United States District Court,
D. Arizona.

GolfSWITCH INC., a Nevada corporation; and Spectrum Golf, Inc., an Arizona corporation,
Plaintiffs/Counterdefendants.
v.
INCUBORN SOLUTIONS, INC. and GolfNow, Inc., d/b/a Cypress Golf Solutions, Arizona corporations; and Michael Loustalot, an individual,
Defendants/Counterclaimants.
GolfSwitch, Inc., a Nevada corporation,
Plaintiff/Counterdefendant.
v.
TeeConnect, LLC, a Delaware limited liability company; OpenCourse Solutions, LLC, a Delaware limited liability company; Heritage Golf Group, LLC, a Delaware limited liability company; and Heritage Golf Group, Inc., a Delaware corporation,
Defendants/Counterclaimants.

No. CV 06-01119-PHX-NVW

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ORDER

NEIL V. WAKE**, District Judge.**

Plaintiffs GolfSwitch, Inc. and Spectrum Golf, Inc. sued Incuborn Solutions, Inc. and GolfNow, Inc., d/b/a Cypress Golf Solutions and Michael Loustalot (collectively "the Cypress Defendants") for alleged infringement of U.S. Patent No. 7,016,857 ("the Patent") and other claims. Plaintiff GolfSwitch, Inc., also sued Tee Connect, LLC, OpenCourse Solutions, LLC, Heritage Golf Group, LLC, and Heritage Golf Group, Inc. (collectively "the Tee Connect Defendants") for alleged infringement of the Patent. On Plaintiffs' motion, the court consolidated the cases and ordered joint discovery and trial of issues of claim construction, patent validity, and patent enforceability.

All parties have filed briefs supporting their proposed constructions of the Patent's claim terms. Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), the court must construe the claims of the patent as a matter of law. On June 30, 2008, the court held a *Markman* hearing during which the Patent and the complete File History were admitted as stipulated Joint Exhibits 1 and 2 and Plaintiffs' expert testified. Having considered the evidence presented in the parties' briefs, during the hearing, and in the exhibits, and for the reasons set forth below, the court construes the disputed terms as a matter of law as follows.

I. Legal Standard

"[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed.Cir.2005) (citations omitted). The court construes the scope and meaning of disputed patent claims as a matter of law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). "It is critical for trial courts to set forth an express construction of the material claim terms in dispute, in part because the claim construction becomes the basis of the jury instructions, should the case go to trial." AFG Industries, Inc. v. Cardinal IG Co., Inc., 239 F.3d 1239, 1247 (Fed.Cir.2001). The court needs to construe only the claim language that is in dispute. NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1311 (Fed.Cir.2005).

First, the court looks to the words of the claims themselves to define the scope of the patented invention. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). The words of a claim generally are given the ordinary and customary meaning that a person having ordinary skill in the art would have given them at the time of 29 of the patent application. Phillips, 415 F.3d at 1312-13. "Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field." Id. at 1313. "[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id*. To determine what a person of ordinary skill in the art would have understood disputed claim language to mean, the court looks to the words of the claims themselves (the context of the disputed terms), the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. *Id*. at 1314.

Second, the court must read the claims in light of the specification, of which they are a part:

The specification contains a written description of the invention which must be clear and complete enough to enable those of ordinary skill in the art to make and use it. Thus, the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.

Vitronics, 90 F.3d at 1582; *accord* Phillips, 415 F.3d at 1315. Because the words of a claim must be based on the descriptive part of the specification, the description aids in ascertaining the scope and meaning of the claims. Phillips, 415 F.3d at 1315. Therefore, the specification is the primary basis for construing the claims. *Id*.

Third, the court may also consider the prosecution history of the patent if it is in evidence. Vitronics, 90 F.3d at 1582. The prosecution history, *i.e.,* the complete record of the proceedings before the PTO, often lacks the clarity of the specification, but can "inform the meaning of the claim language by demonstrating

how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. "A patentee's decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim." Regents of University of California v. Dakocytomation California, Inc., 517 F.3d 1364, 1376 (Fed.Cir.2008). A patentee must be held to what he declares during the prosecution of his patent, and the prosecution history excludes any interpretation clearly and deliberately disclaimed during prosecution. Springs Window Fashions LP v. Novo Indus., L.P., 323 F.3d 989, 994-95 (Fed.Cir.2003).

