IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Honorable Marcia S. Krieger

Civil Action No. 12-cv-02231-MSK-MEH

EDISYNC SYSTEMS, LLC,

       Plaintiff,

v.

ADOBE SYSTEMS, INC.,

       Defendant.

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OPINION AND ORDER CONSTRUING CLAIMS[1]
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THIS MATTER comes before the Court pursuant to the parties' Joint Amended Claim

Construction Chart **(# 88)**, the parties initial claim construction briefs **(# 93, 94)**, the parties'

responsive briefs **(# 104, 105)**, and the parties' reply briefs **(# 108, 109)**.

BACKGROUND

The claims in this action concern U.S. Patent No. 5,799,320 ("the '320 Patent" or simply

"the Patent"), awarded to John Klug,[2] which covers a "Remote Multiple-User Editing System

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[1]   This Opinion and Order was initially prepared and approved for issuance in November 2016. Due to an oversight in chambers, it was not promptly sent to the Clerk's Office for filing and distribution at that time, and that error was only recently discovered. The Court humbly apologizes to the parties for the undue delay that this has caused in the case.

[2]   At some point in time, Mr. Klug assigned his rights in the Patent to the Plaintiff here. Rather than attempting to ascertain the precise date of that assignment for purposes of identifying the party performing a given historical act, this Court's narrative history will simply identify Mr. Klug as the party defending the patent throughout the reexamination proceedings, then shift to the Plaintiff as the party pursuing infringement cases in this District.

and Method." It describes a group of interconnected personal computers, linked in such a way that the users may share and simultaneously edit a file that is stored on only one of the computers. In short, the method entails a "host" computer -- which holds the file and associated application software – that repeatedly "polls" the remote computers for their input or other functions to be performed on the file.

As discussed below, the Patent has been the subject of several proceedings. It has been re-examined on three separate occasions by the U.S. Patent and Trademark Office. The first re-examination resulted in the cancellation of all original claims and the addition of new claims. A second re-examination prompted Mr. Klug to amend some of the new claims, including those at issue here, to avoid cancellation due to the existence of prior art. A third re-examination confirmed the patentability of certain of the new claims and cancelled others.

In addition, the Plaintiff previously brought suit in this Court on the same Patent against a different Defendant. *EdiSync Systems, Inc. v. Centra Software, Inc.*, D.C. Colo. Civ. Case No. 03-cv-01587-WYD-MEH. In that case a claim construction ruling was issued by Judge Daniel in which he construed most of the same claim terms that are at issue in this action. *Id.* at Docket # 258. Judge Daniel later re-construed one of the claim terms in light of a USPTO re-examination, significantly narrowing his prior construction of that term. *Id.* at Docket # 333. Shortly thereafter, the parties reached a settlement of the dispute and the case was dismissed, with no judgment having been entered by the Court.[3]

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[3]   Because Judge Daniel's findings were never embodied in a final judgment, the Court rejects the Defendant's argument here that the Plaintiff is bound by Judge Daniel's constructions. *See e.g. Bobby v. Bies*, 556 U.S. 825, 834-35 (2009) (preclusion arises only where judicial determinations are reduced to a valid and final judgment that necessarily incorporates such

Pursuant to *Markman v. Westview Instruments*, 517 U.S. 370 (1996), the parties now request construction of 29 terms used in the Patent.

ANALYSIS

A. Claim construction standards

The fundamental purpose of a patent is to give notice to others of that in which the inventor claims exclusive rights. *Oakley Inc. v. Sunglass Hut International*, 316 F.3d 1331, 1340 (Fed. Cir. 2003). Thus, the focus of claim construction is ascertaining how a reasonable competitor would interpret the actual claim language, not what the inventor subjectively intended the language to mean. *Id.* at 1340-41. The words used in the patent are evaluated according to their "ordinary and customary meaning," as would be understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*). In some circumstances, the specification may reveal that the inventor specifically – albeit idiosyncratically – defined a term in a way that might differ from the meaning it would otherwise be given. If the intrinsic record <u>clearly</u> discloses that the inventor resorted to his or her own peculiar lexicography, the Court gives effect to the inventor's unique idiom; however, if the inventor used particular words without giving a clear indication of an intent to endow them with an unusual meaning, the Court will give those words their ordinary and customary meaning in the art, notwithstanding the inventor's subjective intent to invoke a different definition. *See e.g. Laryngeal Mask Co. v Ambu*, 618 F.3d 1367, 1372 (Fed. Cir. 2010).

To give meaning to the inventor's language, the Court "looks to those sources available to the public that show what a person of skill in the art would have understood disputed claim

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determinations). However, this Court often finds Judge Daniel's reasoning and conclusions to be persuasive, and acknowledges them accordingly.

language to mean." *Phillips,* 415 F.3d at 1314. Among those sources are: (i) the words of the claims themselves; (ii) the remainder of the patent's specification; (iii) the prosecution history of the patent; (iv) extrinsic evidence concerning relevant scientific principles; (v) the common meanings of technical terms used; and (vi) the state of the art at the time of the invention. *Id.* Terms must be construed in light of the entirety of the patent, not just in the context of the particular claim(s) they appear in. *Id.* at 1313. In other words, claim language must be read in conjunction with the more general and descriptive specification portion of the patent; indeed, the specification is often "the single best guide to the meaning of a disputed term." *Id.* at 1315. Because the patent is examined as a whole, the Court assumes that claim terms will normally be used consistently throughout the patent, and thus, the meaning of a term used in one claim can illustrate the meaning of that same term used elsewhere in the patent. *Id.* at 1314.

As with the specification, evidence of the prosecution history of the patent can also be considered as intrinsic evidence of how the USPTO and the inventor understood the patent. *Id.* at 1317. The prosecution history reflects "an ongoing negotiation between the PTO and the applicant," and can sometimes demonstrate that the inventor limited or disclaimed some portion of a claim. *Id.* At the same time, because the prosecution history predates the final patent language, the prosecution history "often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

Extrinsic evidence of disputed terms – that is, "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises" – can also shed light on the proper construction to be given to those terms, but extrinsic evidence "in general [is] less reliable than the patent and prosecution history in determining how to read

claim terms." *Id.* at 1318. The court in *Phillips* articulated a variety of reasons why a court

construing a patent should be wary of relying too heavily on extrinsic evidence, and cautions

that, while admissible and potentially probative, courts "should keep in mind the flaws inherent

in each time of [extrinsic] evidence and assess that evidence accordingly." *Id.* at 1318-19.

B. Particular claim terms

1. General description of invention

This patent describes a process by which a number of users of networked computers

jointly and simultaneously view and edit a document, database, or other computer file. The

process involves a "host" computer, on which the document or file physically resides, and the

host computer is electronically connected to one or more "remote" computers.[4] As exemplified

by the flowchart shown as Figure 3A, the host computer begins by sending the first screen of the

file to all of the remote computers. Then the host computer "polls" – that is, contacts -- the first

remote computer to inquire whether the user of that remote computer has made a change to the

file. If so, the host computer makes the requested change to the file and sends any updated

display output to all of the connected computers. The host computer then polls the next remote

computer as to whether its user has made a change to the file, and if so, processes any change

and updates the output to all users. This process continues as to each remote computer, then

repeats. The patent further contemplates situations in which users are viewing and interacting

with different parts of the file, requiring that the host computer to monitor the portion of the

document that each remote user is viewing and editing and making appropriate changes to all

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[4]   The patent anticipates that the users will all be in simultaneous voice contact as well,
either through a separate data channel carrying voice communications or via a conference call
over ordinary telephone lines.

remote users' views when a change is made elsewhere in the file.

