IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

INTERMEC TECHNOLOGIES CORP.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 07-272-SLR
	)	
PALM INC.,	)	
Defendant.	)	

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MEMORANDUM OPINION

Dated: September 14, 2010
Wilmington, Delaware

ROBINSON, District Judge

I. INTRODUCTION

On May 18, 2007, Intermec Technologies Corporation ("Intermec" or "plaintiff") filed this action against Palm, Inc. ("Palm" or "defendant") for infringement of U.S. Patent Nos. 5,349,678 ("the '678 patent"), 5,568,645 ("the '645 patent"), and 5,987,499 ("the '499 patent," collectively, "the System patents"), and 5,468,947 ("the '947 patent"), and 5,892,971 ("the '971 patent", collectively "the Terminal patents," all collectively, "the Intermec patents"). (D.I. 1)

Palm filed its answer on July 2, 2007, and thereafter amended it twice. (D.I. 7; D.I. 11; D.I. 17) On September 11, 2007, Intermec filed a motion to strike Palm's inequitable conduct defense from its second amended answer. (D.I. 23) The parties stipulated, on May 23, 2008, that Intermec would withdraw its motion to strike, and that Palm would submit its third amended answer, attached thereto as exhibit 1. (D.I. 48) Palm's third amended answer includes various defenses and counterclaims, two of the latter asserting infringement of Palm's U.S. Patent Nos. 6,665,803 ("the '803 patent") and 7,096,049 ("the '049 patent", collectively "the Palm patents").

Currently pending before the court are: (1) Intermec's motion for partial summary judgment of infringement of the '678 patent (D.I. 152); (2) Intermec's motion for partial summary judgment of validity of the System patents (D.I. 155); (3) Intermec's motion for summary judgment of infringement and validity of the Terminal patents (D.I. 159); (4) Palm's motion for summary judgment of indefiniteness of certain claims of Intermec's '678 and '499 patents (D.I. 151); (5) Palm's motion for non-infringement of the Intermec patents (D.I. 158); and (6) Intermec's motion for summary judgment of non-infringement

and invalidity of the Palm patents (D.I. 162). Fact and expert discovery is now closed. The court's opinion here is limited to the pending motions for summary judgment relating to the Intermec patents. Trial has not yet been scheduled. This court has jurisdiction under 28 U.S.C. § 1338(a) and 35 U.S.C. § 101 et seq.

II. BACKGROUND

A. The Parties and Patents in Suit

Intermec is incorporated under the laws of the State of Delaware, and has its principal place of business in Everett, Washington. Intermec is a wholly owned subsidiary of Intermec, Inc. Norand Corporation ("Norand") of Cedar Rapids, Iowa, is the assignee of the Intermec Patents. In 1997, Norand was acquired by Intermec, who owns all right and title to the Intermec patents. Intermec makes and sells data capture equipment such as portable data collection terminals and wireless communication systems to support them. Intermec also develops, makes and sells bar code readers which may be incorporated into a terminal or provided as an attachment. The Intermec patents relate to data capture systems, data capture terminals, and bar code readers. The data capture systems are comprised of computer systems communicating over radio transceivers to matching transceivers in the data capture terminals.

Palm is incorporated under the laws of the State of Delaware, and has its principal place of business in Sunnyvale, California. Palm provides smartphones, cellular telephones that include the ability to run certain programs such as a calendar application. Smartphones are also capable of connecting with the internet, thereby enabling other applications such as email and web browsing. Internet applications

require a cellular data service subscription with a cell phone carrier. Palm does not offer cellular data subscription services.

The '678 patent was filed on August 21, 1991. The '645 and '499 patents are successive continuations claiming priority to the original '678 application. The System patents share nearly identical specifications directed to data capture systems. The Terminal patents both have a long, complex lineage. The '947 patent is directed to a pocket size data capture unit and shell, or peripheral, modules. Filed on March 29, 1993, the '947 patent is a continuation-in-part of two different applications. One of these parent applications descends from a series of continuations-in-part, which includes Ser. No. 897,547, filed August 15, 1986 ("the 1986 application"). On March 29, 1993, the '971 patent application was filed as a continuation-in-part of the '947 patent. The '971 patent is directed to portable data collection terminals including an indicia reader and a multi-tasking operating system.

B. Technological Background

Data capture systems are used to receive and collect information in a variety of settings such as warehouses, retail stores, and health care facilities. For example, in a warehouse setting, the system might be used to update, in real time, the inventory level of a particular product. It might also be used to identify locations where the product is stored, track the movements of a particular unit of inventory, or indicate which employee currently has charge of the product. Such systems are typified by multiple data collection terminals being placed close to the source of the data being collected, a server or other computer system used to store and further process the data, and a communications network linking the two. For a single data collection site, such as a

warehouse, a single server may be adequate to meet storage and processing requirements. To service multiple data collection sites, a server may be located at each site, and each server may be further networked to a central host computer system. Such a host computer may act as a system-wide data repository.

Portable data collection terminals are typically hand held units that communicate via a radio link back to the server. They allow for collection and entry of data directly from the source location. To improve the speed, efficiency, and reliability of data collection, automatic data entry means, such as bar code readers, are often included with the terminal. Early bar code readers required physical contact with the bar coded label. Typically, a pen-shaped wand was scanned across the bars of the label to read it. Later, non-contact readers allowed bar codes to be read from labels a few inches away. This capability was further enhanced to provide for reading labels from a considerable distance. Thus, a label on a box at the top of a high stack might be read from the ground without having to climb a ladder.

Prior to enhancing portable data collection terminals through distributed processing, application programs were run on the host computer. The host computer controlled the terminals in real time. This significantly increased the hardware and software complexity, forcing the host computer to run multiple processes. Application programs residing on the host computer had to be fast enough to service all remote terminals in real time, had to validate data entry by the user, and had to respond to all user input. This required significant amounts of data to be sent back and forth over a radio link between each of the terminals and its host computer.

Portable data collection terminals contain a fully functional computer hardware system: processor, memory, and input/output devices, plus the terminal application program. The terminal application program is relatively small and simple, and can reside in the limited memory built into the terminal. Other, more sophisticated applications, such as inventory management, are too large to fit in the terminal's limited memory. However, by partitioning the application programs into discrete parts known as modules, and distributing them throughout the system, the terminals are capable of executing much more sophisticated application programs. When a module of an application completes execution, the next module can be requested, loaded into memory, and execution of the application can continue. Thus, input validation as well as considerable processing can be performed directly on the terminal, minimizing the communication and computer resources required.

C. Asserted Claims

1. The '678 patent

Intermec asserts infringement of claims 1, 5, 8-9, and 13-18 of the '678 patent, of which claims 1 and 8 are in independent form. (D.I. 156 at 3) The asserted independent claims of the '678 patent read as follows:

1. A data capture system comprising:

> a) a plurality of portable client data collection terminals, each terminal comprising means for collecting data, dynamic addressable storage means and first control means operating on data formatted in a first style;
>
> b) a server station comprising mass memory means which is larger than said dynamic addressable storage means of a terminal for storing data to be used by said data collection terminals, means responsive to a memory altering request for addressing said mass memory means and

second control means operating on data formatted in a second style different from said first style, said data stored in said mass memory means being formatted in said second style; and

c) communication means for interconnecting said server station and each of said plurality of client data collection terminals;

d) said first control means of each client data collection terminal comprising means responsive to a need for further data for generating said memory altering request and for actuating said communication means to transmit said generated request to said server station, said generated request identifying its terminal and the particular needed data;

e) said responsive means of said server station responsive to said generated and transmitted request for addressing and retrieving said needed data from said mass memory means before actuating said communication means to transmit said needed data back to said requesting terminal as identified by said request;

f) said communication means comprises RF radio means for transmitting said memory altering request from each of said plurality of client data collection terminals to said server station and for transmitting said needed data from said server station back to said requesting terminal.

8. A data capture system comprising:

a) a plurality of client data collection terminals, each terminal comprising means for collecting data, first control means including processor means for executing a selected one of a plurality application programs, and dynamic addressable storage means;

b) a server station comprising mass memory means which is larger than said dynamic storage means of a terminal for storing application programs to be executed by said processor means of each of said data collection terminals, each application program being partitioned into a root module and at least one overlay module, and second control means responsive to a memory altering request for addressing said mass memory means; and

c) communication means for transmitting data between said server station and each of said plurality of client data collection terminals;

d) said first control means of each client data collection terminal further comprises means responsive to the execution of an application

program by said terminal's processor means for generating a memory altering request and for actuating said communication means to transmit said generated request to said server station, said generated request identifying its terminal and a particular overlay module needed to continue the execution of its application program;

e) said second control means of said server station responsive to said generated and transmitted request for addressing and retrieving from said mass memory means said particular overlay module, before actuating said communication means to transmit said particular overlay module back to said requesting terminal as identified by said request, whereby said processor means of said requesting terminal is able to continue executing said presently executed application program.

2. The '645 patent

Intermec asserts infringement of claims 1-4 of the '645 patent, of which claim 1 is in independent form. (D.I. 156 at 3) Claim 1 of the '645 patent reads as follows:

1. A system for collecting data from at least one remote site and transmitting the collected data to a main information center and having information distributed throughout said data collecting system, the information being partitioned into a first information portion and a second information portion, said data collection system comprising:

a) at least one terminal for collecting data at the remote site, said terminal comprising means for collecting data, a first memory for storing the first information portion, information requesting means responsive to the need for information by said terminal to generate an information call identifying the needed information, and first memory searching means responsive to the information call for searching said first memory for the presence or absence of that needed information, said first memory searching means responsive to the presence of that needed information for accessing said first memory and supplying that accessed, needed information for use by said terminal;

b) a server for said terminal; and

c) communication means for interconnecting said terminal and said server, said first memory searching means responsive to the absence of that needed information within said second memory for transmitting the information call via said communication means from said terminal to said server;

d) said server disposed at the main information center and comprising a second memory for storing the second information portion, and second memory searching means responsive to the information call transmitted via said communication means from said terminal for accessing the requested information from said second memory means and transmitting the accessed information via said communication means from said server to said terminal.

3. The '499 patent

Intermec asserts infringement of claims 1-4 and 15-16 of the '499 patent, of which claims 1 and 15 are in independent form. (D.I. 156 at 3)

The asserted independent claims of the '499 patent read as follows:

1. A data collecting system for collecting data from at least one remote site and transmitting the collected data to a main information center, and having information distributed throughout said data collecting system, the information being partitioned into a first information portion and a second information portion, said data collection system comprising:

at least one terminal for collecting data at the remote site, said terminal comprising a data collection mechanism, a first memory for storing the first information portion, a first controller responsive to the need for information by said terminal to generate an information call identifying the needed information, said first controller further responsive to the information call by searching said first memory for the presence or absence of that needed information, said first controller responsive to the presence of that needed information by accessing said first memory and supplying that accessed, needed information for use by said terminal;

a server for said terminal;

a communication system communicatively interconnecting said terminal and said server, said first controller responsive to the absence of that needed information within said first memory by transmitting the information call via said communication system from said terminal to said server; and

said server disposed at the main information center and comprising a second memory for storing the second information portion, and a second controller responsive to the information call transmitted via said communications system from said terminal by accessing the requested information from said second controller and transmitting the accessed

information via said communication system from said server to said terminal.

15. A data collection system comprising:

a main information center with a plurality of servers, each server storing a plurality of application programs and associated application-specific data;

a plurality of remote data collection centers, each data collection center comprising one or more terminals;

each of the one or more terminal selectively requests the application programs from the main information center; and the main information center delivers requested ones of the application programs in executable portions.