In most situations, analysis of the patent and its prosecution history, *i.e.,* the intrinsic evidence, will resolve any ambiguity in a disputed claim term, and it is improper to rely on extrinsic evidence. Vitronics, 90 F.3d at 1583. "[W]here the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. The claims, specification, and file history, rather than extrinsic evidence, constitute the public record of the patentee's claim, a record on which the public is entitled to rely." *Id.*

Where needed, however, the court also may consider "extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317. Extrinsic evidence in the form of expert testimony can be useful to provide background on the technology at issue, to explain how an invention works, to ensure the court's understanding of the technical aspects of the patent is consistent with that of a person skilled in the art, or to establish that a particular term in the patent or prior art has a particular meaning in the pertinent field. Id. at 1318. But conclusory, unsupported assertions by experts regarding the definition of a claim term are not useful to a court. *Id.* While extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language" and "unlikely to result in a reliable interpretation of a patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1317, 1318 (internal quotations and citations omitted).

II. The Patent

On March 19, 1999, GolfSwitch's predecessor-in-interest applied for the Patent, which discloses a computerized golf tee-time reservation system that permits multiple individual users to concurrently access multiple golf course reservation systems to check the availability of tee times, reserve tee times, and modify and cancel tee-time reservations. The application included 14 independent and 57 dependent claims. On March 21, 2006, the Patent issued with 1 independent and 15 dependent claims. All of the disputed terms are in the independent claim, which states:

1 Golf tee-time reservation apparatus for implementing **seamless real time access concurrently** to a plurality of **disparate individual golf course reservation systems** situated at different locations, at least some of which use different **protocols,** said apparatus comprising

a plurality of **user input modules** distributed throughout a wide geographic area including at sites remote from one another, each **user input module** having an **interface** capable of **sending one or more tee-time requests** concurrently to said plurality of **disparate individual gold [sic] course reservation system** [sic], and

an **interface module** having a data link with each of said plurality of **user input modules** for **concurrently**

receiving one or more tee-time requests to said plurality of **disparate individual golf course reservation systems** as **real time transactions,** said **interface module** having a data link connection with each of said plurality of **disparate individual golf course reservation systems** and being arranged to **interface** with each different **protocol** of said plurality of **disparate individual golf course reservation systems to effect acceptance of one or more tee-time requests at the plurality of disparate individual golf course reservation systems** to which said one or more **tee-time requests** are directed, and said **interface module** being arranged to **concurrently process one or more tee-time requests** sent from a single **user input module** to said plurality of **disparate individual golf course reservation systems.**

Patent at 9:63-10:23 (emphasis added to disputed claim terms).

The Summary of the Invention states:

[I]t is an object of the present invention to provide a seamless user/service reservation network which can establish a communication protocol that is capable of interfacing with a plurality of different reservation systems. It is another object of the present invention to provide a graphical interface that allows a user access to multiple vendor reservation systems via the same single interface procedure. It is yet another object of the present invention to provide a seamless user/service reservation network that allows the user to issue multiple concurrent transactions to multiple vendor reservation systems within a single communication. It is a further object of the present invention to provide a communications protocol that allows the user to communicate with the seamless interface network irrespective of, and via multiple forms of entry, including an Internet web application, a graphical user interface, and additional interfaces. Finally, it is an object of the present invention to provide a method of doing business that allows a single user/service reservation network to facilitate multiple input methods accessing multiple vendor reservation systems via a single transactional template.

These and other objects of the present invention are achieved as a method, device, and system for implementing a seamless user/service reservation network having three primary components: an input module, an interface module; [sic] and a vendor service module.

The input module includes a plurality of potential embodiments, including a graphical user interface, an Internet web site interface and a plurality of dedicated single use computer interfaces. The input module allows a registrant to access the network via typical input means such as mouse, keyboard or voice commands. Regardless of the type of interface the user attempts to access, the user interface processes all transactions in the same manner. Thus, the user interface varies the display format of the input means to correspond with and accommodate the needs of the particular type of user, while keeping the transaction protocol standardized.