To increase efficiency, the patent contemplates that some remote users (and, during

certain operations that tax the host computer's capabilities, all users) will not be involved in

active editing, but rather, will be spectators for a period of time. It anticipates that these such

computers will be placed in a "locked out" status by the host, by which they are no longer polled

for changes and are merely provided updates of the file's output when other users make

changes.[5] When appropriate, users who are locked out can have their ability to access reinstated

upon submission of the appropriate command, at which point the polling of their computer

resumes.

The specification also describes embodiments in which there are no mechanisms for

polling the remote computers or storing edit commands in a buffer; these more anarchic

embodiments contemplate that all user input is provided directly to the host computer in real-

time, raising the distinct possibility of conflicting editing commands, overwritten edits, and

generalized chaos that, Mr. Klug suggests, can be prevented only through careful external

coordination among the users themselves.

2. Primary disputed claims

The parties' Joint Claim Construction Chart **(# 88)** lists more than two dozen claim terms

to construe. However, the claim construction briefs focus on a subset of nine key terms. For

purposes of economy and due to the parties' priortization, the Court limits its construction to

those nine key terms.

a. "multi-tasking processing means"

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[5]   The Patent does not offer details as to how the lockout process works – *e.g.* who initiates
the lockout or how a signal to begin or end a lockout is given and received.

All of the claims at issue in this litigation require the host computer to have "multi-tasking processing means" (hereafter "MPM"). The MPM serves two purposes: "coordinating the execution of . . . file editing operations" and "coordinating the transfer of data" to and from the host computer. The parties agree in most respects as to the construction to be given to this term; they disagree only in two particulars: (i) whether the MPM requirement necessarily requires the host computer to be running a multi-tasking operating system, or whether any operating system that may be supplemented by software that effectively simulates a multi-tasking environment can suffice; and (ii) whether all of the steps discussed in Fig. 3A (namely, "establishing voice communication," "polling," sending the first screen of the file to all displays, and transferring the completed file to the remote computers) are necessarily part of the software component of the MPM, or whether some functions may be omitted in certain situations or embodiments.

(i) operating system

Turning first to the question of whether the MPM requires an operating system capable of multi-tasking or merely a single-tasking operating system enhanced by software that simulates a multi-tasking environment, the Court finds that the specification contemplates that the functions described can be performed by a single-task operating system supplemented with mutli-tasking software. It explains that "Multi-tasking can be implemented through the PC's . . . operating system, the application software, the operating software, or some combination thereof." (7:27-29). It goes on to state:

> Software is also available that can effectively convert a single-tasking personal computer into a multi-tasking machine. In this way, a single-tasking personal computer is able to run a plurality of different tasks or programs simultaneously. Until recently,

> however, few presently available personal computers were
> powerful enough to perform effective multi-tasking through the
> use of software. . . Within a relatively short period of time, it is
> expected that personal computers will be widely available that
> operate at many times [the necessary] speed. (7:51-66).

The Plaintiff concedes that the patent itself contemplates the possibility of a single-task operating system, supplemented by multi-tasking software, but argues that Mr. Klug disclaimed that alternative on two occasions during the patent reexamination process. Although a patent may be unambiguous in its terms, the patentee may choose to disclaim or disavow certain claims during the course of prosecuting the patent before the Patent & Trademark Office. *Poly-America v. API Industries, Inc.*, ___ F.3d ___, 2016 WL 5956745 (Fed. Cir. Oct. 14, 2016). A disavowal requires the patentee to make clear, by unequivocal evidence, that the claimed invention includes or does not include a particular feature. *Id.* Here, the Plaintiff points to two items of evidence that, it contends, demonstrate that Mr. Klug disavowed any claim to the invention running on a single-task operating system using multi-tasking software.

The first item is the August 2005 affidavit of Gary Nutt, submitted in conjunction with a 2004 reexamination of the Patent. This reexamination focused, among other things, on the Patent's reference to a "single-user application" that the host computer uses to perform editing of the document or file. Items of alleged prior art described a similar process being performed by a "multi-user application." Mr. Nutt's affidavit makes clear that "multi-tasking is fundamentally different from multi-user," and takes the position that the Patent necessarily describes a single-user application "because it specifically requires the use of multi-tasking to accomplish interactivity." (In other words, an application specifically designed for multiple simultaneous users would not require a "multi-tasking" environment to run in, because, Mr. Klug noted, "the

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multi-user application program would already have facilitated and supported the desired

interactivity" [JA445].[6]) Although Mr. Nutt's affidavit makes a passing comment that "the '320

Patent discloses that "interactivity is accomplished, in part, by using a <u>multi-tasking operating

system</u>" (emphasis added), the context of the statement makes clear that Mr. Nutt is intending to

distinguish a single-user application in a multi-tasking environment from a multi-user

application, not disavowing the Patent's explicit reference to the possibility that the required

multi-tasking environment could be created by multi-tasking software instead of a multi-tasking

operating system. Accordingly, the Court finds that Mr. Nutt's statement cannot be understood

to be an unambiguous disavowal of the specification's suggestion that an appropriate multi-

tasking environment can be created by a single-task operating system running multi-tasking

software.

The second item of evidence is more supportive of disavowal, although some context is

necessary. The Patent was reexamined a second time in 2009, when third parties alleged that

prior art -- namely, U.S. Patent No. 4,939,509 ("the Bartholomew patent"), among others –

anticipated Mr. Klug's invention. The Bartholomew patent appears to contemplate a host

computer running a single-user application "such as a spread sheet or an editor," plus software

that "enables [the host] to function as a time-sharing computer system" that receives commands

from other networked computers. In essence, then, it appears that the Bartholomew patent

anticipated Mr. Klug's notion of a host computer using multi-tasking <u>software</u> to enable it to

interact with other computers, but does not necessarily contemplate a multi-tasking <u>operating</u>

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[6]   Citations to [JA___] reference the appropriate page of the parties' Joint Appendix, found
at Docket # 92.

system performing that task.[7] In response, Mr. Klug argued that the Bartholomew patent did not

describe an actual "multi-tasking" environment, but rather, described a single-tasking

environment where the host computer was either performing edits to the file or document or

receiving instructions from the remote computers, but never both simultaneously. Notably, this

Court does not understand Mr. Klug to have drawn any differentiation at that time between

Bartholomew's "multi-tasking via software" arrangement and a "multi-tasking via operating

system" arrangement. The Patent Office eventually concluded that the Bartholomew patent did

not anticipate Mr. Klug's patent, but based that decision on different grounds, leaving the

operating system question unaddressed.

The third reexamination proceeding occurred in 2012, ostensibly as a result of the

proceedings before Judge Daniel. The party requesting reexamination argued that the Plaintiff's

submissions to Judge Daniel advocated a construction of the Patent that was at odds with the

reasoning of the Patent Office in upholding the claims during the 2009 reexamination. The

reexamination request also appeared to incorporate arguments raised in 2009, including the

contention that the Bartholomew patent also taught the use of a multi-tasking environment via

software. In May 2013, Mr. Klug submitted a lengthy brief addressing the various issues raised

in the reexamination, and it is a portion of that brief that the Plaintiff relies upon here to assert

that Mr. Klug disavowed the creation of a multi-tasking environment via a single-tasking

operating system augmented by multi-tasking software. Specifically, the brief states:

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[7]   In this regard, as the Plaintiff points out in its claim construction brief, the parties'
dispute here over the operating system issue is one that bears on the validity of the Klug patent
relative to prior art, not on the question of infringement by the Defendant. The parties appear to
agree that the Defendant's accused devices all involved the use of a multi-tasking operating
system.