4. The '947 patent

Intermec asserts infringement of claims 1-3 of the '947 patent, of which claim 1 is in independent form. Claim 1 reads as follows:

1. A hand-held data processing system, comprising:

a self-contained computerized processing module for computerized processing of data;

said processing module having a graphical display with a display screen occupying substantially an entire broad side of the processing module;

means for displaying information over substantially the entire surface of the display screen;

said self-contained computerized processing module having a size so as to be readily contained in a shirt pocket; and

said processing module further including optical reader means for effecting the input of optical information.

5. The '971 patent

Intermec asserts infringement of claims 1-5, 8-12 and 19 of the '971 patent, of which claim 1 is in independent form. Claim 1 reads as follows:

> 1. A portable battery-powered hand-held data processing device, comprising:
>
> (a) a user interface system, located on the portable battery-powered hand-held data processing device;
>
> (b) an indicia reader input system, located on the portable battery-powered hand-held data processing device; and
>
> (c) a processing system, comprising
>
> (I) a computerized processor, located within a housing of the portable battery-powered hand-held data processing device, for controlling said user interface system and said indicia reader input system, and
>
> (ii) a multitasking operating system designed to run on said computerized processor and capable of executing essentially concurrently a wide range of computer processes.

D. The Accused Products

Intermec accuses two groups of Palm products of infringing the Intermec patents: Palm's Treo 750, Treo 700w, and 700wx products, based on Microsoft's Windows Mobile™ operating system ("Windows Products"); and Palm's Treo Centro, Treo 680, Treo 700p and Treo 755p products, based on the Palm Operating System™ ("POS Products," collectively, "accused Palm products"). (D.I. 1 at ¶ 10; D.I. 160 at 1) Each of the accused Palm products comprise: a keyboard, touch screen stylus and digital camera; memory; and a processor that runs application programs. (D.I. 153 at 4-5) The accused Palm products are depicted in a photograph. (D.I. 160 at 3)

1. Windows products

In addition to the components shared by all accused Palm products, the Windows products include Microsoft's Internet Explorer Mobile™ as a web browser application and Microsoft Outlook Mobile™ as an email client application. (D.I. 153 at 5)

2. POS products

In addition to the components shared by all accused Palm products, the POS products include a web browser application called "Blazer," and some POS products run unnamed email client applications. (D.I. 153 at 6; D.I. 206 at 14) The Treo Centro product includes the Google Maps application. (D.I. 153 at 5; D.I. 206 at 13)

III. STANDARD OF REVIEW

A court shall grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56 (c). The moving party bears the burden of proving that no genuine issue of material fact exists. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 n.10 (1986). "Facts that could alter the outcome are 'material,' and disputes are 'genuine' if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct." *Horowitz v. Fed. Kemper Life Assurance Co.*, 57 F.3d 300, 302 n.1 (3d Cir. 1995) (internal citations omitted). If the moving party has demonstrated an

absence of material fact, the nonmoving party then "must come forward with 'specific facts showing that there is a genuine issue for trial.'" *Matsushita*, 475 U.S. at 587 (quoting Fed. R. Civ. P. 56(e)). The court will "view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion." *Pa. Coal Ass'n v. Babbitt*, 63 F.3d 231, 236 (3d Cir. 1995). The mere existence of some evidence in support of the nonmoving party, however, will not be sufficient for denial of a motion for summary judgment; there must be enough evidence to enable a jury reasonably to find for the nonmoving party on that issue. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

IV. DISCUSSION

A. Infringement

The court has before it cross motions for summary judgment of infringement. Intermec seeks partial summary judgment that Palm has induced infringement of claims 1 and 8 of the '678 patent. (D.I. 152; D.I. 153 at 20) Intermec also seeks summary judgment of infringement of claims 1 through 3 of the '947 patent and claims 1-5, 8-12 and 19 of the '971 patent, asserting that all such infringement issues relate to claim construction. (D.I. 159 at 1) Palm seeks summary judgment of non-infringement of the asserted claims of the Intermec

patents. (D.I. 161 at 1) At least with respect to the '678 patent, both parties agree that, given proper claim construction, there is no genuine issue of material fact and, thus, summary judgment may be appropriate. (D.I. 153 at 1; D.I. 161 at 18)

All of the asserted claims of the '678 and '645 patents, and claim 1 of the '499 patent, include a communications limitation. Claim 8 of the '678 patent, claim 1 of the '645 patent and claims 1 and 15 of the '499 patent include limitations directed to partitioning of application programs into distinct parts. The asserted claims of the Terminal patents include limitations directed to an indicia/optical reader. Claim 1 of the '947 patent also includes a limitation relating to the relative size of the display screen to the terminal body. Claim 1 of the '971 patent also includes a limitation that the terminal's operating system be multitasking. The parties' arguments are largely premised on differing claim constructions of these key limitations. The court finds these limitations to be dispositive of the infringement motions at bar.

1. Standards

To prove direct infringement, the plaintiff must establish by a preponderance of the evidence that one or more claims of the patent read on the accused device literally or under the doctrine of equivalents. *See Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001). To establish literal infringement, "every limitation set forth in a claim must be found in an accused product, exactly." *Southwall Tech., Inc. v. Cardinal*

IG Co., 54 F.3d 1570, 1575 (Fed. Cir. 1995). "If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law." *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). Significant to the case at bar, if an accused product does not infringe an independent claim, it also does not infringe any claim depending thereon. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989).

To prove infringement by the doctrine of equivalents, a patentee must provide "particularized testimony and linking argument" as to the "insubstantiality of the differences" between the claimed invention and the accused product, or with respect to the function/way/result test. *See Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996).

Establishing the literal infringement of a means-plus-function limitation "requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification." *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed.Cir. 1999). A patentee may show structural equivalence "if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification." *Id.* The *Odetics* court differentiated between the "similar analysis" of equivalents under the doctrine of equivalents and 35 U.S.C. § 112, ¶ 6, noting that a component by component analysis is not

required to establish structural equivalence in the latter. *Id.* Indeed, such an analysis would be improper to the extent that

> [t]he individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations. Rather, the claim limitation is the overall structure corresponding to the claimed function . . . . The appropriate degree of specificity is provided by the statute itself; the relevant structure is that which "corresponds" to the claimed function. Further deconstruction or parsing is incorrect.

Id. at 1268 (internal citations omitted). Conversely, the relevant structure does not include "structure 'unrelated to the recited function' disclosed in the patent . . . ." *Id. (citing Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998)).

To establish indirect infringement, a patent owner has available two theories: active inducement of infringement and contributory infringement. *See* 35 U.S.C. § 271(b) & (c). To establish active inducement of infringement, a patent owner must show that an accused infringer "knew or should have known [their] actions would induce actual infringements." *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006). To establish contributory infringement, a patent owner must show that an accused infringer sells "a component of a patented machine . . . knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use." *Golden Blount, Inc. v. Robert H. Peterson Co.*, 365 F.3d 1054, 1061 (Fed. Cir. 2004) (*quoting* 35 U.S.C. § 271 (c)). Liability under either theory, however,

depends on the patent owner having first shown direct infringement. *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 774 (Fed. Cir. 1993).

2. Direct infringement

a. The System patents

The System patents share nearly identical specifications. Therefore, except where noted, the court makes reference to the specification of the '678 patent.[1] Intermec alleges that the asserted claims of the '678 patent are infringed by a combination of: (1) the accused Palm products constituting a "portable data collection terminal;" (2) a wireless cellular telephone network connected to the internet constituting the "communication means" ("network scenario"); and (3) web and email servers connected to the internet constituting the server (collectively "accused structure"). (D.I. 153 at 1-2)

(1) Communications limitations

In addition to a terminal, the asserted claims of the System patents all require a server and either a "communications means" for **interconnecting,** or transmitting data **between**, the terminal and the server (the '678 and '645 patents) or a "communication system" (the '499 patent). The essence of the

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[1]The essential differences from the specification of the '678 patent are: (1) the specification of the '645 patent defines the "first program part or first information portion . . . as a root module" ('645 patent at col. 9:51-52); (2) the specification of the '645 patent defines the "second information portion as . . . memory overlays or overlay modules" and to include "remote programs and overlay modules" ('645 patent at col. 9:56-58; col. 12:57-58); (3) the specification of the '499 patent, while not including the term "first information portion" defines "second information portions" alternatively as "application program parts . . . or modules" and "memory overlays or overlay modules," and to include "remote programs." ('499 patent at col. 9:50-57; col. 12:57-58)

dispute over these claims is whether the radio module 114 is locally attached to the server 130, as Palm asserts, or whether it may be connected to the server under the network scenario, as Intermec asserts. (D.I. 153 at 33; D.I. 206 at 27-28)

The parties agree that the asserted independent claims of the '678 and '645 patents are subject to 35 U.S.C. § 112 ¶ 6, and are to be construed identically, although each party has proposed a different construction. (D.I. 180, ex. A at 6, 12, 23) By its memorandum order of the same date, the court construed the communication means of claim 8 of the '678 patent as "an RF transmission system with radio module 114 attached to the server station via an RS-232 serial communications interface, and a radio module 152 attached to each of the plurality of portable client data collection terminals via an RS-232 serial communications interface." The court's construction regarding the communication means of claim 1 of the '645 patent is materially the same.[2] Generally, the function of the communication means is to interconnect terminals and the server, allowing data transmission between them.

Intermec argues that the presence of a protocol stack is evidence of "a second embodiment in which the Server computers are connected to the radio module by way of network connections" and, therefore, is corresponding structure required by 35 U.S.C. § 122 ¶ 6. (D.I. 153 at 33) The specification

[2]The court did not construe the communications means limitation of claim 1 of the '678 patent because that claim was held to be invalid as indefinite.

teaches that the client protocol stack is disposed within the terminal 112, and that the server protocol stack is disposed within the server 130. ('678 patent at figure 4; figure 8) There is **no** reference in the specification to a protocol stack being disposed within the radio module 114 (or 152).

Figures 3 and 4 show the serial communications interface 148 (UART) and the client radio protocol stack 160 contained within the bounds of terminal 112. Figures 7 and 8 show the serial communications interface 138 (UART) and the server radio protocol stack 220 contained within the bounds of server 130. The inventors distinctly defined these boundaries, showing them graphically and describing them in the text of the specification as "a serial communications interface" between the radio modules and their respective terminal(s) or server. ('678 patent at col. 8:1-5, figure 3, figure 4) A person of ordinary skill in the art of computer science would understand an interface to be a boundary across which two independent systems meet and act on or communicate with each other.[3]

The function of the claim limitations at issue here require either interconnecting the server and terminal(s), or enabling data transmission between the server and terminal(s). Thus, neither the server 130 nor the terminal 112, nor any of their constituent hardware or software components, can be a part of the communication means itself. What remains, external to the client

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[3]"interface (n.) A boundary across which two independent systems meet and act on or communicate with each other. In computer technology, there are several types of interfaces. . . . hardware interface - the wires, plugs and sockets that hardware devices use to communicate with each other."
http://www.webopedia.com/TERM/I/interface.html (last visited August, 12, 2010).

terminal and server, is radio module 114 and radio module(s) 152. By necessity, these components must be connected to their respective terminal(s) and server. The specification teaches only one protocol for this connection: RS-232. ('678 patent at col. 8:1-2, figure 3, figure 7) As Intermec acknowledges in its brief, RS-232 is a protocol describing data signaling over a local connection. (D.I. 153 at 6)

Thus, the specification does not teach a second embodiment whereby the connection between the radio module 114 and the server 130 constitutes a network connection. Radio module 114 lacks a network protocol stack. Instead, the specification teaches a local connection, using a serial RS-232 protocol, between the radio modules and their respective terminal(s) or server. Both the terminal and the server comprise the requisite hardware and software, as taught by the specification, to effect communications over the communication means. No other disclosed element is necessary.