The interface module serves the dual function of a transaction switch and an information dissemination system. Utilizing a multi-threaded process input means, the interface module processes multiple user transactions bundled into a single communication and concurrently divides and processes each transaction. The interface module communicates with both the user input module and the vendor service module accepting and sending communications to each module. Implementing a dedicated server communication format, the interface module facilitates communication irrespective of the individual embodiments of the other modules. Because of the multi-thread, multiple server configuration, the interface module facilitates concurrent processing of all bundled communications.

The vendor service module establishes a communication link with the interface module and responds to user transactions. Because its transactions are conducted through the interface module, and because all user inputs incorporate the same protocol, the vendor service module processes all transactions irrespective of the embodiment of user input.

Combined, the system of the present invention provides the golf reservation industry with a complete network capable of connecting multiple user inputs having bundled transactions to multiple vendor systems running different software reservation platforms.

Id. at 2:50-3:45. In addition, the Abstract includes the following:

... all user inputs accept the same input format and send all transactions via a bundled communication. The interface module comprises multiple servers designed to communicate with the user input module and the vendor service module and decode and process all bundled requests. Utilizing multi-thread processing, all transactions from either module are concurrently processed. The vendor service module incorporates multiple vendor systems running different software platforms. Each vendor software platform is linked with a dedicated network server that can accordingly translate all standard communications to the specific protocol of the individual software vendor. By incorporating multiple user inputs that are processed concurrently by multiple vendors running different software platforms[,] the seamless golf reservation network establishes a standardized golf tee time reservation system unique to this industry.

Id. at page 1.

The Field of Invention within the Background of Invention states:

In general, this invention relates to a seamless reservation network and more specifically, to a seamless user/service reservation network enabling multiple user interfaces to concurrently access multiple vendor reservation systems running different software reservation platforms.

Id. at 1:12-16.

The Detailed Description of the Preferred Embodiment states in part:

The present invention relates to a method of implementing a seamless user/service reservation network capable of establishing a concurrent communication link between multiple users and multiple vendor reservation systems. Additionally, the present invention also relates to a method of business providing a golf reservation system that reduces all input transactions into a single, common interface which is relayed to multiple vendor interfaces.

....

... The user input module[ ] provides different types of users with an appropriate interface for bundling multiple user transactions and for receiving responses from either the interface module[ ] or the vendor module[ ]. The user input module varies the implementation of the specific user input interface depending on the needs and the sophistication of the user. In the preferred embodiment, some of the typical users include resellers, such as travel agents, Internet based users and individual users transacting on dedicated systems such as kiosks.

....

As has been mentioned previously, the user input module [ ] of the present invention sends all transaction[s] as bundled requests which allows the system to process the individual requests efficiently, and return the processed requests from either the user input module or the vendor service module. Accordingly, the use of bundled transactions to a system using multi-threaded technology allows for true concurrent processing of system requests from either the user input module or the vendor service module.

As would be understood by someone skilled in the relevant art, multi-thread processing technologies allows a processor to divide allotted CPU time into multiple sub-processes that are processed within one clock cycle. By bundling each request as sub-processes within a larger process, a CPU would be allowed to process multiple booking, shopping, maintenance or internal processes within one clock cycle as opposed to having [to] process an individual request or communication in multiple clock cycles. Depending on the number of processors bundled within a single communication, this would reduce the processing time by a linear factor. Because of the multiple thread technology, an end user or vendor can bundle requests and have these requests within each bundle processed immediately and more efficiently by the system.

....

... Because each vendor module may or may not be running software specifically designed to communicate directly with the interface module [ ], each server within the network [ ] must be specifically programmed to correspond with and translate the standard transactions supported by the present invention into the specific protocol for each vendor reservation system....

....

... There is no limit as to the number of vendor service reservation systems contained within the network, nor to the number and type of vendor software platforms that the present invention will recognize....

... Because the golf switch system can interface with any software platform, including networks, the integrity of the reservation system remains intact.

....