> In short, the hardware for the [MPM] functions . . . across all of Klug's embodiments include, at a minimum, . . . a multi-tasking operating system.
>
> More specifically, each of Klug's independent claims recite and require as part of the MPM, the use of a multi-tasking operating system, such as OS/2, and not some other form of "effective multi-tasking." Notably, this position has been consistent throughout the prosecution of the '320 Patent [as he] previously argued that Klug required a multi-tasking operating system when discussing why a POSITA would recognize Klug as teaching use of a single user application program versus multi-user application programs, as discussed during the 1ˢᵗ Reexamination. [JA2073-74]

The final sentence of the quoted text was supported by a footnote that referred back to Mr. Nutt's affidavit, discussed above, and further added that Mr. Klug "clearly and unequivocally argued that Klug requires use of a multi-tasking operating system and thereby clearly disavowed the use of any other techniques for accomplishing 'effective' multi-tasking."[8]

This Court finds no merit in the Plaintiff's contention that it "clearly and unequivocally" disavowed the Patent's claim to software-based multi-tasking as early as the 2004 reexamination, nor in its contention that it has "consistent[ly]" maintained that position since. As noted above, the only authority the 2013 brief cites for that proposition is Mr. Nutt's affidavit, which does not disclaim software-based multi-tasking, much less do so in clear and unequivocal terms. Moreover, the Plaintiff has not pointed the Court to any other instance(s) of such "consistent" disavowals anywhere else in the lengthy reexamination record.

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[8] It appears that the Patent Examiner was not swayed by this argument. In an August 2013 ruling deeming Mr. Klug's remaining claims patentable, the Patent Examiner appears to reject the notion that Mr. Klug disavowed software-based multi-tasking. In doing so, the Patent Examiner simply examined the specification language and found, as quoted above, that it clearly contemplated multi-tasking at either the operating system or software level. Thus, it appears to this Court that the Patent Examiner did not squarely consider, much less resolve, Mr. Klug's argument that he had since disavowed the specification's reference to software-based multi-tasking.

At the same time, this Court is prepared to find that the 2013 brief is itself sufficiently

clear and unambiguous in its disavowal of software-based multi-tasking. Although the statement

that Mr. Klug "clearly and unequivocally . . . requires use of a multi-tasking operating system

[and] disavow[s] the use of any other techniques for accomplishing effective multi-tasking" is

yoked to an erroneous argument that Mr. Klug had asserted that position previously, the error

does not diminish the language's clear intention to reflect disavowal now. Indeed, the disavowal

of software-based multi-tasking at this time appears to be a cagey defensive move by Mr. Klug,

as he seeks to preclude the possibility of invalidation of the Patent due to the prior art of

Bartholomew. The Court might be reluctant to permit such a disavowal at this time if there was

evidence that Mr. Klug had invoked the Patent's reference to software-based multi-tasking in

threatening or pursuing a claim against another alleged infringer – essentially imposing a form of

judicial estoppel upon Mr. Klug -- but the Defendant here has not identified any such instances

of Mr. Klug doing so.

Accordingly, although the Court finds that the plain language of the Patent itself makes

clear that an MPM could consist of either a multi-tasking operating system or a single-tasking

operating system supplemented by multi-tasking software, Mr. Klug clearly and unequivocally

disavowed any reliance on the latter via his September 2013 briefing in the reexamination

proceedings. Thus, for purposes of claim construction at this time, the Court finds that the MPM

described in the Patent requires the use of a multi-tasking operating system.

(ii) software algorithm

The second issue in construing the term "MPM" is whether the software structure that

performs the functions of "coordinating editing" and "coordinating data transfer" consists of all

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of the steps disclosed in the algorithm shown in Fig 3A of the patent, or whether some of the

steps disclosed in that algorithm may be skipped in certain embodiments. Figure 3A depicts the
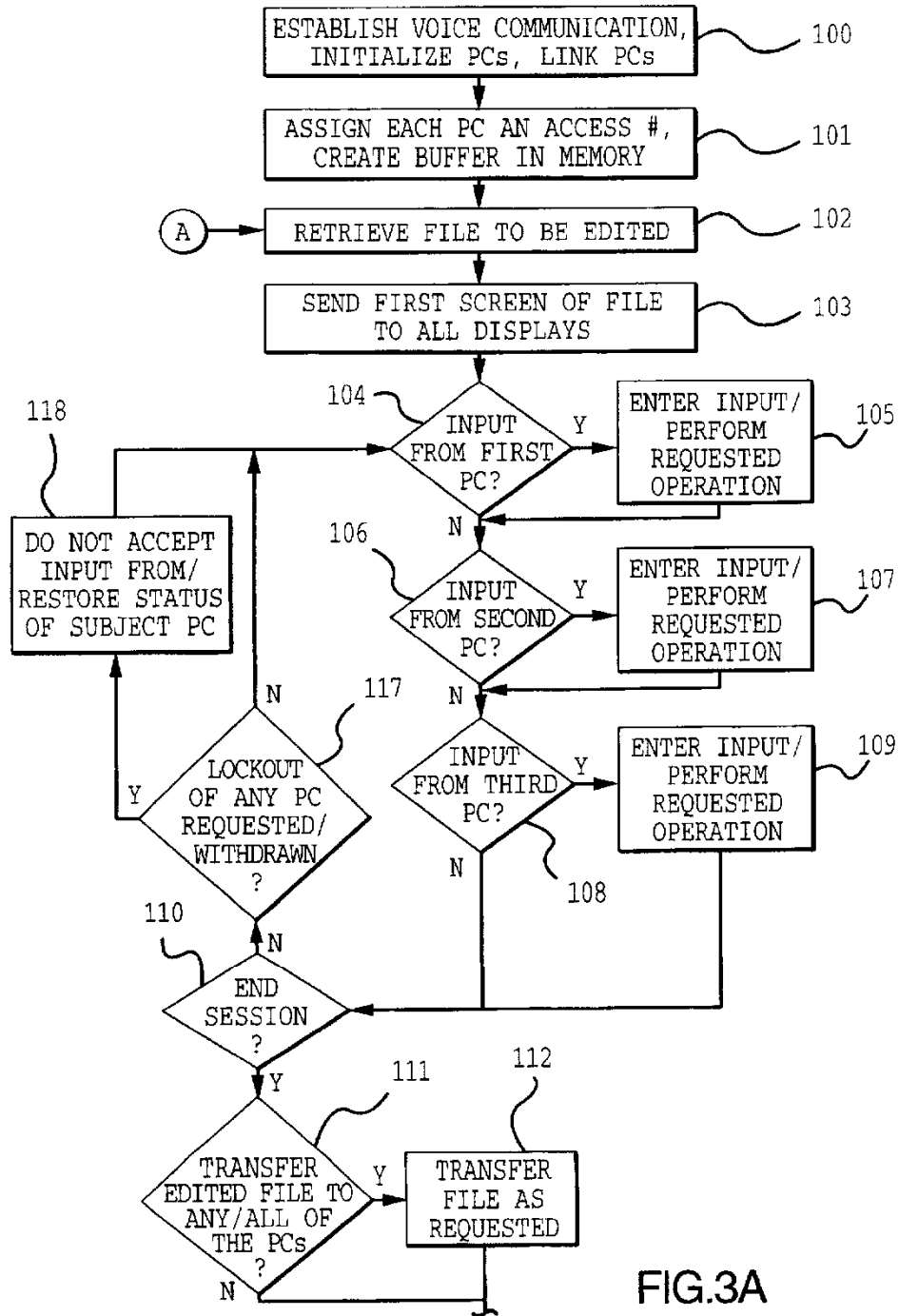
following:

ESTABLISH VOICE COMMUNICATION, INITIALIZE PCs, LINK PCs — 100

ASSIGN EACH PC AN ACCESS #, CREATE BUFFER IN MEMORY — 101

(A) → RETRIEVE FILE TO BE EDITED — 102

SEND FIRST SCREEN OF FILE TO ALL DISPLAYS — 103

104 — INPUT FROM FIRST PC? — Y → ENTER INPUT/ PERFORM REQUESTED OPERATION — 105

N

118

DO NOT ACCEPT INPUT FROM/ RESTORE STATUS OF SUBJECT PC

106 — INPUT FROM SECOND PC? — Y → ENTER INPUT/ PERFORM REQUESTED OPERATION — 107

N

117 — LOCKOUT OF ANY PC REQUESTED/ WITHDRAWN ? — N

Y

INPUT FROM THIRD PC? — Y → ENTER INPUT/ PERFORM REQUESTED OPERATION — 109

N

108

110 — END SESSION ? — N

Y

111 — TRANSFER EDITED FILE TO ANY/ALL OF THE PCs ? — Y → 112 — TRANSFER FILE AS REQUESTED

N

FIG.3A

CONTINUED ON FIG.3B

Both the Patent Examiner, at the conclusion of the 2012 reexamination, and Judge Daniel

have previously concluded that it is necessary that the MPM perform all of the steps of the

algorithm set forth in Fig. 3A. *See* JA2165 ("the Examiner concludes that the minimum

corresponding structure for the MPM includes the algorithm of FIG 3A for all embodiments");

D.C. Colo. Civ. Case No. 03-cv-01587-WYD-MEH at # 333.   Whether the Plaintiff is

attempting to distinguish or undo those outcomes is somewhat unclear.

On the one hand, most of the argument in the Plaintiff's initial claim construction brief

appears to focus on the notion that "polling of locked-out PCs [is not] part of the structure."

Docket # 104 at 13. Thus, it appears that the Plaintiff is arguing that an MPM need not perform

steps such as 104, 106, or 108 if the PC in question is locked out. *See also id.* at 15 (MPM "must

only include the capabilities of 'polling' for inputs from any then-activated remote PC (if any)

and locking-out all other (if any) remote PCs").

On the other hand, the parties' Joint Claim Construction Chart seems to suggest that the

Plaintiff's position is that the appropriate software structure for carrying out the MPM's

functions consists of <u>all</u> of the steps shown in Fig. 3A <u>except</u> the "establish voice

communication" portion of step 100; the "create buffer in memory" portion of step 102; and

steps 111 and 112 (determining whether to transfer the completed file to other users at the

completion of the session and making such a transfer). *Docket* # 88 at 4-5.   But specific

argument about the voice communication, memory buffer, and file transfer steps are nowhere to

be found in the pertinent portion of the Plaintiff's initial brief. The Plaintiff's response brief

addresses the voice communication issue in slight detail, but that document also makes

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arguments that are inconsistent with the Plaintiff's assertions in the Joint Claim Chart. *Compare*

e.g. Docket # 88 at 5 (conceding that "Fig. 3A, Operations 103, 'Send first screen of file to all

displays'" is a required component for the task of "coordinating data transfer") with Docket #

104 at 29 ("Step 103, 'Send[ing] First Screen of File to All Displays' is also not corresponding

structure for the MPM"). Curiously, it is the Plaintiff's reply brief that addresses the software

algorithm issues most completely, raising several arguments not previously made in the

Plaintiff's prior filings.

This Court exercises its discretion to decline to address arguments that are effectively

raised for the first time in a reply brief. *See Norman v. U.S.*, 429 F.3d 1081, 1091 n. 5 (Fed. Cir.

2005). Thus, the Court does not consider the Plaintiff's argument that the software component

of the MPM excludes the voice communication, memory buffer, and file transfer portions of Fig.

3A. The Court considers only the question that the parties have consistently briefed: whether the

multi-computer polling process of Steps 104, 106, and 108 are a necessary component of the

MPM.

In this regard, the Court finds that the Patent necessarily requires that the MPM contain a

software structure that is designed to poll multiple computers. The Plaintiff's argument appears

to suggest that there may be certain <u>times</u> when only one computer is active, and that may very

well be true. But the Patent necessarily describes an invention's entire <u>design</u>, not how it might

operate at a discrete moment and under certain specific conditions. To fulfill the description

found in the Patent, any embodiment of the invention that entails the use of polling must be

designed to poll, at least at some points, all of the computers participating in the session. It may,

in practice, skip that polling if certain conditions are met, but the embodiment must nevertheless

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be capable of performing that polling. In this regard, then, the Court agrees with the Patent

Examiner and Judge Daniel, finding that the software portion of the MPM necessarily requires

the performance of all steps shown in Fig 3A.

As best the Court understands, the Plaintiff primarily argues that the Patent describes

embodiments where, for various reasons, the host computer will sometimes only receive input

from a single PC – that is, where all other PCs involved in the session have been "locked out" or

are otherwise not "active." In such circumstances, the Plaintiff appears to suggest, the algorithm

shown in Fig. 3A need not attempt to poll the inactive PCs, and need only receive input from the

sole active PC. Thus, the Plaintiff argues, the algorithm need not perform <u>all</u> of the steps shown

in Fig. 3A, but merely the polling steps that are pertinent in a given situation.

Such an argument is somewhat inconsistent with what Fig. 3A depicts. The Plaintiff's

argument suggests that there is an extra, undisclosed step to the algorithm shown in Fig. 3A –

one in which the host PC, before performing the polling loop of steps 104, 106, and 108, pauses

to query which (if any) PCs are locked out and acts to entirely bypass the polling step involving

that/those PC(s). Tthere are multiple instances in the Patent that suggest that the host computer

<u>polls</u> locked-out remote computers, but simply ignores what they have to say. For example, step

118 explicitly states "do not <u>accept input</u> from" a locked out PC, suggesting that the algorithm

continues to poll every PC, regardless of its locked-out status, but proceeds to simply reject or

disregard the input from PCs that are designated as locked out. *See also* 6: 4-5 ("input by a

locked out user will not be considered").

However, the Court generally agrees with the Plaintiff that the specification itself

describes situations in which, in the course of carrying out the algorithm, locked-out PCs will

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<u>not</u> be polled at certain times. Mr. Klug explains that, when a large number of users are

involved, "the polling of all the users would take a relatively large amount of time." 11:10-13.

To solve this problem, Mr. Klug designed the lock-out process, such that locked-out PCs "will

not be checked for input" at all, thereby saving the time that would be spent polling them. 11:16-

17. Thus, the Court agrees with the Plaintiff that the specification contemplates that, at times,

locked out PCs will not be polled in the manner shown in Fig. 3A.