Alternatively, Intermec argues that, even if the means is construed as a local connection, the network scenario is equivalent under 35 U.S.C. § 112 ¶ 6. "Literal infringement of a means-plus-function claim limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification." *Applied Med. Res. Corp. v. United States Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006) (*citing Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003)). To prevail on its motion,

Intermec must adduce admissible evidence that the accused structure performs the identical function and be identical or equivalent to the corresponding structure for the communication means. Intermec asserts that

> there is no meaningful difference between the presentation manager program (i.e., the web server software in an Internet example) controlling the radio module over a local are [sic] network connection or remotely over a wide area network connection, such as the Internet, from the standpoint of the [sic] what work is performed, the way it is performed and the results achieved.

(D.I. 153 at 19) Palm disputes this. (D.I. 206 at 7)

Intermec begins its analysis at the interface between the radio protocol stack 220 and the presentation manager 216, two software components internal to the server. Intermec's argument does not address the function of the communication means as construed by the court, to wit, to interconnect the terminal and server, not the presentation manager with the radio protocol stack and beyond. Intermec has failed to demonstrate that the network scenario is structure identical or equivalent to radio module 114 attached to the server via an RS-232 serial communications interface. Similarly, no correspondence is shown for the connection between the alleged terminal and its corresponding transceiver. The court finds that Intermec has not shown, on the record, evidence sufficient to show direct infringement of claims 1 and 8 of the '678 patent.

From the above discussion, it follows that Intermec has also not adduced sufficient evidence of infringement of all asserted claims of the '645 patent, based on consideration of the communication means alone.

Claim 1 of the '499 patent recites "a communication **system** communicatively **interconnecting** said terminal and said server." The court has construed this limitation as "a wireless network system that enables a terminal and server to transmit and receive data using transceivers." Although this is not means-plus-function language, the arguments of the parties are subsumed in the discussion above. Here again, Intermec fails to adduce evidence that the network scenario corresponds to this limitation. To do so, Intermec would have to show that a particular server transmits data to an accused Palm product using a transceiver.

(2) Partitioning of application programs

All of the asserted claims of the System patents, except claim 1 of the '678 patent, relate to application programs that have been partitioned into parts, or modules.[4] The memory of a data collection terminal may "have a capacity insufficient to store all of an application program and data to be executed by its microprocessor." ('678 patent at col. 9:61-65) To address this issue, the specification teaches that "each of the plurality application programs is partitioned into a root module and at least one overlay module." (*Id.* at col. 5:42-44) "The first program part is known as a root module and will be loaded first." (*Id.* at col. 10:2-3) Overlay modules are required to continue the execution of the application program. (*Id.* at col. 5:51-52) "When the microprocessor is

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[4]Claims 1 and 8 of the '678 patent are in independent form. Claim 8 makes direct reference to application programs. Claim 1 of the '645 patent is in independent form, and makes reference to a "first information portion" which the court construed to be "a root module," i.e., a part of an application program. Claims 1 and 15 of the '499 patent are in independent form. Claim 1 also recites a "first information portion." Claim 15 recites "executable portions" which the court construed to be "root modules or overlay modules."

executing the last instruction of a root module or an overlay module, then it is necessary to request and receive the next overlay module to permit the application program to continue to be executed without interruption." (*Id.* at col. 10:10-15) "Thus there has been described a data capture system 110 that distributes the application program between the memory of a terminal 112 and a database server 130." (*Id.* at col. 14:47-49)

The court has construed "application programs" as "sequences of machine-level instructions capable of execution on a processor," "first information portion" as a root module, and "executable portions" as root modules or overlay modules. Claim 8 of the '678 patent, itself, makes clear that application programs are partitioned into a root module and at least one overlay module. Thus, root modules and overlay modules must also be sequences of machine-level instructions capable of execution on a processor. Intermec argues that "[c]laim 8 is infringed whenever a Server returns a dynamic web page with embedded executable JavaScript. Because the embedded script permits the application to continue executing, the web page with the embedded script is, by definition, an overlay module." (D.I. 153 at 34) (citations omitted) Under Intermec's scenario, the web browser program constitutes the root module, and the dynamic web page containing JavasScript commands constitutes an overlay module. Intermec's assertions are based entirely on its proposed claim constructions, that were not adopted by the court. There is no evidence of record that dynamic web pages, nor any embedded script language, are application programs (or parts thereof) as

construed by the court. Intermec has not adduced evidence that dynamic web pages or any embedded script language are comprised of machine-level instructions.

As to equivalents, Intermec argues that

> [t]wo minor differences exist between the steps described in Figure 6 and the accused behavior of the web browser and e-mail client programs described above. First, the web browser and e-mail client of the Accused Products perform the steps of Figure 6 themselves instead of accessing a special purpose transaction manager program to perform them. Second, the data requests are not formatted by the Accused Products as SQL requests, but are formatted as PHP, ASP, POP or IMAP requests. Because each of these differences is within the scope of equivalents, neither presents a basis for non-infrngement.

Intermec is silent regarding the equivalence of dynamic web pages and embedded script languages to application programs comprising sequences of machine-level instructions. Intermec has failed to adduce evidence of infringement of claim 8 of the '678 patent on this basis.

With respect to the remaining asserted claims of the '645 and '499 patents, Intermec argues the same theory of infringement as for claim 8 of the '678 patent, to wit, that using the accused Palm products to access web and email servers over the internet constitutes infringement. (D.I. 203 at 16) For the reasons stated above, this argument is unavailing. Therefore, Intermec has failed to adduce evidence of infringement of the aforementioned claims and patents on this basis alone.

b. Terminal patents

(1) Optical/Indicia reader

The parties' dispute regarding infringement of the Terminal patents is primarily focused on whether the "optical reader means" of claim 1 of the '947 patent, and the

"indicia reader input system" of the '971 patent, require not only the capture of an image, but also the extraction of information encoded in the image ("decoding").

Intermec argues that the optical reader means limitation is not subject to 35 U.S.C. § 112 ¶ 6, but asserts that the result is the same regardless of whether the term is construed as means-plus-function language or not. (D.I. 160 at 23) In this regard, Intermec contends that the term optical reader does not include a decoding function; only image capture is required. (D.I. 150 at 30; D.I. 160 at 22-23) Indeed, Intermec uses the term "camera" in its briefs, although that term is not found within the four corners of the Terminal patent specifications. (D.I. 150 at 30-31) ("The patent discloses a CCD camera capable of digitizing any form of text or graphics. . . . The claim term must be construed broadly enough to encompass all disclosed corresponding structures, including the CCD camera.") Intermec's arguments are based on extrinsic evidence in the form of ordinary and computer dictionary definitions of the word "read." (D.I. 150 at 30) The specification of the '947 patent teaches numerous examples of readers that use optical means in reference to reading and decoding bar codes, with only one reference to other types of information read. ('947 patent, col. 3:10; col. 10:50; col. 11:18-19; col. 13:6-7; col. 17:1-39; col. 18:9-44; figures 13A, 13B, 14-18) In fact, the inventors devoted nearly 6 of 32 columns of the specification to a discussion of digital signal processing (decoding) of bar code images. ('947 patent, col. 16:60-22:39)

The court has construed "optical reader means for effecting the input of optical information" as a photoelectric sensor array, light source, and decoding logic, and "an indicia reader input system" as a system for obtaining the information encoded in a

symbol. Based on its proposed claim construction, Intermec argues only that the accused Palm products infringe because they contain cameras. (D.I. 150 at 30-31) There is no evidence of record that the optical reader means limitation, as construed by the court, is found in the accused Palm products.

(2) Broad side

Claim 1 of the '947 patent recites in part: "1. A hand-held data processing system, comprising: . . . a graphical display with a display screen occupying substantially an **entire broad side** of the processing module." Again, the arguments are framed around the construction of this limitation. Intermec argues that this limitation should be construed as "a display screen that occupies a considerable portion of a relatively long boundary of the device," and that the accused Palm products meet this limitation, as "there is no dispute that the displays of Palm's Accused Devices are the most prominent feature of the operating face of the device and that they occupy a considerable portion of the side-to-side dimension of the operating face of the device." (D.I. 160 at 21) Intermec also frames the argument as whether or not the device can contain a keyboard and still infringe. (D.I. 160 at 20-21)

The court has construed "a display screen occupying substantially an **entire broad side** of the processing module" as a display screen that occupies the entire surface of the largest face, except for a small border, as shown in figure 9." The specification of the '947 patent teaches:

> As previously described in detail, the computerized processing module 200 may be self-contained and may have a display screen occupying substantially an entire broad side of the unit, **as is shown in FIG. 9.**

('947 patent at col. 24:22-25) (emphasis added) Figure 9 shows a display screen that occupies the entire surface of the largest face, except for a small border. Intermec fails to adduce evidence that this limitation, as construed, is found in the accused Palm products.[5]

(3) Multitasking operating system

Claim 1 of the '971 patent recites in part: "1. A portable battery-powered hand-held data processing device, comprising . . . (c) a processing system, comprising . . . (ii) a multitasking operating system designed to run on said computerized processor and capable of executing essentially concurrently a wide range of computer processes." Intermec argues that "[n]o actual dispute exists regarding whether Palm's Accused Devices include a . . . 'multitasking operating system designed to run on said computerized processor and capable of executing essentially concurrently a wide range of computer processes.'" (D.I. 160 at 26) Palm responds, "[u]nder Palm's proposed construction, none of the devices using the Palm OS execute two application programs at the same time (or at 'essentially the same time,' to use Intermec's formulation)." Palm does not contest that the Windows Products have multitasking operating systems. (D.I. 208 at 10) Intermec asserts that Palm failed to contest that the POS products contained a multitasking operating system until its response to Intermec's summary judgment motion. (D.I. 245 at 5) As discussed above, the court finds that the indicia reader limitation is dispositive of non-infringement of the '971 patent by the accused Palm products and, therefore, this dispute is not material.

[5]The accused Palm products are depicted in a photograph. (D.I. 160 at 3)

3. Indirect infringement

The court finds that Intermec has failed to show that the accused Palm products meet the: (1) communications limitation of the System patents; (2) partitioned application program limitation of the System patents;[6] and (3) optical/indicia reader limitation of the Terminal patents. Further, the accused Palm products do not meet the broad side limitation of the '947 patent. Indirect infringement, whether by active inducement of infringement or contributory infringement, requires that direct infringement must first be established. As Intermec has failed to adduce evidence of direct infringement of the Intermec patents, no claim of indirect infringement can lie. Palm makes various other arguments that Intermec has failed to show evidence of induced infringement. Because the court finds no direct infringement, the court does not reach these arguments.

B. Invalidity

1. Indefiniteness

a. Standards

Indefiniteness is a question of law. *Amgen Inc. v. F. Hoffman-LA Roche Ltd.*, 580 F.3d 1340, 1371 (Fed. Cir. 2009) (citing *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008)). That is, "[a] determination that a patent claim is invalid for failure to meet the definiteness requirement of 35 U.S.C. § 112 [¶ 2] is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims[.]" *Biomedino, LLC v. Waters Technologies Corp.*, 490 F.3d 946, 949

[6]Claim 1 of the '678 patent does not have such a limitation.

