IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

ERIC HAMILTON	)	
Plaintiff	)	Civil Action No.
v.	)	
	)	MJG 02-CV-2438
TERAGLOBAL COMMUNICATIONS CORP.	)	
WEBWISDOM.COM, INC	)	
Defendants	)	
	)	

PLAINTIFF'S OPENING BRIEF ON CLAIM CONSTRUCTION

In accordance with part C. 7. a. of the Scheduling Order in the above captioned matter, Plaintiff Hamilton hereby submits his Opening Brief on Claim Construction.

I. THE CLAIMS AT ISSUE

Independent Claim 1 and dependant claims 2 and 4- 12 of the Hamilton Patent (Exhibit A) are asserted against the TerraGlobal/Wave Three accused products/services.

Claims 2, 5, 6, 7, 8 and 12 have no terms which need any special definition. All of the terms in these claims are well known and should be afforded their common meaning.

The only language which requires special definition through a Markman claims interpretation determination by the Court because is the language:

> simultaneously and concurrently entering said information in handwritten freehand form from each of said stations and to display on at least its associated monitor means; and
>
> communication means for virtually simultaneously and concurrently transmitting said information being entered simultaneously and concurrently at either of said input means from either station to other station, and for enabling the virtually simultaneous and concurrent display of said transmitted information on both of said monitor means associated with both of

> said stations such that said information being entered at a first input means simultaneously and concurrently appears on all of said monitor means while under the independent control of said first input means.

found in Claim 1. This language is used in Claim 4 as:

> The system of claim 2, wherein said communication means selectively affords said instructor's station to selectively view said information displayed at said monitor means on any of said student's stations virtually simultaneously and concurrently to the time said information is being handwritten at said student's stations.

in Claim 9:

> The system of claim 8, wherein said stations include more than two remotely-located stations, and wherein said input means include more than two input means for simultaneously and concurrently entering said handwritten information in freehand form from said more than two stations.

in Claim 10:

> The system of claim 1, wherein said communication means includes means for transmitting one pixel of said information being entered simultaneously and concurrently at either of said input means from either station to the other station on a pixel-by-pixel basis from alternating stations.

and in Claim 11:

> The system of claim 1, wherein said communication means includes means for enabling the display of one pixel of said information being entered simultaneously and concurrently at either of said input means from either station to the other station on a pixel-by-pixel basis from alternating stations.

II. GENERAL STATEMENT OF DISPUTED LANGUAGE

The dispute in claim construction centers around the meaning of "virtually simultaneously and concurrently transmitting" and "the virtually simultaneous and concurrent display ." Plaintiff's position is that "virtually simultaneous" is not the same as "simultaneous." Any system for transmission of information will require a certain time lag for the information to

be distributed from one location to other locations in the system. Simultaneous transmission and or display is not an object of the invention. The important aspect of the invention is that it allows multiple users to "simultaneously and concurrently entering said information" from a number of separate inputs without having to wait for a transfer of program control as was required by the limitations of the cited prior art.

Distribution of the information to the other participants need not be simultaneous as long as it was "virtually" simultaneous. Defendant asserts that the claims should be construed such that any delay in transmission, however slight and regardless of the reason, would be outside the scope of coverage of the claims.

Defendant also seeks to improperly narrow the meaning of "handwritten freehand" information. Defendant seeks to narrow this meaning to only encompass information entered by a stylus in direct contact with the display screen. A stylus and a touch screen are one disclosed embodiment of the invention and are recited in specific dependant claims. The specification of the patent discloses and described alternative "handwritten freehand" entry of information and specifically includes the use of a mouse in this definition. Handwritten freehand does not mean entered with a stylus on a screen or digitizer pad. Handwritten freehand is a term used by the inventor for a broad range of sketched input as opposed to the entry of keyboard characters.

III. SPECIFIC CLAIMS CONSTRUCTION

CLAIM 1 -

"1. A computer assisted electronic educational information communication system, comprising:"

(needs no special definition)

Any exchange of information is the education of the recipient by the provider of the information. An exchange of ideas (collaboration) is the education of all participants. Education is not confined to a formal classroom setting. The American Heritage Dictionary defines education as "Serving to impart knowledge or skill."