But the Court also agrees with the Defendant, who argues that the necessary inquiry is

not what tasks the algorithm performs at a certain point in time and in response to a certain set of

circumstances, but rather, what steps the algorithm must be <u>capable</u> of performing. In this

regard, it is clear that the algorithm must be designed to poll <u>all</u> of the PCs involved in the

session at some point(s) in time. All descriptions of the invention indicate an expectation that

<u>every</u> user participating in a session would have some ability to participate in editing. In order to

participate in editing, a user must have his or her PC polled at some point (or, in non-polling

embodiments, simply have the ability to send edits to the host).[9] Thus, the algorithm of every

embodiment must include a software structure that polls or receives data from multiple users. It

may very well be that, at times, only one user is actively editing the document or file, and thus,

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[9]   Indeed, the *sine qua non* of "coordinating editing" is the algorithm managing editing
instructions coming simultaneously or serially from two or more different sources. The act of
"coordinating" something requires, by definition, two or more inputs that the agent performing
the coordination brings into a common order or relationship; for example, one coordinates their
own schedule with the schedule belonging to a friend, a coordinator of a football team manages
and arranges all of the various components of the offense or defense. Thus, by definition, the
MPM is "coordinating editing" only when it is managing editing instructions coming from two
or more PCs. In the situation that the Plaintiff describes, where only on PC is actively supplying
editing instructions because all others are locked out, the MPM is not "coordinating" anything, it
is merely implementing the single set of instructions it is being given.

the portion of the algorithm that manages polling other PCs is not in use. But to carry out the functions described in the patent, every embodiment will require an algorithm that is capable of performing all of the functions shown in Fig. 3A, including the polling of each PC.

Thus, as to the issue that is apparently in dispute,[10] this Court agrees with the Patent Examiner and Judge Daniel that the MPM, as described in the patent, requires a software algorithm that is capable of performing all of the steps shown in Fig. 3A.

b. "polling"

Claim 31 of the Patent describes a "means for sequentially polling the input from each of the [user's computers]." The Plaintiff proposes that the term "polling" be construed to mean "determining whether a file editing input has been received from an active PC." The Defendant proposes that the term be construed to mean "the process of continually checking each potential source of input . . . in a round-robin sequence." Thus, the primary differences between the parties' proposed construction is that the Defendant's construction requires that polling be both "continual" and "in a round-robin sequence," whereas the Plaintiff's construction lacks those requirements.

The specification describes how the polling process occurs: "the microprocessor of the host PC essentially sequentially polls each of the PCs for input." 9:63-64. The specification states that, if input is provided, the host PC carries out the command contained in the input, updates the display sent to each PC, and then "performs the same function for the other two PCs"

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[10]   Although the Plaintiff does not argue as much in its initial claim construction brief, it raises a new issue in its response and reply briefs: that the MPM should not have to perform all of the steps shown in Fig. 3A because certain steps, like "establish voice communication" (step 100) or transferring the completed file (step 112) are not tasks that are found in all embodiments.

– that it, the host polls the remaining PCs in sequence. 10:3-8. "After each polling sequence" is completed, the host PC "checks to see if a request has been made to end the editing," and, if so, begins the exit process. 10:66-67. Otherwise, "the polling sequence . . . is repeated," beginning again with the first PC. 10:8-10.

Noting that the polling process can take a long time when large numbers of users are present, the Patent contemplates that "any of the PCs may be locked out and made non-active," with the result that "that PC's buffer will not be checked for input." 11:14-17. The locked-out user continues to receive updates to the display of the document or file, and both the specification and Fig. 3A contemplate that at the end of the polling sequence, the host PC queries whether any of the locked-out PCs should be made active again. 11:20-23, Step 117. There are also circumstances where no polling whatsoever will occur, such as when the host computer is involved in a resource-intensive process such as spell-checking. 10:31-34.

The Plaintiff's brief argues that the Defendant's proposal of a "round-robin sequence" of polling – by which each remote PC is checked, or checked in particular order, in each iteration of the polling cycle – is in error, and that "the host PC does not check its buffer equally for inputs from each remote PC in some set order." In doing so, the Plaintiff relies on a passage in the specification that states "the [host PC] polls the buffer which holds input for the first PC for input therefrom. The buffer may be checked for a certain period of time, until the buffer is empty, or until it is determined that no input data has been placed in the buffer." 9:65-10:2.

It appears that Mr. Klug has sown confusion by his use of the term "buffer" to describe two different mechanisms. The host PC creates a buffer in its own memory to store commands that it has received during the polling sequence, but has not yet executed. 9:48-50. At the same

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time, the patent speaks of other "buffers" that, although never expressly described, must

necessarily be created in the memory of the remote PCs, similarly storing input commands from

the user that have yet to be sent (via the polling process) to the host PC. *See e.g.* 10:65 (storing

each user's editing location in "that PC's buffer" that is later polled); 11:16-17 (when a user is

locked out, "that PC's buffer will not be checked for input"). Once it is understood that the

remote and host PCs each have buffers to store unprocessed commands, the reference to a

"buffer" that the Plaintiff relies upon becomes clear: the buffer being polled is the buffer on each

remote PC that stores whatever editing commands the remote user has input. Thus, the polling

occurs when the host PC checks the remote PC's buffer and either: (i) finding it empty, waits

until the host PC has "determined that no input data has been placed in the buffer"; or, (ii)

finding commands, begins conveying those commands to the host PC until it has either emptied

the remote PC's buffer or until a certain time period has passed. The Plaintiff's argument

mistakes the "buffer" described above to be only the host PC's buffer, suggesting that the

"polling" occurs there. Such a construction fails to account for how that buffer ever gets filled

with commands from the remote PC. If the only "buffer" that exists is found on the host PC, and

it is that buffer that is "polled," the Patent describes no mechanism for commands to be solicited

from the remote PCs.

The Court also finds that the Patent calls for the "polling" process to require the querying

of each PC during each cycle. For PCs that are "active" – that is, not locked-out – the polling

retrieves editing commands from the remote computer. PCs that are locked-out are also queried

during the polling sequence, albeit for a different information. They are queried at Step 117 to

determine whether their lockout should be cancelled (*e.g.* because the user has begun providing

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input after a period of inactivity or because the user has sent a command to end the lockout). The cyclical querying of the locked-out PCs is necessary to effectuate the Patent's observation that a lockout can be ended "at any time." Thus, the Court agrees with the Defendant's construction that calls for "polling" to require each remote PC to be queried for input in an established order or "round-robin sequence."

However, the Court does not adopt that portion of the Defendant's proposed construction that requires "polling" to be conducted "continually." The Plaintiff is correct that, at times, the host PC will stop all polling and devote its complete attention to a complex task. The polling sequence or cycle is performed repetitively, but not necessarily "continually.

Accordingly, the Court construes the term "polling" to mean "the process of repetitively checking, in an established order, each personal computer for input."

c. "substantially real-time" and "substantially contemporaneously"

All of the independent claims call for the invention to function in a way that allows users to make edits "on a substantially real-time basis" and to be able to review the results "substantially contemporaneously with" the execution of the editing commands. As the Defendant concedes, these terms mean that "edits [are] made so quickly that they would be performed on the file almost as fast as the edits are inputted by the users" and that the display of such edits "occur[s] so quickly that all of the remote users would be able to see the edits being made on the display almost at the same time as the edits would be inputted by an editing user."

Although the parties are not asking for the Court to construe the term "substantially" in order to clarify its meaning, the Defendant argues that the term introduces a fatal indefiniteness to Mr. Klug's claims. The Defendant contends that the word "substantially" "provide[s] no

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reasonable guidance as to how close in time these actions need to be to fall within the claims'

scope," suggesting that one person skilled in the art might consider a delay of 5 seconds between

input and edit to be "substantially real-time," while another might not.

A patent is impermissibly indefinite if its claims, read in light of the specification and

prosecution history, fail to inform, with reasonable certainty, a person skilled in the art as to the

scope of the claimed invention. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2124

(2014). The term "substantially" is not necessarily indefinite; if the record provides sufficient

instruction from which a person skilled in the art could ascertain what "substantially" means in

the appropriate context, the claim is sufficiently definite. *See Apple, Inc. v. Samsung Electronic

Co.*, 786 F.3d 983, 1002-03 (Fed.Cir. 2015). Here, the Patent repeatedly suggests that the metric

to determine "substantially" in this context is one of perceptibility of the difference between the

speed at which edits are made and displayed via the host PC and the speed at which those edits

would be made and displayed if the same operation had been carried out on the user's own PC.