(Fed. Cir. 2007) (citation omitted); *see also Exxon Research and Engineering Co. v. U.S.*, 265 F.3d 1371, 1376 (Fed. Cir. 2001) (rejecting argument that underlying questions of fact may preclude summary judgment on indefiniteness, as "a court may consider or reject certain extrinsic evidence in resolving disputes en route to pronouncing the meaning of claim language").

Section 112 requires that a patent "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. As explained by the Federal Circuit,

> [t]he primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe.

All Dental Prodx, LLC v. Advantage Dental Prods., Inc., 309 F.3d 774, 779-80 (Fed. Cir. 2002) (*citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28-29 (1997)). In other words,

> [a] patent holder should know what he owns, and the public should know what he does not. For this reason, the patent laws require inventors to describe their work in "full, clear, concise, and exact terms," 35 U.S.C. § 112, as part of the delicate balance the law attempts to maintain between inventors, who rely on the promise of the law to bring the invention forth, and the public, which should be encouraged to pursue innovations, creations, and new ideas beyond the inventor's exclusive rights.

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 731 (2002).

A determination as to whether the definiteness requirement has been met "requires construction of the claims according to the familiar canons of claim construction." *All Dental Prodx, LLC,* 309 F.3d at 779-80. Claims that are not amenable to construction or are insolubly ambiguous are indefinite. *Halliburton Energy*

Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008). As with every construction issue, the focus of the indefiniteness inquiry is on the meaning that claim terms would have to one of ordinary skill in the art "at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1313 *(citing Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.,* 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

Although a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement, *In re Marosi*, 710 F.2d 799, 802-03 (Fed. Cir. 1983), a claim is deemed sufficiently definite only if "one skilled in the art would understand the bounds of the claim when read in light of the specification." *Exxon Res. & Eng'g Co. v. U.S.*, 265 F.3d at 1375. Therefore, even if a claim term's definition can be reduced to words, it "is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope." *Halliburton*, 514 F.3d at 1251. In this regard, a claim term is indefinite if the patent does not provide an "objective anchor" or "yardstick against which potential infringers may measure their activities." *Girafa.com v. IAC Search & Media, Inc.*, Civ. No. 07-787-SLR, 2009 U.S. Dist. LEXIS 88796, at *7 (D. Del. Sept. 25, 2009).

In sum, the indefiniteness standard of 35 U.S.C. § 112, ¶ 2 is met "where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area." *Id.*

Because both claim construction and indefiniteness are questions of law, these issues are amenable to summary judgment.

b. The '678 patent

Palm argues that claims 1 and 9 of the '678 patent are invalid as indefinite under 35 U.S.C. § 112, asserting that the terms "first style" and "second style" have no discernible meaning to a person of ordinary skill in the art, and that neither the specification nor a plain, dictionary meaning aid such person in understanding the meaning of these terms. (D.I. 154 at 1) Intermec agrees that these terms do not have any special meaning; nevertheless, the plain meaning of the terms is readily discernable based on the intrinsic record, to wit, the terms explain how "data, requests, and programs are formatted differently on the terminal units of the patent than they are formatted on the servers." (D.I. 200 at 1) "Intermec proposes that these terms be construed as 'data arranged in a manner appropriate for' the client ('first style') or server ('second style')." (D.I. 200 at 8) (*citing* D.I. 180, ex. A at 3, 5) Relying on *Datamize*, Intermec further argues that "the claim term 'different' ('second style different from said first style') is not a subjective term, but is, at most, a term of degree" and, thus, the "court must determine whether the patent's specification provides some standard for measuring that degree." (D.I. 200 at 9) (*quoting Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005))

The court has found no such standard. The independent claims of the '678 patent (1, 8 and 21) describe systems comprised of terminals and a server. The terminals and the server are connected by a communication means. Each terminal further comprises a first control means and dynamic addressable storage means. The

server comprises a second control means and mass memory means.[7] Within the claims, the term "first style" is used in reference to the terminal's first control means operating on data (claim 1), generating and transmitting a memory altering request (claims 6 and 11), and executing application programs (claim 9). The term "second style" is used in reference to the server's second control means executing its control program (claim 10), operating on data (claim 1), storing its data on its mass memory means (claim 1), and storing the terminal's application programs on its mass memory means (claim 10). The server is capable of translating data from the second to the first style (claim 7), translating requests for data and application programs from the first to the second style (claims 6 and 11 respectively), and translating overlay modules from the second to the first style (claim 12). It is apparent that the terms "first style" and "second style" are used consistently in the claims of the '678 patent, to wit, "first style" describes data operated on, requests generated by, and application programs executed on a terminal, whereas "second style" refers to data operated and stored on, control programs executed on, and application programs stored on the server.[8]

It remains unclear, however, whether there is only one meaning of the term "style", or whether "style" can have different meanings when used in different contexts such as in reference to data, programs, or requests. Reading claim 1 and claim 6

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[7]The server further comprises, inter alia, other storage means, but it is not material to the issue at bar.

[8]Thus the interpretation of the claims at issue is consistent with other claims of the '678 patent that address "first style" and "second style."

together, the term "style" has the same meaning in both the data and request context.[9] In the same manner, reading claims 9-12 together demonstrates that "style" has the same meaning when applied in the context of application programs, control programs, overlay modules and requests. Thus, the terms "first style" and "second style" have a single meaning, which is used consistently within the claims. However, no further information can be rendered from the claims alone to assist a person of ordinary skill in the art in discerning that single consistent meaning.

Palm asserts that the terms "first style" and "second style" do not appear in the specification of the '678 patent, except for their inclusion in the "Summary of the Invention" which does nothing more than "parrot verbatim the language in the claims, without any explanation." (D.I. 240 at 5) In fact, the abstract and specification of the '678 patent do provide an additional reference to the term "second style," beyond that of the claims, explaining that the **data stored in the terminal's dynamic addressable storage means is formatted in the second style**.[10] None of the claims describe the

[9]Claim 1 of the '678 patent recites "a) . . . each terminal comprising . . . first control means operating on data formatted in a first style; b) a server station comprising . . . second control means operating on data formatted in a second style different from said first style." Claim 6, which depends from claim 1 recites "said memory altering request in said first style, . . . translating said memory altering request from its first style to said second style." Thus, if "first style" and "second style" had a different meaning with regard to data as opposed to requests, claim 6 would be lacking antecedent basis. Although it is well settled that claims are not invalid for lack of antecedent basis, such usage supports the conclusion that the term "style" has the same meaning in the data and request context. *See Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1376 (Fed. Cir. 2008)

[10]The abstract and specification disclose "a dynamic addressable memory." ('678 patent at [57], 5:18) The "dynamic addressable memory" of the abstract and specification corresponds with the "dynamic addressable storage means" of claims 1 and 8. (*Id.* at 15:7-10, 16:13-17) "The data stored in the dynamic addressable memory

format of data stored in the terminal's dynamic addressable storage means. No other structure for storing data on the terminal is disclosed, nor is any means disclosed for the terminal's first control means to translate data from the second style to the first style. Therefore, the specification and claim 1 are inherently inconsistent, as claim 1 requires the terminal's first control means to operate on data formatted in the first style, whereas the specification requires data stored in the terminal's dynamic addressable storage means to be formatted in the second style. Thus, claim 1 is necessarily invalid due to the irreconcilable contradiction within the patent. *See Enzo Life Sciences, Inc. v. Digene Corp.*, 305 F. Supp 2d 406, 410 (D. Del. 2004) (*citing Allen Engineering Corp. v. Bartell Industries*, 299 F.3d 1336 (Fed. Cir. 2002); *In re Cohn*, 58 C.C.P.A. 996, 438 F.2d 989 (C.C.P.A. 1971)).

Moreover, the essence of the invention is to minimize data transmission, response time and power requirements through the use of distributed processing, while at the same time increasing the size and sophistication of applications that may be run on the terminal. ('678 patent at col. 4:59-68; col. 5:1-13) It is **not** an object of the invention to have a "first style" and "second style." Although the specification describes "first style" and "second style," it does not do so as a limitation.[11] The patent only

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is formatted in the second style." (*Id.* at [57], 5:27-28)

[11]"In other words, the [Structured Query Language (SQL)] request **could be translated** into a format that would correspond and be recognized by that format of the remote database." ('678 patent at 9:57-60) (emphasis added) "The principal function of the presentation manager program 216 is to translate between that format used by the transaction manager program 158 of a terminal 112 and the SQL format of the database of the hard disk drive 137 **if these formats are different.**" (*Id.* at 13:55-60) (emphasis added)

discloses that the first style is different from the second style. Nowhere in the specification or claims is there any suggestion as to how the styles differ, examples of styles, nor any other guidance which would allow a person of ordinary skill in the art to discern the meaning of "first style" or "second style," nor to discern the degree of difference between the two.[12] Intermec argues that a limitation that the two styles be different is sufficient to preclude a finding of indefiniteness. (D.I. 200 at 8) (*citing Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1345, 1347-48 (Fed. Cir. 2008)) In *Kyocera,* the court, in construing the claim phrase "a second wireless communication different from the first," when viewed in context, suggested "that the two claimed wireless communications are not merely 'different' in any way, but in such a way that requires adaptations in 'communication circuitry' to facilitate both wireless uses." In the case at bar, there is only a requirement that data be formatted differently.

Intermec's expert, Ray W. Nettleton, Ph.D. ("Nettleton"), opines that any one of a multitude of differences in the organization of data would qualify as "data formatted in different 'styles,'"[13] yet fails to point to any intrinsic evidence linking these proposed

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[12]The only embodiment of the invention includes "distributed databases [which] currently rely on some form of communication through [SQL]." ('678 patent at 3:53-55) In terms of structure, the only means described in the specification for translating between first and second styles are those devoted to translating a received SQL request and translating to "database format" shown in figures 6 (format request 196, send SQL request 198, data received 200, format data 204, and return data 206) and figure 9 (receive SQL request 234 and translate to database format 236).

[13]Nettleton describes different examples of data formatted in different styles as including: Cascading Style Sheets ("CSS"), computer files, objects within files, bits within a web page enclosed by HTML <script> tags, the Joint Photographic Experts Group "JPEG" format for storing compressed graphical images, ".doc" files which contain word processing documents, other specially formatted files, relational databases, both in general and specific implementations such as MySQL and

meanings to the patent. Moreover, Nettleton's explanation is still vague and ambiguous. Most computer standards evolve through various versions. Presumably, different versions of the same standard would qualify as different. However, it is possible that the differences between these versions are not relevant to the functioning of the terminal and server as described in the patent. Nettleton's interpretation would encompass any type of data specification, organization, or format, even if it did not exist at the time of the invention, and even if it did not relate to the conceived benefits of the invention. For example, Nettleton discusses the HTML <script> tag. At the time the application for the '678 patent was filed, HTML had not yet been fully developed, and its design did not encompass the <script> tag mentioned by Nettleton.[14]

In sum, Nettleton asserts that any difference, no matter to what degree, may be considered a "second style different from the first," unless it would conflict with a disclosed embodiment. This does not adequately inform a person of ordinary skill in the

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Microsoft's SQL server, different methods used by operating systems to format secondary storage such as NTFS, LVM, and FAT, and different bit-length processor architectures. (D.I. 179, tab 103 at ¶¶ 105-35)

[14]HTML had not yet been released in its original version, which did not include the <script> tag. *See* Email from Tim Berners-Lee, acknowledged developer of HTML, to Dan Connolly (Oct. 29, 1991 10:03:11 GMT+0100) http://lists.w3.org/Archives/Public/www-talk/1991SepOct/0003.html (last visited June 21, 2010). The application for the '678 patent was filed on August 21, 1991. ('678 patent at [22]). The <script> element was not implemented as a standard until after 1996 and HTML version 3.2. Dave Raggett, *HTML 3.2 Reference Specification W3C Recommendation* (Jan. 14, 1997), http://www.w3.org/TR/REC-html32#script (last visited June 21, 2010).

art as to the bounds of the invention. Discussing interpretation of means-plus-function claim language, the Federal Circuit has noted that to

> resolve the ambiguity in a way that gives it the broadest possible construction (i.e., that its claim covers all future improvements without regard to whether [the applicant] invented such improvements) . . . would undermine the notice function of the claims because it would allow [the applicant] to benefit from the ambiguity, rather than requiring [the applicant] to give proper notice of the scope of the claims to competitors.