The WebEx Glossary http://www.webex.com/glossary.html, (Exhibit B) which is a measure of industry understanding of the meaning of terms in general use, uses a broad definition of the terms instructors and students in defining the online whiteboards which are the subject matter of this suit: "Whiteboard - This is analogous to an actual whiteboard in a meeting room. Instructors and students can simultaneously mark and write on the whiteboard to share information."

"at least two stations;"

(needs no special definition)

two computer terminals of any configuration capable of communication.

"at least two monitor means, one associated with each of said stations, for displaying electronic educational information in visual form;"

(needs no special definition)

Monitors are standard components which have known functions in a computer system. This claim element includes any monitor capable of displaying information in a visual form. The monitor must be capable of graphic representation in addition to text for the display of an interactive whiteboard. Any common computer monitor will perform this function. The patent specification describes the monitor as a standard computer monitor. In one specific embodiment, corresponding to certain dependant claims, the monitor is touch screen display. However, independent Claim 1 is not limited to a touch screen display.

"at least two input means, one associated with each of said stations, for simultaneously and concurrently entering said information in handwritten freehand form from each of said stations and to display on at least its associated monitor means; and"

"Simultaneously and concurrently entering" means that each user can enter information at his/her station at the same time as the other users enter information at their stations. The entry of information is independent. There is no dispute as to the meaning of this part of this element of Claim 1.

Handwritten freehand form includes any freehand sketch tool, as opposed to a text tool or tool which selects fixed geometric elements. The tool can be implemented with a mouse, a pen, a digitizer pad, a touch screen, a stylus or any other freehand input device. The Patent Specification (Exhibit A) refers to the use of a mouse or a pen in the definition of handwritten freehand in several places:

Column 14, line 13:

"If a mouse rather than a pen is the input device and if the ..."

Column 14, line 60:

"Similarly, if the user is in a drawing or erasure mode (611), the line is drawn or erasure effected (with a white fillbar) (614). An evaluation of whether the communication is being shared with the teacher (616) (if this is a student situation) or with other students (618)(if this is a teacher situation) results in those coordinates with destination being sent (if a mouse rather than a pen is used) to the aforementioned sent_pt function (617 and 19), which prepares them for transmission to the appropriate destination via the send_que function..."

Column 16, line 1:

"... followed by a determination of whether the input device is a mouse or a pen

(803) Thus, the implementation may be reconstructed using a mouse instead of a pen. When the pen is used (853B), the mouse is disabled (821)."

Column 16, line 32:

The "click areas" that define what events occur when a given spot on the screen is touched by the pen (or mouse, when a button is depressed) are then initialized..."

Several time in the file history, both the patent office examiners and Hamilton "... in freehand form, e.g., using a stylus or a mouse,..." (Exhibit F, page 22) refer to a mouse as a freehand drawing form.

Again, defendants also use the term freehand much more broadly when describing the tools included in infringing/licensed products. WebEx Glossary http:www.webex.com/ glossary.html: "Whiteboard - This is analogous to an actual whiteboard in a meeting room. . . . There must be tools to draw straight and free-hand lines, circles, ovals, rectangles and type words."

Even the literature of TerraGlobal/Wave Three (Exhibit C) describes the use of a mouse in entering information on the TerraGlobal/WaveThree whiteboard as "freehand." Teramedia Demo 6.2 User Guide, page 18: "The pen allow you to draw freehand on the Virtual Whiteboard workspace."

Wave Three - Session Workspace User Guide, (Exhibit D) page 1: "...you can use a variety of tools to draw freehand and correspond via a 'virtual whiteboard' environment."

> **"communication means for virtually simultaneously and concurrently transmitting said information being entered simultaneously and concurrently at either of said input means from either station to other station, and for enabling the virtually simultaneous and concurrent display of said transmitted information on both of said monitor means associated with both of said stations such that said information being entered at a first input means simultaneously and concurrently appears on all of said monitor means while under the independent control of said first input means."**

The transmission is "virtually" simultaneous and concurrent. The virtual language means that the information does not have to appear on the other station at same the time as it is entered.

The display of information is also not simultaneous but "virtually" simultaneous. The information does not appear in the displays as it is entered. There is a delay to allow for accumulation and transmission. The information can be transmitted and displayed: after a set time delay such as updating every second; after the completion of a drawing stroke; or after entry of a segment of a drawing, such as each pixel or a group of pixels.