See 9:13-17 ("the likelihood is reduced that user of the remote PC will even notice a time delay

that would suggest that the operation has been carried out at the host PC rather than the remote

PC"); 10:12-13 ("no discernable delay in the processing will be perceived by the users"); 10:23-

24 ("a significant delay will not be perceived"). Thus, the Patent provides a benchmark -- the

time the same operation would take to perform on the user's own PC -- to measure any delay and

a metric -- whether the user would perceive that difference in time-- by which to determine

whether that delay is "substantial" or not. Although there are natural variations in different

people's ability to perceive short increments of time, the invention here is focused on using high-

speed data lines and powerful computers to create a seamless multi-user interface. Persons

skilled in that art would necessarily be familiar with user interface issues and the degree of

delays in processing that typical users would and would not notice in such circumstances.

Accordingly, the Court finds that the term "substantially" as used in the contexts above is

not indefinite.

d. "personal computer"

All independent claims entail the use of "a personal computer." The parties agree that

this phrase involves "a single-user [ ]computer designed for personally-controllable

applications," but the Plaintiff proposes two additional qualifications: that a personal computer is

necessarily a "microcomputer" and that it is "not connected to a mainframe."[11]

The Patent largely defines "personal computer" as follows:

> Traditionally, a personal computer is defined as a single-user
> microcomputer designed for personally controllable applications.
> However, recently introduced single-user computers have many
> times the processing power of their predecessors, and the term
> personal computer covers a wide variety of products. Today,
> single-user personally controllable "desktop" computers are used
> in technical or engineering workstations for CAD/CAM and the
> like. Many of these personal computers use reduced instruction set
> computing (RISC) microprocessors, and can perform functions in a
> single-user system which were until only recently available just
> from mainframes.

7:5-17.

Turning first to whether "personal computer" necessarily means "microcomputer," the

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[11]   Judge Daniel adopted the Plaintiff's construction in the prior action, but this Court notes
that the parties' dispute in that case concerned whether Mr. Klug, during the prosecution of the
patent, had limited its definition of "personal computer" to one having specified processor speeds
and other architecture. Thus, whether the construction should include the terms
"microcomputer" and "not connected to a mainframe" was not a matter considered by Judge
Daniel, and thus, his adoption of the construction the Plaintiff urges here is not persuasive on
those points.

Court pauses, as neither party has offered a clear definition of the term "microcomputer" or explained how that term differs from the undifferentiated "computer." The Defendant argues that "[t]he specification . . . recognizes that 'microcomputer' is an antiquated term and goes on to include 'workstations' . . . in the category of 'personal computers' that would work with the claimed invention, despite not being labeled 'microcomputers.'" Thus, the Court assumes that the Defendant contends that "microcomputers" and "workstations" are distinct from each other. But the text quoted above does not appear to recognize that distinction; to the contrary, Mr. Klug clearly considers the term "personal computer" to include "technical or engineering workstations." Moreover, and perhaps more importantly, the Defendant's own proffered expert, Keith Lantz, adopts a definition that makes the term "personal computer" "[s]ynonymous with microcomputer." *Docket* # 95 at ¶ 83. Accordingly, the Court finds that the term "personal computer" means "a microcomputer."

The remaining question is whether a "personal computer" must be one that is "not connected to a mainframe." The Patent itself mentions the term "mainframe" only once, in the unhelpful context of noting that modern personal computers can perform some of the tasks that previously could only be performed by mainframes. 7:14-16. As with "microcomputer," the parties have not cited to extrinsic evidence that provides a meaningful definition of the term "mainframe." Mr. Lantz's affidavit briefly addresses the notion that "terminals" are computers that "require a mainframe or server to operate," and that these less-powerful machines are distinct from "personal computers." Mr. Lantz explains that terminals are "machines [that] had relatively simple hardware that could only display the results of computations that had been performed on another computer." The Patent expressly states that "[t]he present invention may

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also be carried out using a host PC, as discussed above, and <u>remote computer terminals that do</u> <u>not have the full power of a PC</u>." 13:34-36 (emphasis added). And many of Mr. Klug's initial claims distinguished the notion of "terminal" from that of "personal computer" – for example, Claim 17 called for "a personal computer" and "a plurality of remote terminals." From this, the Court discerns that the terms "terminal" and "personal computer" are not synonymous.

By using the term "personal computer" in the claims at issue, then, the Court presumes that Mr. Klug did not intend to assert a claim over a process that involves the use of "terminals." The only evidence in the record that distinguishes a "terminal" from a "personal computer" is Mr. Lantz's unopposed assertion that a terminal "require[s] a mainframe or server to operate." Thus, the Court thus construes the term "personal computer" as follows: "a single-user microcomputer, designed for personally controllable applications, that does not require a mainframe or server in order to operate."

e. "single-user application program"

All of the disputed claims entail the use of a host PC "using a single user application program." The Plaintiff suggests a construction of that term to be "a software program that <u>perceives</u> that only a single user is providing inputs to the program at any given time." The Defendant proposes a construction of "an application program <u>designed</u> for use by only a single user at a time." Judge Daniel construed this term in the prior litigation, adopting the Plaintiff's proposed construction over several constructions urged by the defendant there that were somewhat similar, but not identical to, the construction urged by the Defendant here.

As Judge Daniel noted, the term "single-user application program" does not appear in the specification of the Patent; rather, it was a new term that appeared for the first time when Mr.

Klug re-framed his claims during the first re-examination proceeding. Both sides essentially admit that, beyond the general purpose of the invention, nothing in the Patent itself sheds any light on Mr. Klug's intended meaning of the phrase "single-user application program."

The parties' proposed constructions differ only in regard to a relatively nebulous point: whether the application is <u>designed</u> for a single user or whether it <u>perceives</u> a single user. To a large extent, this distinction appears to be a purely semantic one. A system that is designed for a single user will, by definition, only ever perceive one user to be using it; there is no need for the system to even contemplate the receipt of input from someone other than the single user. Likewise, a system that can only perceive one user must necessarily have been designed so than only one operator can use the system at a time. Otherwise, the designer who intended the application to support multiple users failed to design a system that meets his or her intentions. Thus, the "perceived" versus "designed" distinction appears to be a meaningless one. Certainly, the parties' briefing has not explained why the selection of one term over another would have any concrete significance.

This Court is not persuaded that Judge Daniel's reasoning in the prior litigation applies here. In that case, the defendant proposed constructions – the application only "allows" input from a single user, or is only "controllable" by a single user – that, Judge Daniel found, would have subverted the very intention of Mr. Klug's invention, which was to allow multiple users to provide input to, or otherwise control, the application. Unlike the constructions proposed in that case, the parties' proposed constructions here are so functionally similar that there is no meaningful need to select one over the other. Accordingly, the Court declines to adopt one proposed construction over the other, finding that they are, functionally, identical.