Halliburton, 514 F.3d at 1254. Although the "first style" and "second style" language of the disputed claims is not means-plus-function language, allowing Nettleton's opinions to define the scope of the disputed claims would yield a similar result – allowing the applicant to benefit from the ambiguity, rather than requiring proper notice and scope of the claims. For the above reasons, the court finds that the terms "first style" and "second style" as used in claims 1 and 9 of the '678 patent are insolubly ambiguous and, therefore, finds that said claims are invalid as indefinite under 35 U.S.C. § 112.

c. The '499 patent

Independent claim 15 of the '499 patent recites, "each of the one or more terminal [sic] selectively requests the application programs from the main information center; and the main information center delivers requested ones of the application programs in executable portions." ('499 patent at 16:33-37) Claim 16 depends from claim 15 and recites, "the terminal establishes a communication link with the main information center to deliver the requests, and the requests are selectively forwarded to at least one of the plurality of servers for servicing." (*Id.* at 16:38-43)

Palm argues that "claims 15 and 16 of the '499 [p]atent . . . incorporate limitations directed to the method of use of the system, and not just the apparatuses of the claimed

system." (D.I. 154 at 3) Palm asserts that these claim limitations require that an unidentified external agent perform the predicate selection of an application program and, relying on *IPXL Holdings, L.L.C. v. Amazon. com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005), argues that claims 15 and 16 of the '499 patent are invalid as indefinite. (D.I. 154 at 9-10)

IPXL was a case of first impression for the Federal Circuit and, since that time, several district courts have been asked to invalidate claims under *IPXL*, with most holding "that the suspect claims did not cover both an apparatus and a method, but rather were apparatus claims containing functional limitations." *Ricoh Co. Ltd. v. Katun Corp.*, 486 F. Supp. 2d 395, 401-02 (D.N.J. 2007) (collecting cases). In one such typical case, a party asserted that a claim including the limitation, "upon activation of the presented link . . . ," was indefinite under *IPXL* because "it cannot be known whether infringement . . . occurs when the computer-readable storage device is manufactured or sold, or whether infringement occurs when a user activates such a system's presented link, **or both**. Moreover, infringement of these claims can only take place by virtue of human interaction . . . ." *Yodlee, Inc. v. CashEdge, Inc.*, No. 05-01550, 2006 WL 3456610 at *4 (N.D. Cal. Nov. 29, 2006) (emphasis in original). The Court concluded that

> [t]he claim describes what happens "upon activation of the presented link." It does not seek to patent activation of the link; it seeks only to patent a device which performs certain functions if and when the link is activated. Infringement occurs when a device that has the capability of performing the steps described [in the claim] is manufactured and sold. Whether a user actually activates the link presented by the infringing device is of absolutely no import. Similarly, the process initiated by activating the link need never take place. If the device presents such a link, and activating

> such link would initiate the process described [in the claim], the device infringes.

Id.

The circumstances described above are similar in the case at bar. Claim 15 does not seek to patent user selection of a program, but only a terminal which performs a certain function – selection of one of a plurality of application programs – if and when a user indicates a desire to execute one of the programs. Further, in describing figure 5, the specification states:

> A start 162 is initiated in a number of ways by the associated application program. At power up when typically there is no application being executed, the operating system program, which is stored in the ROM 144, places a call to the program manager 156. Alternatively, a new application program may be called by the operator by actuating a selected key(s) of the keyboard 113.

('499 patent at 10:31-37) Thus, the specification teaches that operator intervention is an alternative means of starting a new application program. The language of claim 15 does not limit the means of selecting an application program to manual operator intervention. It is conceivable that program selection could be also be performed by automatic means, such as based on battery condition or other environmental parameters. The language of claim 15 describes the claimed apparatus in functional terms, it does not describe active use. *See Ricoh*, 486 F. Supp. 2d at 402-03. Therefore, the court holds that claim 15 of the '499 patent is not invalid as indefinite under 35 U.S.C. § 112, nor is claim 16 indefinite by reason of its dependency.

2. Anticipation

a. Standards

Under 35 U.S.C. § 102(a), "a person shall be entitled to a patent unless the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent."

A claim is anticipated only if each and every limitation as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

> [A]nticipation requires that each limitation of a claim must be found in a single reference. Although [the Federal Circuit has] permitted the use of additional references to confirm the contents of the allegedly anticipating reference, . . . we have made clear that anticipation does not permit an additional reference to supply a missing claim limitation.

Teleflex, Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1335 (Fed. Cir. 2002). That is, additional references may be used only to shed light on what a prior art reference would have meant to those skilled in the art at that time, not for a specific teaching, as this would be indicative of an attempt to improperly "combine the teachings of the references to build an anticipation." *Studiengesellschaft Kohle, m.b.H. v. Dart Industries, Inc.*, 726 F.2d 724, 727 (Fed. Cir. 1984).

A single prior art reference may expressly anticipate a claim where the reference explicitly discloses each and every claim limitation. However, the prior art need not be *ipsissimis verbis* (i.e., use identical words as those recited in the claims) to be expressly anticipating. *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716 (Fed. Cir. 1984).

A single prior art reference also may anticipate a claim where one of ordinary skill in the art would have understood each and every claim limitation to have been disclosed inherently in the reference. *Continental Can Co. USA Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Federal Circuit has explained that an inherent limitation is one that is necessarily present and not one that may be established by probabilities or possibilities. *Id.* That is, "the mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* "[I]nherency operates to anticipate entire inventions as well as single limitations within an invention." *Schering Corp. v. Geneva Pharms. Inc.*, 339 F.3d 1373, 1380 (Fed. Cir. 2003). The recognition of an inherent limitation by a person of ordinary skill in the art before the critical date is not required to establish inherent anticipation. *Id.* at 1377.

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. *Key Pharms. v. Hercon Lab. Corp.*, 161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art to determine whether the prior art discloses the claimed invention. *Id.*

b. The System patents

In response to Palm's assertion of an invalidity defense regarding the System patents, Intermec has moved the court for partial summary judgment on all of Palm's invalidity claims against the System patents, except for obviousness. (D.I. 156 at 1) Palm has asserted that eight prior art references anticipate one or more claims of the System patents. (D.I. 207 at 4-7, 16-20, 23-30) As discussed below, Palm concedes that many of these references do not anticipate the System patents but, instead, render

the patents obvious in light of other references. Each of the independent claims of the System patents, except claim 15 of the '499 patent, require wireless communications between the terminal(s) and the server. The independent claims of the System patents, except claim 1 of the '678 patent, also require application programs that are partitioned into modules. The court finds these limitations substantially dispositive with regard to the System patents.

(1) U.S. Patent No. 4,714,989 ("Billings")

The parties agree that Billings teaches computer terminals communicating over a network with a server in a data center. (D.I. 156 at 6; D.I. 207 at 4-5) Intermec argues that Billings does not teach partitioned application programs with root and overlay modules stored at the server. (D.I. 156 at 7) Palm responds that "Billings teaches **data** being stored in a server to be requested when needed to continue execution." (D.I. 207 at 17) (emphasis added) The court notes that Palm's assertion is non-responsive in that it does not address partitioning of application programs, only data. The communications taught by Billings takes place either through a direct connection or, using modems, through a public or private telephone switching network, or a packet switching network. (Billings at 4:31-54). Palm concedes that Billings "do[es] not disclose a terminal with a wireless transceiver, and therefore render[s] the asserted claims of the [System] patents obvious rather than anticipated." (D.I. 207 at 23-24)

(2) U.S. Patent No. 4,940,974 ("Sojka")

Sojka discloses a communication system between a multiplicity of mobile terminals and a primary processor. (Sojka at [57]) Intermec argues that Sojka fails to disclose a server storing and transmitting root modules and overlay modules. (D.I. 156

at 9) Palm does not contend that Sojka anticipates the System patents but, instead renders them obvious. (D.I. 207 at 30)

(3) U.S. Patent No. 5,012,234 ("Dulaney")

Dulaney discloses a "portable communications receiver" with a memory, which can have the contents of its memory altered remotely using wireless communications. (Dulaney at 2:29-39) Intermec argues, inter alia, that Dulaney does not disclose application programs being downloaded, nor storing of application programs in root modules and overlay modules. (D.I. 156 at 11) Palm responds that Dulaney "explicitly recite[s] the download of executable code that operates in conjunction with code already present on the terminal," pointing to "RSF #51, 58," which the court interprets to be a reference to "Palm's Response to Intermec's Statement of 'Undisputed' Facts," § 2(E). (D.I. 207 at 29). However, neither RSF #51 nor RSF #58 discuss Dulaney, nor address Dulaney's lack of a server storing application program modules. (D.I. 207 at 19-20) The court, therefore, finds that Dulaney does not anticipate claim 8 of the '678 patent, claim 1 of the '645 patent, claims 1 and 15 of the '499 patent, or claims depending therefrom.

(4) U.S. Patent No. 5,003,576 ("Helferich")

Helferich discloses an analog-to-digital voice storage cellular telephone for recording voice messages while the user is away from the cellular telephone unit. (Helferich at [57]) Intermec argues that Helferich lacks disclosure of downloading executable code. (D.I. 243 at 8) Palm concedes that Helferich, on its own, does not meet the limitation requiring partitioning of application programs but, instead, contends that the claims are obvious in light of other references. (D.I. 207 at 29) Therefore, the

court holds that Helferich does not anticipate the '645 or '499 patents, nor claim 8 and dependent claims of the '678 patent.

(5) U.S. Patent No. 5,051,822 ("Rhoades")

Rhoades discloses a home computing element capable of establishing a digital, interactive communication system providing a plurality of subscribers access to a plurality of video game programs stored in a plurality of remote game storage centers. (Rhoades at col. 1:6-10) Intermec argues that Rhoades fails to disclose any wireless communications between the home computing element and the storage center, or partitioning of application programs. (D.I. 156 at 13-14) Palm concedes that Rhoades does not disclose a terminal with a wireless transceiver, but disputes that Rhoades does not disclose a system that has a root module on a terminal requesting overlay modules from a server. (D.I. 207 at 19, 23) Palm contends that Rhoades discloses "execution of application programs that comprise an executive component that downloads video games from a server . . . ." (D.I. 173 at IA 4230-31) Because Rhoades lacks a wireless transceiver, the court finds that it fails to anticipate all of the claims of the System patents, except claim 15 of the '499 patent which has no such limitation. As to claim 15 of the '499 patent, the court finds that there is a genuine issue of material fact precluding summary judgement of non-anticipation of the System patents by Rhoades.

