Having determined what subject matter is being claimed, the next inquiry is whether the subject matter is anticipated or obvious. "In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993)(citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). "'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" *In re Bell*, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). Furthermore, "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary

skill.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (quoting *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)).

Here, in Ruoff's television apparatus "only a portion of the [displayed] image subtended by the gaze of the viewer's eye is of high resolution; the remainder is of low resolution." Col. 3, ll. 23-26. The examiner provides no extrinsic evidence, however, that the high resolution portion is allocated additional bandwidth as compared to the low resolution remainder. To the contrary, the reference implies that the high resolution portion and the low resolution remainder are allocated **equal** bandwidth. Specifically, "[t]he temporal scanning rate is the same for all lines, both high- and low-resolution." Col. 5, ll. 5-6.

Even further to the contrary, Ruoff also implies that the high resolution portion is allocated **less** bandwidth than the low resolution remainder. Specifically, in the high

resolution portion, "the linear scanning velocity is correspondingly lower." *Id.* at ll. 6-9. "Conversely, the low-resolution region ... has a correspondingly higher linear scanning velocity ...." *Id.* at ll. 11-14. Furthermore, Figure 3 of the reference "is an illustration of the data encoding scheme for a single field of data," col. 2, ll. 46-47, which includes time intervals T_2 and T_3. "In time interval T_2, data is [sic] provided which defines [sic] the high-resolution video image portion. In time interval T_3, data is [sic] provided for defining the low-resolution portion of the image." Col. 4, ll. 5-8. Importantly, Figure 3 shows the high resolution time interval T_2 as smaller than the low resolution time interval T_3.

For its part, Bouve fails to cure the defect of Ruoff. The paragraph of Bouve cited by the examiner mentions that "to utilize the above-described multi-media presentation, the system of the invention must provide sufficient bandwidth, processing speed, and display resolution, and the remote port must display the multi-media transmissions with sufficient

speed and resolution so as to be convenient to the user of that information." Col. 14, ll. 20-25. The paragraph then lists communications systems and equipment for providing the sufficient bandwidth. Specifically, the systems and equipment include "modems," "special connections," "special interfaces provided by regional telecommunications systems," "optic fiber cabling," "linkages ... known as Tl, ISDN," "56 Kbps wide band-width connections," and "microwave and other communications links that do not require direct cabled connections." *Id.* at ll. 32-42. Whatever the systems or equipment chosen from the list, however, the reference does not allocate additional bandwidth to an area of the multi-media presentation in which a user is most interested.

Because there is no evidence that Ruoff allocates additional bandwidth to its high resolution portion, and Bouve does not allocate additional bandwidth to an area of its multi-media presentation in which a user is most interested, we are not persuaded that the teachings from the applied prior art would have suggested the limitations of "increasing said existing bandwidth allocation to said area of interest," "an

increase bandwidth mechanism configured to increase said existing bandwidth allocation," or "computer readable code configured to cause said computer to effect an increase bandwidth mechanism configured to increase said existing bandwidth allocation." Therefore, we reverse the rejection of claims 1, 8, 15, and 22. We also reverse the rejection of claims 2-7, 9-14, 16-21, and 23-28, which respectively depend from claims 1, 8, 15, and 22.

CONCLUSION

In summary, the rejection of claims 1-28 under § 103(a) is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
JOSEPH F. RUGGIERO	)	BOARD OF PATENT APPEALS

Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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LANCE LEONARD BARRY	)	
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