Virtually simultaneous and concurrent transmission is found in the patent specification:

Column 8, line 60:

"If the (local or remote) user is instead continuously pressing the pen in a writing area (317), a line is drawn to connect the location of that depression with the most previous one (318). (These "lines" are extremely short, and give the appearance of smooth, continuous drawing or writing)"

Column 13, line 22:

"When an ABS is received ... the user at the sending [remote] station has just pressed the pen to the sensor ... and the absolute coordinates of the touchdown are recorded so that ... a connection can be made between the point at these absolute coordinates and the point at the coordinates where the next interrupt is issued by the pen's serial interface at the remote station. At that next interrupt, a new PACKET is sent by the remote station, with the command field set to REL ... and the relative position from the last touch down or drawing interrupt (whichever is more recent) is included in the packet. A line is drawn from the point at the last pair of coordinates to the point at this new set of coordinates."

The description in the specification demonstrates that the transmission occurs "after" a

line is drawn, not "as" a line is drawn. The start point and end point of a line are transmitted. The line is only drawn at the receiving station after receipt of the start and end points. Thus the line is drawn "virtually simultaneously" not simultaneously to the movement of the input at the sending station.

Again, defendants also use the term "simultaneous" to describe their system when there is also a lag in transmission time between input at the sending station and transmission to the receiving station. (Exhibit B) WebEx Glossary http:Hwww.webex.com/glossary.html: "Whiteboard - This is analogous to an actual whiteboard in a meeting room. Instructors and students can simultaneously mark and write on the whiteboard to share information."

Also (Exhibit C) Teramedia Demo 6.2 User Guide, page 1: "Virtual Whiteboard - Teramedia whiteboard is a real time collaboration tool that allows any number of individuals to share and manipulate any type of media simultaneously in real-time."

This position is also supported by the prosecution history of the Hamilton patent. During examination, Examiner Kubel, in the First Office Action, February 5, 1991, cited a number of references against the claims of the Hamilton patent application. The first references applied, Shaprio and Erhardt taught systems for one way communication. Hamilton in the amendment of August 5, 1991, (Exhibit E) argued that the invention was "Thus, in essence, the invention allows a teacher to interactively share an electronic sheet of paper with one or more students in the classroom." Hamilton contrasted the invention with the prior art by stating that "the Shapiro computer training system is essentially an arrangement for switching video signals." The prior art cited in the file history does not allow for sharing of a common workspace. The prior art over which Hamilton distinguished his invention required a switching of complete control over the application and the shared space from one station to the other. Thus the claims recite that the

access to the system is simultaneous i.e. **"at least two input means, one associated with each of said stations, for simultaneously and concurrently entering said information**..." However, the transmission is only "virtually simultaneous." Agin the distinction over the art of record is "In the Shapiro et al. system, at any given time, only one station can input information." (Exhibit E, page 21)

It is the ability to simultaneously input information and to have simultaneous access to the program and the working space (whiteboard) that Hamilton argued distinguished his invention over the prior art.

Virtually simultaneous means "...both computers connected to the same monitor at the same time..." to distinguish over Shapiro which required that "the student's computer must be disconnected from the instructor's monitor..." Simultaneous and concurrent refers to the continuous connection, not the immediate transfer of data on a pixel-by-pixel basis. (Exhibit E)

In the Second Office Action, February 20, 1992, Examiner Crosby rejected the claims over "remote controlling programs such as Carbon Copy, PCAnywhere or EasyLan with a painting or drawing program such as PC Paint, Dr. Halo or AutoCad." None of these references were made of record on the patent, however, they were discussed during the prosecution.

Hamilton responded in the final amendment before allowance on May 29, 1992 (Exhibit F). Again distinguishing over the prior art on the basis of mutual concurrent access not on the basis of the speed of transmission within the system. Hamilton specifically highlighted the same important aspects of invention discussed in the telephone interviews of March 18 and 25 with Examiner Crosby:

> Claim 1, line 14, "simultaneously" has been added after "entered" to further clarify that the present invention has the capability to process information from both input stations while both users are writing at exactly the same time; (Exhibit F, page

19)

Throughout the amendments, Hamilton consistently distinguishes between "simultaneous entry of information" and "virtually simultaneously transmitting" the information. Hamilton recognized the delay and emphasized the meaning of "virtually."