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f. "data corresponding with and limited to said file editing operations" and "file information"

Each of the independent claims provides for the host PC to be responsible for "coordinating the transfer of data. . . wherein the coordinated transfer of data corresponding with and limited to said file editing operations includes file information received from file editing operations executed by a single user application program and constituting a portion of the given computer file." To reduce this windy verbiage to a manageable size, the Plaintiff proposes construing the phrase "file information . . ." to mean "computer renderable information that identifies the file editing operations then occurring" and to construe the phrase "data corresponding . . ." to mean, simply, "file information." Thus, the Plaintiff's construction would reduce the quoted language in the claims to " . . . wherein the coordinated transfer of file information includes computer renderable information that identifies the file editing operations then occurring." The Defendant proposes to construe the phrase "file information . . ." to mean "editable data, rather than image information, that constitutes a portion of a copy of the computer file and that can be edited by the single user application program" and the phrase "data corresponding . . ." to mean "file information pertaining only to the edits to the file." Thus, the Defendant's concatenated construction of the claim language is ". . . wherein the coordinated transfer of file information pertaining only to the edits to the file includes editable data, rather than image information, that constitutes a portion of a copy of the computer file and that can be edited by the single user application program."

Once again, the language in the claims is not directly addressed in the specification; rather, the disputed language was added to the claims by Mr. Klug during the second reexamination, in an attempt to overcome the prior art of the Bartholomew patent. Notably, the

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Patent Office was concerned that the Bartholomew patent anticipated Mr. Klug's invention

insofar as the host computer in the Bartholomew patent passed "display information" back to the

remote user. As Mr. Klug explained, under Bartholomew, the remote user "will receive a

communication from [the host] whenever [the host's] screen display changes – such screen

display change may be as mundane as [the host's] on-screen clock time clock updating."

JA1424. In other words, in the Bartholomew invention, the data that remote users received was

simply a screenshot of the host computer's display, not interactive or editable data.

At the time of the reexamination, Mr. Klug's claims addressed a means for "coordinating

the transfer of data corresponding with and limited to said file editing operations from said host

computer to the display means of the others." Mr. Klug argued that, under his own invention,

the host computer transmitted data used for "file editing operations" to the remote users, not just

images of the host's own screen. He relied, in part, on an affidavit from Mr. Nutt that further

explained that "editable forms for information operate on the information itself rather than on an

image of the information (e.g., one can use conventional programs to read and write a document

in editable form, such as a Word file. . .) As a result, a fundamental tenet of the '320 patent is

that the information, rather than an image of the information, is shared among the participants."

JA1481.

The Patent Examiner disagreed, finding that, under Bartholomew, "only the specific data

lines that have been changed or edited would be sent to the [remote PC]," and thus, Bartholomew

addressed the claim to "data corresponding with and limited to said file editing operations."

JA1486. Mr. Klug made certain edits to the claim language that failed to satisfy the Examiner,

ultimately leading Mr. Klug to offer another amendment containing the operative language here.

JA1517. The Examiner accepted this modification as overcoming Bartholomew, noting that the

amendment ensured that Mr. Klug's invention "allow[ed the host] to send 'the file information

itself' so that data is executed in each remote PC using the single user application program and

thus, outputs of the data can differ from one remote PC to other remote PC." JA1537.

Thus, it is clear from the prosecution history that in Mr. Klug's claims, as amended, each

remote PC is running the same application program (*e.g.* Microsoft Word). The "file

information" that the host PC sends to the remote PCs is at least a portion (and possibly the

whole) of the very computer file that the users are collectively editing, not simply some portion

of the host computer's screen display. From the prosecution proceedings, this Court will assume

that, in at least some embodiments, the host PC simply supplies the remote PCs with an copy of a

portion of the computer file being edited, and then proceeds to simultaneously provide each user

with the editing commands entered by other users, relying on the remote PCs to perform those

edits (*i.e.* "data is executed in each remote PC "). The Court will assume that other embodiments

closely follow the design outlined in the specification, where the host PC receives the editing

commands and performs the file edits. To overcome Bartholomew, these embodiments must

return something more than the mere output of the host PC's editing. Thus, it is fair to conclude

that, in these embodiments, the host PC supplies the remote PCs with a updated copy of the

portion of the file after each edit.

In such circumstances, it is abundantly clear that the term "file information" necessarily

consists of two components: "a portion of the given computer file" (referenced in the claim

language itself) plus either the modifications to that portion that have resulted from the output of

"file editing operations" performed on that portion of the file by the host PC, or the actual editing

instructions collected by the host PC and sent to the remote PCs to be carried out on their copies

of the file. Constructing the term in this way is consistent with the actual claim language as well

as the discussions that Mr. Klug had with the Patent Examiner and the amendments he made to

overcome the Bartholomew patent. In this sense, the portion of the Defendant's proposed

construction that defines "file information" as "editable data that constitutes a portion of a copy

of the computer file" more accurately captures this concept than the Plaintiff's proposed

construction of "computer renderable information."

Indeed, the Plaintiff's construction could, arguably, encompass nothing more than the

sending of an image of the host PC's screen, as such display information is "computer

renderable" (it can be displayed on a computer) and it "identifies the file editing operations then

occurring" by showing how the display changes as each editing operation is performed on the

host PC. As the prosecution history makes clear, simply conveying the host PC's display to the

remote PCs would implicate the Bartholomew patent. The Plaintiff's proposed construction also

omits certain express limitations in the claim language, such as the requirement that the "file

information" consist of "a portion of the given computer file." Thus, the Court finds the

Plaintiff's proposed construction to be both overbroad and under-inclusive. The Court adopts the

Defendant's construction of the term "file information."

In doing so, this Court notes that it reaches a conclusion different than that of Judge

Daniel in the prior litigation. Judge Daniel's adoption of the Plaintiff's proposed construction

turned on two key findings: (i) that Mr. Klug's amendments to the claim language during the

second reexamination did not "agree to give up coverage for systems that transmit only image

information to the remote computers" – in other words, Mr. Klug elected to maintain a claim to

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such an invention despite the risk that doing so could result in invalidity due to anticipation by the Bartholomew patent; and (ii) that the Defendant's requirement that "file information" consist of "editable data" was contrary to the process described in the specification, by which the host PC performed all of the edits to the file or document, and then simply distributed the output of such operations to the remote PCs, such that "the form of the 'file information' . . . is irrelevant because all of the editing occurs on the host PC." This Court finds that both of those arguments are refuted by Mr. Nutt's affidavit, upon which Mr. Klug relied during the reexamination. As Mr. Nutt explains, "a fundamental tenet of the '320 patent is that the information, rather than an image of the information, is shared among the participants." This is further confirmed by the Patent Examiner reciting that Mr. Klug agreed that "the sending of the 'file information' itself allows the data to be executed in each remote PC." JA1559. Thus, because this Court finds that the prosecution history unambiguously includes an argument by Mr. Klug that the "file information" must consist of editable data capable of being processed by the software application on the remote PCs, the proper construction of the term "file information" is that urged by the Defendant, not the Plaintiff.

However, as between the parties' proposed constructions of "data corresponding with . . . .," the Court adopts the Plaintiff's construction. The Plaintiff's proposed construction essentially subsumes this clause within the broader term "file information." The Defendant's proposed construction also links this clause to the term "file information," but further limits it to "information pertaining only to the edits to the file." By the terms of the claims themselves, "data corresponding with . . . includes file information . . . ." Thus, by definition, the phrase "data corresponding with . . ." must either be congruent with or broader than the phrase "file

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information. . ." In other words, a rule that "A includes B" means that either A contains all of B and nothing more, such that A = B, or A contains all of B plus other things, such that A > B. In no circumstance can A include B and yet A < B. The Defendant's proposed construction of "data corresponding with . . ." produces the improper A < B result, as it provides that "data corresponding with . . ." is "file information" but only that portion of file information "pertaining . . . to the edits to the file." As discussed above, "file information" includes two components: a copy of a portion of the file and editing information. The Defendant's proposed construction would define "data corresponding with . . ." to include only the latter, yielding a situation where that clause fails to "include" all of "file information. . . ." By contrast, the Plaintiff's proposed construction, which simply equates "data corresponding with. . . ." with "file information . . ." produces the permissible result where, if A includes B, A = B. Thus, a construction wherein "data corresponding with. . ." is simply synonymous with "file information . . ." produces a logically valid result.