By standardizing the communications between modules, the present invention allows multiple user inputs to utilize the same instructions to access different vendors running different software platforms. Accordingly, the interface module[ ] receives these transactions and processes them accordingly.

... As mentioned in the above-mentioned discussion, the current prior art reservations systems in the golfing industry cannot accommodate multiple software platforms. Additionally, each prior art reservation system has its own unique user interface. The present invention includes a method of supporting multiple user inputs incorporating identical transactional protocols which are connected, via an interface, to multiple vendor software reservation platforms. Currently, the golf tee time reservation industry cannot incorporate both the translational and communication functions into one single reservation network. The present invention provides the industry with such a method.

Id. at 4:4-11, 4:28-38, 5:50-6:6, 6:56-62, 7:43-46, 7:63-65, 8:44-49, 9:17-29.

III. Claim Construction

The following chart summarizes the court's construction of the disputed terms. The full analysis supporting each construction is below.

Term	***Construction***
"Tee-time request"	Request from an individual user of the tee-time reservation network for tee-time availability, booking, modification, verification, and/or cancellation
"To effect acceptance of one or more tee-time requests at the plurality of disparate individual golf course reservation systems"	To generate a response to one or more tee-time requests from the plurality of disparate individual golf course reservation systems
"Seamless"	Not apparent to the user that the system is interacting with different golf course reservation systems or protocols
"Real time"	Occurring in the present time
"Real time transactions"	Transactions occurring in the present time
"Disparate individual golf course reservation systems"	Computerized golf course reservation systems that use different software platforms
"Protocols"	Format for transmitting data
"Different protocol(s)"	Different communication protocols and different application protocols
"Access concurrently"	Access simultaneously with other user input modules
"Sending one or more tee-time requests concurrently"	Simultaneously sending one or more tee-time requests as bundled transactions within a single communication

"Concurrently receiving one or more tee-time requests"	Simultaneously receiving one or more tee-time requests as bundled transactions within a single communication
"Concurrently process one or more tee-time requests"	Simultaneously process one or more tee-time requests within the same clock cycle using multi-threaded processing
"Interface"	Means for communicating or exchanging
"Interface module"	A component that transmits data between user input modules and disparate individual golf course reservation systems
"User input modules"	Components through which an individual user of the tee-time reservation system inputs information to and/or interacts with the plurality of disparate golf course reservation systems through the interface module

A. "Tee-time request" and "To effect acceptance of one or more tee-time requests at the plurality of disparate individual golf course reservation systems"

Plaintiffs' proposed construction for "tee-time request" is "availability check, booking, modification, verification, and/or cancellation." The Cypress Defendants and the Tee Connect Defendants' proposed construction for "tee-time request" is "request from an individual user of the tee-time reservation network for tee-time availability, booking, modification, verification, and/or cancellation." In their response brief Plaintiffs do not dispute Defendants' construction. Either proposed construction, however, makes the use of the claim term in the phrase "to effect acceptance of one or more tee-time requests" illogical if "acceptance" is given its ordinary meaning because an availability check or request for verification may be responded to, but is not "accepted."

Plaintiffs propose that the court construe the phrase "to effect acceptance of one or more tee-time requests at the plurality of disparate individual golf course reservation systems" as "to obtain responses directly from each disparate golf course reservation system that the user's request for availability, booking, verification, or cancellation has been satisfied." Plaintiffs' construction is inaccurate because a user's request to make a reservation cannot always be satisfied. The Cypress Defendants and the Tee Connect Defendants propose that the court construe this phrase as "to cause one or more tee-time requests to be sent to, received by, and responded to by each disparate golf course reservation system." In their responsive brief, the Tee Connect Defendants asserted that the differences between the parties' proposed constructions are insignificant, and the court need not construe this claim term.

The Patent uses the term "tee-time requests" only in independent claim 1 and dependent claims 4 and 15. Claim 1 includes "each user input module having an interface capable of sending one or more tee-time requests" to individual golf course reservation systems, "an interface module having a data link with each ...

user input module[ ] for concurrently receiving one or more tee-time requests ... as real time transactions," "said interface module ... to interface with each different protocol of ... disparate individual golf course reservation systems to effect acceptance of one or more tee-time requests at the ... golf course reservation systems to which ... tee-time requests are directed," and "concurrently process one or more tee-time requests sent from a single user input module to said plurality of disparate individual golf course reservation systems." Patent at 10:3-23.