> "communication means for virtually simultaneously transmitting the electronic information being simultaneously entered at either station to the other station, and for enabling the virtually simultaneous display of the transmitted information at both of the stations such that electronic information being entered at a first station appears at both stations at substantially the same time while under the independent control of the first station." (emphasis in the original) (Exhibit F, page 22)

Hamilton also distinguished over the non-record prior art in the basis of simultaneous control not simultaneous transmission at the bottom of Page 22 of the May 20, 1992 amendment, Exhibit F.

Hamilton also provided a newly discovered reference, Suzuki, to the patent office in the May 20th amendment. On page 24, Hamilton distinguishes his invention over this new reference on the same basis as the previous statements. "In other words, like the combination of the other art discussed above, Suzuki cannot simulate two users writing simultaneously and independently on a the same sheet of 'electronic paper' from different workstations. More specifically, ... information entered by one user of the Suzuki system would not be under the independent control of that user."

CLAIM 2 -

2. The system of claim 1, wherein one of said stations is adapted for an instructor and the other of said stations are adapted for students.

(needs no special definition)

An instructor is the participant with control over the session in a collaboration system, often referred to as a presenter, moderator, host or administrator.

CLAIM 4 -

4. The system of claim 2, wherein said communication means selectively affords said instructor's station to selectively view said information displayed at said monitor means on any of said student's stations virtually simultaneously and concurrently to the time said information is being handwritten at said student's stations.

(needs no special definition)

If the session is not peer-to-peer but is controlled by one participant, the controlling participant can selectively view the other participant's screens. The "virtually simultaneously" needs no additional definition beyond claim 1.

CLAIM 5 -

5. The system of claim 4, wherein said instructor's station's monitor means is selectively controlled by the user implementing icons on said monitor.

(needs no special definition)

The use of screen icons is well know and understood.

CLAIM 6 -

6. The system of claim 2, wherein said communication means selectively affords said instructor's station to virtually simultaneously and concurrently transmit said information being handwritten at said instructor's station to all of said monitor means at all of said students' stations.

(needs no special definition)

The controlling participant can select which other participant's view the controller's screen. The term "virtually simultaneously and concurrently transmit" need no definition beyond Claim 1.

CLAIM 7 -

> **7. The system of claim 1, wherein said communication means includes a communication network, and further includes a central processing unit and bus interface, located at each of said stations, which is in data communication with said communication network.**

(needs no special definition)

A communication network is commonly accepted to be selectable from a LAN, a WAN, the Internet or the World Wide Web and includes any form of data transmission or communication. The selection is simply a matter of design choice. Each form of communications network has its own "bus interface" e.g. 100/10baseT for LAN, 802.11 for wireless, RJ11 or modem for WWW etc. All commonly known and understood.

CLAIM 8 -

> **8. The system of claim 1, wherein at least one of said input means includes a hand-held stylus for inputting free-style handwritten text and drawings.**

(need no special definition)

This claim is narrower than claim 1because a stylus is specifically recited. However a stylus has a well understood meaning.

CLAIM 9 -

> **9. The system of claim 8, wherein said stations include more than two remotely-located stations, and wherein said input means include more than two input means for simultaneously and concurrently entering said handwritten information in**

freehand form from said more than two stations.

(need no special definition)

The collaboration system of this claim must allow sessions with at least three participants each with an input means as above. The meaning of more than two is clear and the term "simultaneous and concurrently entering" need no additional definition beyond Claim 1.

CLAIM 10 -

10. The system of claim 1, wherein said communication means includes means for transmitting one pixel of said information being entered simultaneously and concurrently at either of said input means from either station to the other station on a pixel-by-pixel basis from alternating stations.

(needs no special definition)

The meaning of transmission on a pixel-by-pixel basis is clear and not in dispute. Claim 10 is narrower than the broader recitation of information transmittal of Claim 1. In Claim 10 each pixel is transmitted after entry on a station. Claim 1 is broader, allowing for transmission of a group of pixels, such as a complete entry stroke or after an update time period.

CLAIM 11 -

11. The system of claim 1, wherein said communication means includes means for enabling the display of one pixel of said information being entered simultaneously and concurrently at either of said input means from either station to the other station on a pixel-by-pixel basis from alternating stations.

The meaning of display of one pixel on a pixel-by-pixel basis is not in dispute. Claim 11 is narrower than the broader recitation of information display of Claim 1. In Claim 11 each pixel is displayed on each station after entry on any station. Claim 1 is broader, allowing for display of pixels after grouping, such as a complete entry stroke or after an update time period.