Accordingly, the Court construes the pertinent claim language to be "wherein the coordinated transfer of data corresponding with and limited to said file editing operations includes file information received from file editing operations executed by a single user application program and constituting a portion of the given computer file" to mean "wherein the coordinated transfer of data [ ] includes editable data, rather than image information, that constitutes a portion of a copy of the computer file that can be edited by the single user application program."

g. "interconnecting means"

Claims 21-24 and 45-48 all require an "interconnecting means for electrically

interconnecting said host computer with the others." The parties disagree on what structure is described to carry out this interconnection function. The Plaintiff contends that the appropriate structure is "all hardware and software, provided in or connected to a PC, which enables the host PC to connect to an analog and/or digital networks and any networks and/or communications systems utilized to facilitate communications between the host PC and one or more remote PCs." The Defendant contends that the appropriate structure is "the ISDN digital communications network described at col. 8:24-45 or the digital/analog communications network described at cols. 11:50-12:30."

The Patent describes interconnecting means in several locations. Among others, it mentions a preference for "a non-dedicated digital communications system [that can] link both the personal computers and voice communication means," 5:14-17, and, as an alternative, "a plurality of modems . . . and an analog communications link." 5:18-20. In the specification, Mr. Klug elaborates at some length about the need for high-speed communications links, noting that "[u]ntil recently," such networks required "dedicated lines" which posed economic and logistical obstructions to implementing the invention. 8:14-24. Mr. Klug noted more recent availability of ISDN systems, "a non-dedicated digital communications network which can carry voice and data over the same pair of standard telephone wires." 8:24-29. (The Patent implies, however, that at the time of its drafting, ISDN networks had yet to reach "full[ ] operation[ ] nationally" and internationally. 8:36, 39-40.) He also predicted that "further engineering breakthroughs have been made which will enable even faster digital communications over non-dedicated lines." 8:46-48. Mr. Klug noted that "the only hardware that is necessary to connect a personal computer to an ISDN interface is an ISDN adapter." 8:41-44.

Later, the Patent describes the alternative of a connection occurring "over an analog communications network via digital-to-analog/analog-to-digital converters" (essentially, modems). This system called for the converter in the sending PC to convert digital signals to analog ones, for the signals to be transmitted over the analog communications network, and for the converter on the receiving PC to convert the analog signals back to digital ones. 11:55-60. The Patent further contemplates that, when using an analog network, hardware or software that performs data compression may be necessary to achieve sufficient data speeds and multiplexers may be useful to reduce the number of individual telephone lines that connect to the host PC may be desirable.

The Court rejects that portion of the Defendant's proposed construction that limits the digital version of an "interconnection means" to an ISDN network. Mr. Klug specifically noted that future, non-ISDN digital networks were likely to arise, suggesting that reference to an ISDN network was simply an example of a type of non-dedicated, high-speed digital communications network that could support the invention. At the same time, the Court also rejects the several aspects of the Plaintiff's proposed construction. A construction that reaches "all hardware and software . . . which enables host PC to connect to an analog and/or digital network" misconstrues the Patent's requirements when an analog network is present. This incorrectly limits the notion of "interconnecting means" to those hardware and software structures used by the host PC when the Patent makes clear that in embodiments involving analog networks, all PCs, host and remote, must possess a converter for handling analog and digital signals. 5:18-19, 11:62-64. Moreover, the Plaintiff's proposed construction's overbroad inclusion of "all hardware and software . . . which enables the [ ] PC to connect to [a] network" and "any networks and/or communications

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systems utilized" encompass far more than is described in the Patent. Thus, the Court rejects

both parties' proposed constructions. Instead, the Court construes "interconnection means" to

refer to "either: (i) a non-dedicated, digital communications network capable of data speeds

equivalent to or faster than an ISDN, and hardware in each PC in the form of an adapter to

connect the PC to that network, or (ii) an analog communications network, hardware in each PC

in the form of a digital-to-analog/analog-to-digital converter, and, if needed to ensure data

transmission rates sufficient to allow for substantially simultaneous editing, data compression

software for each PC sufficient to achieve that rate."

h. "voice communication means"

Claims 22, 23, 29, 32, and 33 all include various language requiring "voice

communication means . . . for transmitting audio signals" between users. The Plaintiff proposes

that the phrase "voice communication means" be construed to refer to "hardware and/or software

which enables a user of a PC to communicate orally with another user." The Defendant proposes

that the phrase be construed to mean "telephones connected over a standard analog telephone

line or over the same line of the digital communications network as are the personal computers."

The specification clearly contemplates that users will remain in voice contact through the

use of telephone technology, specifically, "telephone handsets." 6:61, 9:18. The remainder of

the Patent describes only the type of telephone network involved: the preferred embodiment

describes the same "digital communications network" that carries data, 6:62-64, but "if the

digital communication network does not have both voice and data capabilities, the telephone

handsets can be linked via a traditional conference call over other lines, such as standard analog

telephone lines." 9:26-30. Mr. Klug makes a single mention of "digital telephones," 6:63, but

does not elaborate on the meaning of such a term, nor does the Plaintiff's brief cite to evidence in the record explaining how that term would be understand by persons in the art at the time of the Patent.

The Court rejects the Plaintiff's proposed construction, as nothing in the Patent describes voice communication as being facilitated by "hardware or software." The Patent clearly and exclusively describes voice communication via telephone handsets. Thus, the Court finds that the structures disclosed in the patent enabling the "voice communication means" are "telephone handsets communicating over a digital communications network or analog telephone network."

i. "coordinating"/"coordination"

Finally, the parties seek construction of the terms "coordinating" or "coordination" that appear in various places throughout the claims. The parties agree that the words should be given their common meaning, but disagree as to what that common meaning is.

The term "coordinating" is used principally in identifying the functions that the MPM performs, namely "coordinating the execution" of file editing commands and "coordinating the transfer of data" from the host PC to the remote PCs. The Plaintiff suggests that the term "coordinating" commonly means "to put in the same order or rank, or to bring into a common action, movement, or condition." The Defendant suggests that the term means "bringing various elements into a proper or required relation to ensure effective operation."

The Court will not belabor the analysis on this point. The common meaning of the term "coordinating," in the context that it is used here, entails the acts of collecting multiple items of information from various sources and applying analytical rules to them in order to organize them into a unified whole. Thus, the task of "coordinating editing" entails collecting each remote

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user's editing commands, applying analytical rules (such as "execute them in a first-in/first-out sequence" or "suspend all command execution during spell checking") to organize them, resulting in a single, consolidated set of instructions for the host PC to carry out. "Coordinating file transfers" entails, in the most complex embodiments, the host PC ascertaining each individual user's location in the file, applying analytical rules to determine what portion of the edited file to return to that user, and compiling a single list of the file parts to be sent to each user that can then be executed.

This definition is consistent with that found in the Oxford English Dictionary: to "coordinate" means, in this context, "to place or arrange things in proper position relatively to each other and to the system of which they form parts; to bring into proper combined order as parts of a whole." Thus, the Court adopts neither party's proposed construction of the term "coordinating," instead using the construction that "coordinating" (and its cognates) means "collecting disparate items of information and, applying analytical rules, organizing them into an integrated whole."

CONCLUSION

Accordingly, the Court construes the disputed terms as set forth herein.

Dated this 16th day of June, 2017.

BY THE COURT:

Marcia S. Krieger
Chief United States District Judge