(6) U.S. Patent Nos. 4,972,463 and 5,239,662 (collectively "the Danielson patents")

Danielson discloses a store-based data communications system that combines multiple data sources, which use differing communications protocols for transmission over a single telephone line, by translating all data sources to a common protocol.

(Danielson patents at [57]). The parties agree that the Danielson patents do not disclose a terminal with a wireless transceiver and, therefore, do not anticipate the System patents. (D.I. 207 at 23-24; D.I. 243 at 3)

(7) U.S. Patent No. 4,835,372 ("Gombrich '372")

Palm contends that Gombrich '372 anticipates "certain" asserted claims of the System patents, referring to "Palm's Preliminary Invalidity Contentions at 16, Exh. G at 10-13." (D.I. 207 at 7) The court is unable to locate this reference in the record. Intermec is silent regarding issues specific to Gombrich '372. Therefore, the court finds the record insufficient to make a determination regarding anticipation of the System patents by Gombrich '372.

(8) U.S. Patent No. 4,857,716 ("Gombrich '716")

Palm asserts that Intermec's motion does not address the Gombrich '716 patent, which Palm contends anticipates claims 1-7 of the '678 patent, referring to "Palm's Preliminary Invalidity Contentions at 16, Exh. G at 10-13." (D.I. 207 at 23) Again, the court is unable to locate this reference in the record. However, claims 2-7 of the '678 patent depend from independent claim 1, which the court has found to be invalid as indefinite.

c. The Terminal patents

Palm has asserted defenses against infringement of the Terminal patents, including six alleged prior art references that anticipate the Terminal patents. (D.I. 160 at 1; D.I. 208 at 13-16, 18-22) Intermec argues that, given proper claim construction, "no questions of fact remain" and, therefore, it is entitled to summary judgement of validity. (D.I. 160 at 1) Only the first claim of each of the Terminal patents is in

independent form. Of importance to the issue at bar are several limitations of the Terminal patents, to wit: (1) a display screen occupying substantially an entire broad side of the processing module ("the broad side limitation"); (2) optical reader means/indicia reader input system ("optical reader limitation"); and (3) a multitasking operating system, . . . capable of executing essentially concurrently a wide range of computer processes. ("multitasking operating system limitation"). The broad side limitation applies to the '947 patent only; the optical reader limitation applies to both Terminal patents, and the multitasking operating system limitation applies to the '971 patent only.

(1) Federal Express Tracker ("Tracker")[15]

The Tracker was a hand-held device used by Federal Express to scan bar codes for package tracking. (D.I. 160 at 1; D.I. 208 at 12) It included a bar code reader, display, and keyboard. (D.I. 160 at 11; D.I. 208 at 13-14) The parties engage in lengthy arguments over whether the Tracker had a "graphical display," a limitation of the '947 patent, but a term for which neither party sought the court's construction. It is the size of the display relative to the largest face of the Tracker that is dispositive with respect to the '947 patent. The Tracker's display screen does not meet the broad side limitation as construed by the court to be "a display screen that occupies the entire surface of the largest face, except for a small border, as shown in figure 9." (*See* D.I. 165, tab 3 at IA 000007) Palm asserts that the Tracker also meets the multitasking operating system

[15]Note: the Federal Express "Tracker", and various iterations thereof (such as the "Supertracker"), should not be confused with the Intermec (Norand) "Trakker" referenced in this court's earlier memorandum order (D.I. 270). Norand created a mock-up device (presumably of the "Trakker" device) seeking to market Norand's device to Federal Express, but Federal Express did not contract with Norand for production of the "Tracker." (D.I. 208 at 27)

limitation of the '971 patent, premised on Intermec's proposed construction, which the court did not adopt. (D.I. 208 at 35) Palm has failed to adduce evidence that the Tracker had a multitasking operating system as construed by the court to be "an operating system that permits the user to execute two or more application programs at the same time." Therefore, the court finds that the Tracker does not anticipate either the '947 or '971 patents.

(2) EU Publication No. 0053061A1/U.S.; U.S. Patent No. 4,545,023 ("Mizzi")

Mizzi discloses a hand-held computer comprising a flat touch-sensitive display screen on the upper face of the casing, having the size of a pocket book, and including various interfaces, e.g., RS-232 serial or IEEE parallel, for connecting peripheral devices. (Mizzi at col. 1:6-35; col. 3:49-52). Mizzi does not contain any reference to optical readers, bar code readers, or other types of optical input devices. Palm argues that the existence of interfaces to peripheral devices, coupled with the ability to connect a bar code reader, satisfies the optical reader limitation of the Terminal patents. (D.I. 208 at 14). Claim 1 of the '947 patent recites "1. A hand-held data processing system, comprising: a **self-contained** computerized processing module . . . said processing module further **including optical reader means** for effecting the input of optical information." (emphasis added) Claim 1 of the '971 patent recites "(b) an indicia reader input system, **located on** the portable battery-powered hand-held data processing device." (emphasis added) Palm fails to proffer sufficient evidence that Mizzi anticipates either of the Terminal patents. Therefore, the court holds that Mizzi does not anticipate the '947 or '971 patents.

(3) U.S. Patent No. 4,916,441 ("Gombrich '441")

Gombrich '441 discloses a handheld pocket terminal having a display screen and a bar code reader. (Gombrich '441 at [57]) The fundamental dispute regarding Gombrich '441 is whether or not it is prior art to the Terminal patents. (D.I. 160 at 12; D.I. 165 at 15) The '947 patent application was filed March 29, 1993. ('947 patent at [22]) The '971 patent application was filed May 23, 1995. ('971 patent at [22]) Gombrich '441 was filed September 19, 1988. Both Terminal patent applications are continuations-in-part, with complex lineages, and include, as a common ancestor, the 1986 application, Ser. No. 897,547, filed August 15, 1986. Intermec claims priority to the 1986 application for both Terminal patents, excluding the multitasking operating system limitation of the '971 patent. (D.I. 160 at 7) A chain of five different applications, of various types, intervene between the '947 patent application and the 1986 application, with three between the '971 patent application and the 1986 application. ('947 patent at [63]; '971 patent at [63])

Intermec gives glancing treatment, in its briefs, to the prima facia case of anticipation of the Terminal patents by Gombrich '441, instead focusing on whether Gombrich '441 is prior art. (D.I. 160 at 12-13, 31-32; D.I. 245 at 7-8, 10-11, 13 & n.4, 14) Palm asserts that, "Intermec's **only** challenge that the Gombrich '441 prior art reference does not anticipate the '947 patent is that Gombrich is not prior art," and briefly argues that Gombrich '441 includes a multitasking operating system, a limitation of the '971 patent. (D.I. 208 at 34-36) (emphasis in original)

"[T]he party asserting invalidity must . . . show by clear and convincing evidence that the asserted patent is invalid. Once it has established a prima facie case of

invalidity and its burden is met, 'the party relying on validity is then obligated to come forward with evidence to the contrary.'" *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305 (Fed. Cir. 2008) (*citing Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1573 (Fed. Cir. 1985)) "'[N]o claimed subject matter is entitled to the benefit of the filing date of an earlier application unless that subject matter has been disclosed in **every** intervening application relied upon to establish a chain of copendency.'" *In re Reiffin Family Trust*, 340 Fed. Appx. 651, 660 (Fed. Cir. 2009) (emphasis retained) (*quoting Dart Industries, Inc. v. Banner*, 636 F.2d 684, 688 (D.C. Cir. 1980))

Here, Intermec has moved the court for summary judgment of validity, and has pointed to Palm's prima facie case, which it disputes. (D.I. 160 at 10) At summary judgment, the court must view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion. The court reasonably infers that Palm has established a prima facie case, and the burden shifts to Intermec to prove that the Terminal patents are entitled to an earlier priority date. Thus, Intermec is required to show that the subject matter claimed in the Terminal patents has been disclosed in every intervening application relied upon to establish a chain of copendency. Intermec has failed to do so. (D.I. 160 at 7-9) Based on the evidence of record, the court finds that the Terminal patents are not entitled to a priority date based on earlier applications. Further, the court finds that a genuine issue of material fact exists with regard to whether Gombrich '441 anticipates the Terminal patents, based on the conflicting reports of the parties' experts.

(4) U.S. Patent No. 4,857,716 ("Gombrich '716")

Gombrich '716 discloses a patient identification and verification system for use in health care settings, which includes a portable bar code reading device, that can communicate over a wireless communications link. (Gombrich '716 at [57]) The bar code reading device taught by Gombrich '716 is further comprised of a display, status lights, bar code reader, and keypad. (Gombrich '716 at figure 10) As with regard to the Tracker, the parties' arguments regarding the display are focused on its graphical nature, not on its relative size. Gombrich '716 fails to disclose a display that meets the broad side limitation of the '947 patent, nor does Palm argue that it does. (See, e.g. Gombrich '716 at figures 1, 6, 11-12, 21 and 26; D.I. 208 at 16, 30) Palm argues that Gombrich '716 meets the multitasking operating system limitation of the '971 patent. However, in so doing, Palm uses the construction proposed by Intermec, not that adopted by the court. (D.I. 208 at 35-36) The court finds that Palm has failed to adduce sufficient evidence that Gombrich '716 meets either the broad side limitation of the '947 patent, or the multitasking operating system limitation of the '971 patent. Therefore, the court holds that Gombrich '716 does not anticipate either of the Terminal patents.

(5) U.S. Patent No. 4,720,781 ("Crossman")

Crossman teaches a data processing terminal comprising a touch screen panel display module, supported by a support module, where the display module may be removed from the support module and operate independently. (Crossman at [57]) The display module has its own central processor, memory, control means and power source. (*Id.*) Crossman further teaches that

> [t]he display module has a limited range of functions when operating independently of the support module, which functions include the scanning and display of stored information, with data entry from the touch sensitive overlay or, for example, a bar code wand (not shown) connected to the data input which module can then be used in a data gathering application, for example, stock checking in a store or warehouse.

(*Id.* at col. 3:65-4:5) The display module, operating independently, is shown to be hand held. (*Id.* at figure 5) Palm argues that Crossman meets the optical reader limitation. (D.I. 208 at 32) Palm further argues that "[t]he computer system in Crossman operates via a multitasking, real-time operating system." (D.I. 208 at 16) (*citing* Crossman at col. 4:15-18) This disclosure, however, relates only to the support module, which is a distinct computing system. "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention **arranged as in the claim**." *Net Money in, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) (emphasis in original) (citation omitted). The '971 patent does not include a multitasking operating system arranged in a separate support module external to the portable hand held data processing device, nor does Palm argue that it does. Therefore, the court holds that Crossman does not anticipate claim 1, and dependent claims, of the '971 patent.

(6) U.S. Patent No. 4,471,218 ("Culp")

Culp discloses a pen-shaped, battery-powered, wand-type bar code reader that uses a single LED light and a series of beeps to confirm collection of information. (Culp at [57]; figure 1) Intermec argues that the "Culp device does not include any display, nor does it disclose any operating system; much less, a multi-tasking operating system." (D.I. 160 at 15) Palm fails to respond. Therefore, the court holds that Culp does not anticipate either the '947 or '971 patents.

d. Summary

The court finds that Palm has failed to point to sufficient evidence of record that Billings, Sojka, Danielson, or Rhoades anticipate the System patents, or that Dulaney or Helferich anticipate claim 8 and dependent claims of the '678 patent, claim 1 and dependent claims of the '645 patent, or claims 1 or 15 and dependent claims of the '499 patent. Further, the court finds that Palm has failed to point to sufficient evidence of record that the Tracker, Mizzi, Gombrich '716, or Culp references anticipate the Terminal patents, or that Crossman anticipates the '971 patent. The court also finds that Intermec has failed to proffer sufficient evidence that the asserted claims of the Terminal patents are entitled to a priority date earlier than their respective filing dates and, therefore, Gombrich '441 is prior art to the Terminal patents.