The Summary of the Invention refers to a "network that allows the user to issue multiple concurrent transactions to multiple vendor reservation systems within a single communication." *Id*. at 2:58-60. Figure 5 of the Patent "is a transactional diagram of the communication classifications between the modules of the present invention." *Id*. at 3:62-63, 8:4-5. The Detailed Description of the Preferred Embodiment describes Figure 5 as categorizing the instructions and communications into four preferred categories: shopping, booking, maintenance, and internal. *Id*. at 8:5-43. The description of the four categories uses the terms "instructions," "communications," and "requests" interchangeably. *See id*. The shopping category includes requests from the user input module to either the interface module or the vendor service module and includes retrieving information regarding golf courses in a particular geographic area and availability of a specific tee time on a specific course. *Id*. at 8:13-22. "All booking instructions[ ] are communications from the user input module[ ] to the vendor service module[ ]" and "include requests to book a specific tee time at a specific course[ ], requests to modify a previous reservation[ ], requests to cancel a previous tee time[ ], and requests to verify or confirm a previous tee time reservation[ ]." *Id*. at 8:24-30. "Maintenance communications are typically transactions from the vendor service module[ ] either requesting the interface module[ ] to change the information [ ] stored within its database server, such as course layout descriptions or statistics, or a request to notify[ ] the user of a change in previously reserved tee time." *Id*. at 8:32-37. Internal communications are performed within the interface module and include functions that check performance or verify that all servers and applications are running properly. *Id*. at 8:38-43.

The term "tee-time requests" was not used in the initial application for the Patent. File History at 480-523. It first was used in the amended claims submitted in October 2003:

72. (New): A golf tee-time reservation system for implementing seamless real time access to one or more golf courses, said system comprising:

means for inputting a *tee-time request;*

means for interfacing a protocol with one or more different protocols;

means for issuing one or more *tee-time transactions* to one or more golf course reservation systems;

means for displaying one or more tee-time schedules; and

means for reserving one or more tee-times from said one or more golf course in real time.

72. (New): The golf tee-time reservation system of claim 72, wherein said means for inputting a *tee-time request* comprises a graphical user interface.

Id. at 389 (italics added).

In November 2004, the above claims were canceled, but a newly added claim 109 included "each user input module having an interface capable of receiving one or more tee-time requests," "an interface module having a data link connection with each of said user input modules for processing said tee-time requests as real time transactions," and "said interface module ... being arranged to interface with each different protocol of said golf course reservation systems to effect acceptance of each of said tee-time requests at the golf course reservation systems to which said requests are directed." *Id*. at 173-74. At that point, claim 109 was the sole independent claim presented for consideration. *Id*. at 175. The accompanying remarks include the following:

The present invention thus allows *tee-time reservations* to be made with respect to golf course reservation system[s] that are not part of a common system but instead have their own different protocols.... An interface module has a data link with each of the user input modules to process *tee-time requests* as real time transaction[s]. The interface module additionally has a data link connection with each of the golf course reservation systems and is arranged to interface with the different protocols associated with the different golf course reservation systems so that *tee-time requests* can be accepted at the golf course reservation systems.

Id. at 175 (italics added).

The June 2005 claim amendments replaced "tee-time transactions" with "tee-time requests" in claim 103 "in order to be consistent with the terminology used in patent claim 109." *Id*. at 125, 127. The amendments also included replacing "receiving" with "sending" in claim 109, so that the user input module now was described as "having an interface capable of sending one or more tee-time requests concurrently." *Id*. at 126. The patentees attached to their amendments a white paper by one of the inventors titled "U.S. Patent Defense" and dated May 3, 2005, which distinguished the GolfSwitch invention from prior art and responded to the Examiner's findings. *Id*. at 130-53. The paper states, "GolfSwitch provides for ***simultaneous*** seamless real time tee-time interaction (tee-time availability searches, reservations and cancellations) with multiple golf courses running disparate tee-time reservation systems located at diverse geographical locations." *Id*. at 132, 133 (emphasis in original); *see also id*. at 144. The paper refers to "the issue of how the Golf Course manages the tee time reservations (i.e. available tee time schedules, cancellations, check-in, communicate reservations to the golf course administrators, etc ...)." *Id*. at 138.