CLAIM 12 -

> **12. The system of claim 1, wherein said communication means includes means for queuing said information being simultaneously and concurrently transmitted from either station to the other station.**
>
> (needs no special definition)

Queuing information is described in the specification as it is generally understood in the art, information is placed in a que for sending and receiving so that information is passed in an ordered manner. The term "simultaneously and concurrently transmitted" does not need additional definition beyond Claim 1.

IV. CLAIMS DIFFERENTIATION

In addition to the foregoing, the narrow reading of the claims asserted by Defendant is precluded by the doctrine of claims differentiation. RF Delaware, Inc., v. Pacific Keystone Technologies, Inc., 02-1508 CAFC, 2003 U.S. App. LEXIS 7450, (April 21, 2003)

> It is well established that, generally, patent terms are given their plain, ordinary, or accustomed meaning to one of ordinary skill in the relevant art. *Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1341, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001)*. Under the doctrine of claim differentiation, "each claim in a patent is presumptively different in scope." *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1233, 57 USPQ2d 1679, 1685 (Fed. Cir. 2001)*. Although claim differentiation is not a "hard and fast rule of construction," it is applicable where "there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims." *Id.* Moreover, claims are not necessarily and not usually limited in scope simply to the preferred embodiment. See *Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1370, 65 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2003)* (holding that the district court improperly read limitations from the specification into the claims). . . . . Such construction also renders redundant or meaningless the limitation "a flocculation layer" in claim 7 and the limitation "a transitional layer" in claim 12. Furthermore, such construction is not supported by the doctrine of claim differentiation, especially as the only meaningful difference between claims 7 and 12 is the limitation regarding a transitional layer, and a major difference between claim 1 and claim 7 is the latter's addition of a flocculation layer. (RF Delaware at 17)

The very limitations that Defendant is attempting to import into Claim 1 are found in

dependant claims which have no other distinguishing limitations.

"A hand-held stylus" is found in Claim 8, which depends directly from Claim 1 and adds no other limitations. It is improper to limit the recitation of "handwritten freehand" to "a hand-held stylus" as Defendant proposes. Such construction would render redundant or meaningless the limitation in claim 8. Handwritten freehand must therefore encompass more than a stylus used on a screen or pad,it must also encompass a mouse, as recited in the specification and discussed in the file history.

Additionally, "Input ... by a user drawing or writing directly on said display surface..." is found in Claim 13. Claim 17 recites "a user controlled hand-held stylus, stylus sensor, and stylus interface..." Claim 24 requires an "interactive monitor..." and Claim 25 recites "a user controlled freehand writing stylus, ... stylus sensor..." Each of these are limitations on the handwritten freehand language which should not be imported in to claim 1.

"Virtually simultaneous" must also be broader than the dependant claims for the same reason. Claim 10, directly dependent from Claim 1, recites "transmitting one pixel ... on a pixel-by-pixel basis..." and adds no other limitations. Claim 11, again directly dependent from Claim 1, is only distinguished over Claim 1 by the recitation of "display of one pixel ... on a pixel-by-pixel basis..." Neither of these limitations should be read into Claim 1 as asserted by Defendant.

Additionally, "simultaneously and concurrently communicating said information in real time..." is recited in Claim 13. Claim 18: "simultaneously and concurrently displayed..." Claim 23: "simultaneously and concurrently communicating one pixel of said information in real time ... on an alternating-station pixel-by-pixel basis..." Claim 24: "simultaneously and concurrently communicating ... and "simultaneously and concurrently display..." Claim 28: "simultaneously and concurrently communicated and interactively shared in real

time..." Claim 29: "in a pixel-by-pixel format..." None of these limitations are found in Claim 1 and none should be read into Claim 1 because "each claim in a patent is presumptively different in scope." Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1233, 57 USPQ2d 1679, 1685 (Fed. Cir. 2001).

Virtually simultaneous must be given a broader meaning than that asserted by Defendant because Defendant's proposed construction is found in dependnat claims which have no other limitations.

CONCLUSION

For the forgoing reasons, this Court should not adopt Defendants proposed overly narrow claim construction but should afford the claims of the Hamilton patent their full and proper scope as defined herein.

Respectfully Submitted:

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