3. Enablement, written description and best mode

Palm argues that claims 9, 15, and 16 of the '499 patent are invalid under 35 U.S.C. § 112 ¶ 1 for violation of the best mode requirement, lack of enablement, or inadequate written description, arguing that each of these claims requires disclosure of multiple servers. (D.I. 207 at 36-39) Intermec argues that the court lacks jurisdiction with regard to claim 9, as Intermec is no longer asserting claim 9.

a. Standards

(1) Declaratory judgment

Subject matter jurisdiction under the Declaratory Judgment Act applies only if "the facts alleged, under all the circumstances, show that there is a substantial controversy, between parties having adverse legal interests, of sufficient immediacy and reality to warrant the issuance of a declaratory judgment." *MedImmune, Inc. v. Genentech, Inc.*,

549 U.S. 118, 127 (2007). "In patent cases, declaratory judgment jurisdiction exists 'where a patentee asserts rights under a patent based on certain identified ongoing or planned activity of another party, and where that party contends that it has the right to engage in the accused activity without license.'" *Hewlett-Packard Co. v. Acceleron LLC*, 587 F.3d 1358, 1361 (Fed. Cir. 2009) (*quoting SanDisk Corp. v. STMicroelectronics, Inc.*, 480 F.3d 1372, 1381 (Fed. Cir. 2007)) "[A] patentee defending against an action for a declaratory judgment of invalidity can divest the trial court of jurisdiction over the case by filing a covenant not to assert the patent at issue against the putative infringer with respect to any of its past, present, or future acts." *Super Sack Mfg. Corp. v. Chase Packaging Corp.*, 57 F.3d 1054, 1058 (Fed. Cir. 1995) (citation omitted).[16]

(2) Enablement and written description

The statutory basis for the enablement requirement is found in 35 U.S.C. § 112, paragraph 1, which provides in relevant part:

> The specification shall contain a written description of the invention and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it

[16]The standard for justiciability, with regard to patent rights, that was used in Super Sack at the time was the "two-part test," that required: "both (1) an explicit threat or other action by the patentee, which creates a **reasonable** apprehension on the part of the declaratory plaintiff that it will face an infringement suit, and (2) **present** activity which could constitute infringement or concrete steps taken with the intent to conduct such activity." *Super Sack*, 57 F.3d at 1058 (emphasis retained). As the Federal Circuit explained:

> In *MedImmune*, the Supreme Court rejected the first prong of our declaratory judgment standard, concluding that the "reasonable apprehension of suit test" was unduly restrictive. The Court explained that whether a declaratory judgment action contains an Article III controversy must be determined based on "all the circumstances," not merely on whether the declaratory judgment plaintiff is under a reasonable apprehension of suit.

Cat Tech LLC v. TubeMaster, Inc., 528 F.3d 871, 879-80 (Fed. Cir. 2008) (citation omitted).

> pertains, or with which it is most nearly connected, to make and use the same.

The Federal Circuit has explained that "patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable . . . . Tossing out the mere germ of an idea does not constitute enabling disclosure." *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997). To satisfy the enablement requirement, a specification must teach those skilled in the art how to make and to use the full scope of the claimed invention without undue experimentation. *Genentech*, 108 F.3d at 1365. The specification need not teach what is well known in the art. *Hybritech v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986).

The enablement requirement is a question of law based on underlying factual inquiries. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). Enablement is determined as of the filing date of the patent application. *In re Brana*, 51 F.3d, 1560, 1567 n.19 (Fed. Cir. 1995). The use of prophetic examples does not automatically make a patent non-enabling. The burden is on one challenging validity to show, by clear and convincing evidence, that the prophetic examples together with the other parts of the specification are not enabling. *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1577 (Fed. Cir. 1984).

Some experimentation may be necessary in order to practice a claimed invention; the amount of experimentation, however, "must not be unduly extensive." *Id.* at 1576.

> The test for whether undue experimentation would have been required is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the

> experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed.

PPG Indus. Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1564 (Fed. Cir. 1996) (*quoting Ex parte Jackson*, 217 U.S.P.Q. 804, 807 (1982)). A court may consider several factors in determining whether undue experimentation is required to practice a claimed invention, including: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance disclosed in the patent; (3) the presence or absence of working examples in the patent; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (6) the predictability of the art; and (7) the breadth of the claims. *Wands*, 858 F.2d at 737. These factors are sometimes referred to as the "Wands factors." A court need not consider every one of the Wands factors in its analysis. Rather, a court is only required to consider those factors relevant to the facts of the case. *See Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d 1200, 1213 (Fed. Cir. 1991).

(3) Best mode

The statutory basis for the best mode requirement is found in 35 U.S.C. § 112 ¶ 1, which reads in pertinent part: "The specification . . . shall set forth the best mode contemplated by the inventor for carrying out his invention." "The purpose of the best mode requirement is to ensure that the public, in exchange for the rights given the inventor under the patent laws, obtains from the inventor a full disclosure of the preferred embodiment of the invention." *Dana Corp. v. IPC Ltd. P'ship*, 860 F.2d 415, 418 (Fed. Cir. 1988). Whether a patent meets the best mode requirement is a question of fact. *Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 1566-67 (Fed. Cir. 1996) (*citing Scripps Clinic*

& Research Found. v. Genentech, Inc., 927 F.2d 1565, 1578 (Fed. Cir. 1991)). "Invalidation for failure to set forth the best mode requires (1) the inventor knew of a better mode than was disclosed and (2) the inventor concealed that better mode. Both parts of the best mode test must be met in order to invalidate the patent." *High Concrete Structures, Inc. v. New Enterprise Stone and Lime Co.*, 377 F.3d 1379, 1382 (Fed. Cir. 2004) (citations omitted). "[T]he date for evaluating a best mode disclosure in a continuing application is the date of the earlier application with respect to common subject matter." *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 557 (Fed. Cir. 1994).

b. Claim 9 of the '499 patent

Intermec initially asserted claim 9 of the '499 patent against Palm. (D.I. 145, ex. A at 40-42) Intermec argues, in two footnotes, each containing one sentence on point, that the court lacks subject matter jurisdiction to adjudicate invalidity of claim 9 of the '499 patent, on the grounds that Intermec is not asserting that claim. (D.I. 156 at 16 n.1; D.I. 243 at 15 n.6) Before considering Palm's invalidity arguments regarding claim 9 of the '499 patent, the court must first determine whether it retains jurisdiction on this issue.

Palm argues that, given its declaratory judgment counterclaims of invalidity against Intermec, and Intermec's failure to provide Palm a covenant not to sue on these claims by the time of oral argument, the court retains jurisdiction to adjudicate this matter. (D.I. 207 at 37) Intermec's initial assertion of claim 9 against Palm met the requirements for jurisdiction. Other than the conclusory statements in its footnotes, Intermec has not provided legal authority, or pointed to evidence, that would establish that the court no longer has jurisdiction in this matter. The court concludes that it

continues to have subject matter jurisdiction over this issue, notwithstanding Intermec's later decision to withdraw claim 9 from contention.

c. Analysis

Independent claim 9 of the '499 patent recites "a computer network comprising a first computing device and a second computing device . . . the first computing device attempts to service the information calls, but, if the attempt fails, the first computing device forwards the information calls to the second computing device for servicing." Independent claim 15 recites in part "a main information center with a plurality of servers." Claim 16 depends from claim 15.

Palm argues that the inventors of the '499 patent failed to satisfy the enablement and written description requirements by failing to disclose multiple servers in the specification, as mandated by independent claims 9 and 15 of the '499 patent. (D.I. 207 at 37-38) Intermec's counter arguments are premised on its claim that host computer 118 constitutes the second server. (D.I. 156 at 18, 30) Intermec further argues that, "[b]ecause enablement is a legal question, Dr. Williams' opinions are legal conclusions that cannot create a genuine issue of material fact for trial." (*Id.* at 30) "'[A]n expert's opinion on the ultimate legal issue [of enablement] must be supported by something more than a conclusory statement.'" *Genentech*, 108 F.3d at 1367 (*quoting In re Buchner*, 929 F.2d 660, 661 (Fed. Cir. 1991)) (brackets in original). Although Dr. Williams has provided the basis for his opinions (D.I. 207 at 21), the court finds that the issue of whether multiple servers are disclosed in the specification reduces to a dispute between opposing experts. Therefore, Intermec's arguments regarding sufficiency go to

the weight of evidence. A genuine issue of material fact exists precluding summary judgment on this issue.

With respect to the best mode requirement, the '499 and '645 patents are continuations of the '678 patent, with all three patents sharing essentially the same specification. As discussed above, a dispute remains as to whether multiple servers are disclosed in the specification. To the extent that multiple servers are disclosed in the specification of the System patents, they are common subject matter to both the '678 and '499 patents. Palm's best mode argument is based on a memorandum written on February 1, 1994, by one of the inventors of the '499 patent, Michael Morris ("Morris" and "Morris Memorandum"). (D.I. 207 at 13, 39) Palm asserts that the Morris Memorandum was an "extension" of the '678 patent, which Morris acknowledged depicts a system with multiple servers, and that "this disclosure never made it into the '499 patent." (D.I. 207 at 39) Palm fails to point to evidence that the disclosure in the Morris Memorandum was the best mode, i.e., that Morris believed it to be the best mode, and that the Morris Memorandum was written at the relevant point in time – at the time the '678 patent application was filed, not the '499 patent. The court concludes that the '499 patent is not invalid for violating the best mode requirement.

4. Inequitable conduct

a. Standards

Applicants for patents and their legal representatives have a duty of candor, good faith, and honesty in their dealings with the United State Patent and Trademark Office ("PTO"). *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995); 37 C.F.R. § 1.56(a) (2003). The duty of candor, good faith, and honesty includes the duty to submit

truthful information and the duty to disclose to the PTO information known to the patent applicants or their attorneys which is material to the examination of the patent application. *Elk Corp. of Dallas v. GAF Bldg. Materials Corp.*, 168 F.3d 28, 30 (Fed. Cir. 1999). A breach of this duty constitutes inequitable conduct. *Mollins*, 48 F.3d at 1178. If it is established that a patent applicant engaged in inequitable conduct, the patent application is rendered unenforceable. *Kingsdown Med. Consultants v. Hollister Inc.*, 863 F.2d 867, 877 (Fed. Cir. 1988).

In order to establish unenforceability based on inequitable conduct, a defendant must establish, by clear and convincing evidence, that: (1) the omitted or false information was material to patentability of the invention; or (2) the applicant had knowledge of the existence and materiality of the information; and (3) the applicant intended to deceive the PTO. *Mollins*, 48 F.3d at 1178. A determination of inequitable conduct, therefore, entails a two step analysis. First, the court must determine whether the withheld information meets a threshold level of materiality. A reference is considered material if there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent. *Allied Colloids, Inc. v. American Cyanamid Co.*, 64 F.3d 1570, 1578 (Fed. Cir. 1995) (citations omitted). A reference, however, does not have to render the claimed invention unpatentable or invalid to be material. *See Merck v. Danbury Pharmacal*, 873 F.2d 1418 (Fed. Cir. 1989).