On October 24, 2005, patentees submitted a paper titled "Concurrent Processing of Tee Time Requests" dated October 17, 2005, which compares the GolfSwitch application to the Hunt, Germain, and Arnold patents. *Id*. at 49-62. It does not address the meaning of "tee-time request" or suggest that the term is relevant to distinguishing the GolfSwitch invention from prior art. It does summarize a portion of the application using the phrase "multiple booking, shopping, maintenance or internal processes" with the phrase "a plurality of reservation transactions." *Id*. at 51.

Thus, the term "tee-time request" was added to the Patent through amendments during prosecution, but its use did not narrow the scope of any claims. It refers to user-generated, response-seeking interaction with the golf course reservation network related to reserving tee times and not to maintenance and internal administrative transactions processed by the GolfSwitch invention.

The court therefore adopts Defendants' proposed construction of "tee-time request" as "request from an individual user of the tee-time reservation network for tee-time availability, booking, modification, verification, and/or cancellation."

Further, the court construes "to effect acceptance of one or more tee-time requests at the plurality of disparate individual golf course reservation systems" as "to generate a response to one or more tee-time requests from the plurality of disparate individual golf course reservation systems."

B. "Seamless"

Plaintiffs and the Cypress Defendants propose the construction of "seamless" as "not apparent to the user that the system is interacting with different golf course reservation systems or protocols." The Tee Connect Defendants urge the court to construe "seamless" as "direct connectivity between the plurality of user input modules and the plurality of disparate individual golf course reservation systems."

Claim 1 discloses an apparatus that includes "each user input module having an interface capable of sending one or more tee-time requests concurrently to said plurality of disparate individual gol[f] course reservation system[s]" and "an interface module having a data link with each of said user input modules ... and said interface module having a data link connection with each of said plurality of disparate interface modules...." Thus, the plain language of the claim discloses an invention connecting the user input modules to the golf course reservation systems *through* the interface module and not directly.

Moreover, although how communications between modules are structured may affect seamlessness, connectivity does not constitute seamlessness. A person having ordinary skill in the art would understand "seamless" to refer to the user's perception that he is interacting with a single integrated system. *See* Hearing Transcript, May 30, 2008, at 66:8-15.

The court therefore construes "seamless" as "not apparent to the user that the system is interacting with different golf course reservation systems or protocols."

C. "Real time" and "Real time transactions"

Claim 1 includes the terms "real time access" and "real time transactions." Patent at 9:64, 10:11. Plaintiffs propose that "real time access" be construed as "the system is capable of communicating in a timely fashion with different golf course reservation systems so as to effectively make online tee-time reservations." Plaintiffs propose that "real time transactions" be construed as "as timely as is necessary to satisfy the need of a user making online tee-time reservation (e.g., within one internet session)."

The Cypress Defendants propose that the court construe "real time" as "within a time frame that seems immediate to the user of the system" and "real time transactions" as "tee-time requests that are processed to the individual golf course reservation systems within a time frame that seems immediate to the user of the system." The Tee Connect Defendants' proposed construction of "real time" is "without delays or lag times" and of "real time transactions" is "tee-time requests that are processed against the most current and/or valid data without delays or lag times."

In remarks submitted with the October 2003 amendment, patentees asserted:

The present invention provides a golf tee-time reservation system that comprises real-time concurrent processing. All other known prior art reservation systems/networks utilize a dependent database for retrieving and scheduling tee-time transactions. Real-time concurrent processing provides *immediate* processing of transactions for scheduling a tee-time.... The subject invention permits tee-time information to

be retrieved by systematically extracting the information and displaying it to the user *without delays or lag times* from separate hardware and database components.