After determining that the applicant withheld material information, the court must then decide whether the applicant acted with the requisite level of intent to mislead the PTO. *See Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1327 (Fed. Cir.

2009); *Baxter Int'l, Inc. V. McGaw Inc.*, 149 F.3d 1321, 1327 (Fed. Cir. 1998). "Intent to deceive cannot be inferred solely from the fact that information was not disclosed; there must be a factual basis for finding a deceptive intent." *Herbert v. Lisle Corp.*, 99 F.3d 1109, 1116 (Fed. Cir. 1996). That is, "the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive." *Kingsdown*, 863 F.2d at 876 (Fed. Cir. 1988). Evidence of specific intent must "be clear and convincing, and inferences drawn from lesser evidence cannot satisfy the deceptive intent requirement." *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008). A "smoking gun," however, is not required in order to establish an intent to deceive. *See Merck*, 873 F.2d at 1422.

Once materiality and intent to deceive have been established, the trial court must weigh them to determine whether the balance tips in favor of a conclusion of inequitable conduct. *N.V. Akzo v. E.I. Dupont de Nemours*, 810 F.2d 1148, 1153 (Fed. Cir. 1988). The showing of intent can be proportionally less when balanced against high materiality. *Id.* In contrast, the showing of intent must be proportionally greater when balanced against low materiality. *Id.*

b. The System patents

Intermec has moved the court for partial summary judgment on Palm's defense of inequitable conduct with respect to the System patents. (D.I. 155 at 1) "The two Danielson patents are at the core of Palm's inequitable conduct counterclaim" regarding the System patents. (D.I. 207 at 8) Palm asserts that two of the inventors of the System

patents, Morris and Lyle Zumbach ("Zumbach"), as well as Intermec's attorneys, were aware of the Danielson patents. Palm further asserts, without citation to the record, that

> [a] comparison of the Danielson patents to the prior art that was before the Examiner reviewing the patentability of the [System patents] illustrates that the Danielson patents include elements not found in the prior art the Examiner was then considering; this prior art would not have been cumulative of art already under consideration.

(D.I. 207 at 10-11) In arguing that none of the prior art submitted with the application for the '678 patent related to distributed computing systems of the type disclosed by the Danielson patents, Palm argues that Danielson was not cumulative, although it does not expressly use that term. (*Id.* at 8-9) (citing D.I. 172, tab 104 at IA 3839-3841) Palm further points out that "Mr. Morris did not argue that the patents were cumulative with other references already submitted . . . ." (*Id.* at 11) The burden to show that non-disclosed prior art was cumulative, however, cannot be shifted to Intermec. *See In re: Katz Interactive Call Processing Patent Lit.*, Case No. 07-ML- 01816-RGK (FFMx), Slip. Op. at 8-9 (C.D. Cal. Aug. 14, 2009) (granting summary judgment on inequitable conduct claim where challenger failed to present evidence establishing prior art was not cumulative). Palm has not adduced sufficient evidence of intent to deceive. In sum, Palm has only proffered evidence that the inventors knew of allegedly material prior art. Therefore, the court finds that Intermec has not committed inequitable conduct with regard to the System patents.

c. The Terminal patents

Intermec has moved the court for summary judgment that the asserted claims of the Terminal patents are valid and enforceable. (D.I. 159 at 1) Palm's inequitable conduct defense regarding the Terminal patents is based on the (Federal Express)

Tracker device previously discussed. Not only does Palm argue that the Tracker was material prior art that the inventors failed to disclose with the intent to deceive, but also that the inventors sought to patent the Tracker device itself. (D.I. 208 at 26-30) Palm points to evidence that the inventors knew about the Tracker, and that it was similar in appearance to both figure 5A and 5B of the '947 patent and to an illustration in a Norand proposal to the Royal Hong Kong Jockey Club. (*Id.* at 28-29) With regard to evidence of intent to deceive, Palm states:

> The reaction of the two different named co-inventors of the patents is particularly telling. As noted above, Dennis Durbin, who left Intermec earlier this year, testified that Figures 5A and 5B of the '947 patent (Figs. 32 and 33 of the '971 patent) looked like the Tracker. He also testified that the picture in the proposal to the Royal Hong Kong Jockey Club that looks most like Figure 5A depicted the Tracker. That picture looks substantially similar to Figures 5A and 5B of the '947 patent . . . Arvin Danielson, now Intermec's Chief Technology Officer, had a different (and much less forthright) reaction. When asked about the same pictures in the proposal to the Royal Hong Kong Jockey Club shown above, Danielson said nothing at all about the Tracker. Instead, he said he thought the pictures looked familiar because they appeared in Norand patents [and] could not say what the drawing depicted, except that it was a Norand industrial drawing.

(*Id.*) (citations omitted). Palm's circumstantial evidence does not rise to the level of clear and convincing, as required to infer intent to deceive. "[A]n accused infringer cannot carry its threshold burden simply by pointing to the absence of a credible good faith explanation." *Larson Mfg. Co. of South Dakota, Inc. v. Aluminate Products Ltd.*, 559 F.3d 1317, 1341 (Fed. Cir. 2009) (citations omitted). "'When the absence of a good faith explanation is the only evidence of intent, however, that evidence alone does not constitute clear and convincing evidence warranting an inference of intent.'" *Id.* (*quoting M. Eagles Tool Warehouse, Inc. v. Fisher Tooling Co.*, 439 F.3d 1335, 1341 (Fed. Cir.

2006)) Therefore, the court holds that the Terminal patents are not unenforceable due to inequitable conduct.

5. Nonjoinder of inventors

a. Standards

Naming or failing to name an inventor, through error and without deceptive intent, may be cured by issuance of a certificate correcting such error. 35 U.S.C. § 256. "The error of omitting inventors or naming persons who are not inventors shall not invalidate the patent in which such error occurred if it can be corrected as provided in this section. *Id.* "Inventorship is a question of law . . . based on underlying facts." *Univ. of Pittsburgh of the Commonwealth Sys. of Higher Educ. v. Hedrick*, 573 F.3d 1290, 1297 (Fed. Cir. 2009) (*citing Hybritech*, 802 F.2d at 1376). "[T]he burden of showing misjoinder or nonjoinder of inventors is a heavy one and must be proved by clear and convincing evidence." *Hess v. Advanced Cardiovascular Systems, Inc.*, 106 F.3d 976, 980 (Fed. Cir. 1997) (*quoting Garrett Corp. v. United States*, 422 F.2d 874, 880 (Ct. Cl. 1970)) "A person must contribute to the conception of the **claimed** invention to qualify as a joint inventor." *Vanderbilt Univ. v. ICOS Corp.*, 601 F.3d 1297, 1303 (Fed. Cir. 2010) (*citing Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1359 (Fed. Cir. 2004)) (emphasis added).

b. The Terminal patents

Intermec has moved the court for summary judgment that the Terminal patents are not unenforceable for failure to join inventors. (D.I. 160 at 1) Palm argues that the Terminal patents are unenforceable due to failure to name co-inventors. (D.I. 208 at 30) In support of its argument, Palm contends that, because Intermec claims priority of the

Terminal patents to the 1986 application which named four inventors (the Terminal patents name only two), two inventors are missing from the application. (*Id.*) Palm's argument fails for several reasons. First, inventorship is determined by contribution to the claims, not to the specification. Palm would have to demonstrate that the claims of the 1986 application matched those of the Terminal patents to draw an inference that inventors had been omitted. It has not done so. Second, assuming arguendo that Palm was able to establish nonjoinder of inventors, this error alone would not invalidate the Terminal patents. *See* 35 U.S.C. § 256. Third, Palm asserts that "[f]ailure to name a co-inventor on a patent renders the patent unenforceable. By Intermec's own admission, it cannot enforce either of [the Terminal] patents." (*Id.*) Palm fails to cite legal authority for this proposition, or to point to evidence of Intermec's alleged admission. The court is also unable to find support for Palm's proposition that mere failure to name a co-inventor renders a patent unenforceable. Therefore, the court holds that the Terminal patents are not unenforceable for failing to name co-inventors.

V. CONCLUSION

For the aforementioned reasons, the court denies Intermec's motion for partial summary judgment of infringement of the '678 patent (D.I. 152), and grants Palm's motion for non-infringement of the Intermec patents (D.I. 158).

Intermec's motion for partial summary judgment of validity of the System patents (D.I. 155) is granted-in-part with respect to: (1) no anticipation of the System patents by Billings, Sojka, Danielson, and Rhoades; (2) no anticipation of claim 8 and dependent claims of the '678 patent, claim 1 and dependent claims of the '645 patent, and claims 1 and 15, and claims depending therefrom, of the '499 patent, by Dulaney and Helferich;

(3) no invalidity of the '499 patent for failure to disclose the best mode; and (4) no inequitable conduct with respect to the System patents; and is otherwise denied.

Intermec's motion for summary judgment of infringement and validity of the Terminal patents (D.I. 159) is granted-in part with respect to: (1) no anticipation of the Terminal patents by the Federal Express Tracker, Mizzi, Gombrich '716, and Culp; (2) no anticipation of claim 1 and dependent claims of the '971 patent by Crossman; (3) no inequitable conduct with respect to the Terminal patents; and (4) no failure to name inventors of the Terminal patents; and is otherwise denied.

Palm's motion for summary judgment of indefiniteness of certain claims of the '678 and '499 patents (D.I. 151) is granted-in-part with regard to claims 1 and 9 of the '678 patent, and is otherwise denied.

An appropriate order will issue.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

INTERMEC TECHNOLOGIES CORP.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 07-272-SLR
	)	
PALM INC.,	)	
Defendant.	)	

ORDER

At Wilmington this 14th day of September 2010, consistent with the memorandum opinion issued this same date;

IT IS ORDERED that:

1. Intermec's motion for partial summary judgment of infringement of the '678 patent (D.I. 152) is denied.

2. Palm's motion for non-infringement of the Intermec patents (D.I. 158) is granted.

3. Intermec's motion for partial summary judgment of validity of the System patents (D.I. 155) is granted-in-part and denied-in-part, to wit:

a. Intermec's motion is granted as to no anticipation of the System patents by Billings, Sojka, Danielson, and Rhoades.

b. Intermec's motion is granted as to no anticipation of claim 8 and dependent claims of the '678 patent, claim 1 and dependent claims of the '645 patent, and claims 1 and 15, and claims depending therefrom, of the '499 patent, by Dulaney and Helferich.

c. Intermec's motion is granted as to no invalidity of the '499 patent for failure to disclose the best mode.

d. Intermec's motion is granted as to no inequitable conduct with respect to the System patents.

4. Intermec's motion for summary judgment of infringement and validity of the Terminal patents (D.I. 159) is granted-in part and denied-in-part, to wit:

a. Intermec's motion is granted as to no anticipation of the Terminal patents by the Federal Express Tracker, Mizzi, Gombrich '716, and Culp;

b. Intermec's motion is granted as to no anticipation of claim 1 and dependent claims of the '971 patent by Crossman.

c. Intermec's motion is granted as to no inequitable conduct with respect to the Terminal patents.

d. Intermec's motion is granted as to no failure to name inventors of the Terminal patents.

5. Palm's motion for summary judgment of indefiniteness of certain claims of the '678 and '499 patents (D.I. 151) is granted-in-part and denied-in-part, to wit: Palm's motion is granted as to indefiniteness of claims 1 and 9 of the '678 patent.

United States District Judge