In yet another differing aspect of the present invention, the present invention provides a real-time reservation network that utilizes a multithreading technique. This technique provides *immediate* processing of transactions for the user [ ]. A system database is not required for retrieving a tee-time request, and a database is only provided for storing user schedule information at the end of a transaction.

... Again, the present invention provides a real-time seamless reservation system that functions *immediately* with differing golf reservation networks using multi-thread processing [ ].

File History at 396-97 (italics added).

The essence of the parties' arguments and citations to both intrinsic and extrinsic evidence is that "real time" means that it occurs *now,* in the present time, while the user is interacting with the system, and not in a batch to be processed later, and it operates on current data, not on a snapshot of past data. The term does not define the length of time during which the processing will be completed, only when the processing will occur. Whether a transaction is completed quickly enough to satisfy the user or to seem immediate to the user without delays or lag times may be a result of real-time processing combined with use of certain methods of processing, *e.g.,* concurrent multi-threaded processing, but it does not define "real time."

Claim 1 refers to "an interface module having a data link ... for concurrently receiving one or more tee-time requests ... as real time transactions." Patent at 10:7-11. If "transactions" means only "tee-time requests," as Defendants propose, the quoted language means "receiving tee-time requests as real time tee-time requests," and the word "transaction" provides no information. Rather than render the term "transaction" superfluous, the court concludes "transaction" is a commonly understood word and need not be construed. *See* Phillips, 415 F.3d at 1314.

Therefore, the court rejects all of the parties' proposed constructions of "real time" and "real time transactions." The court construes "real time" as "occurring in the present time" and "real time transactions" as "transactions occurring in the present time."

D. "Disparate individual golf course reservation systems"

Plaintiffs propose construing "disparate individual golf course reservation systems" as "more than one golf course reservation system." The Cypress Defendants and the Tee Connect Defendants' proposed construction is "computerized golf course reservation systems that use different software platforms."

The intrinsic evidence supports Defendants' construction. The Patent's Abstract states: "The vendor service module incorporates multiple vendor systems running different software platforms." Patent at page 1. The Abstract further refers to "multiple vendors running different software platforms." *Id*. The Background of Invention states:

In general, this invention relates to a seamless reservation network and more specifically, to a seamless user/service reservation network enabling multiple user interfaces to concurrently access *multiple vendor reservation systems running different software reservation platforms*.

Id. at 1:12-16 (emphasis added). The Summary of Invention refers to "a plurality of different reservation systems," "multiple vendor reservation systems," and "multiple vendor systems running different software reservation platforms." *Id*. at 2:53, 55, 59-60. The Patent describes prior art golf reservation systems as being limited to specific golf courses that run the reservation system's specific software and concludes there is a need for a golf reservation system that "can communicate with any vendor reservation network or individual vendor reservation software platform, and can facilitate the concurrent processing of a plurality of requests to different software platforms." *Id*. at 1:29-33, 2:37-45.

The court therefore construes "disparate individual golf course reservation systems" as "computerized golf course reservation systems that use different software platforms."

E. "Protocols"

Plaintiffs propose that "protocols" be construed as "format for transmitting data." The Cypress Defendants and the Tee Connect Defendants propose that "protocols" be construed as "communication standards that govern the physical transport or transmission of data from one computer to another, such as Transmission Control Protocol/Internet Protocol (TCP/IP), User Datagram Protocol/Internet Protocol (UDP/IP), and X.25." Plaintiffs argue that Defendants' proposed construction improperly limits the meaning of "protocols" to standards for the physical transmission of data and impermissibly restricts the claim to preferred embodiments. Defendants argue that Plaintiffs referred to the specific communication protocols TCP/IP, UDP/IP, and X.25, Plaintiffs' proposed construction expands the meaning of "protocols" to include "specifically disclaimed general application layer types of formats such as HTTP or SOAP," and the term should be construed to refer to communications layer protocol only. (Docs.181 at 12-13, 182 at 16.)

At a minimum, the term "protocols" as used in the Patent means standards or formats for transmitting data. The term usually is found in the Patent specification in the context of or preceded by the word "communication" or "communications." Occasionally it is used in the context of or preceded by the word "transaction" or "transactional." In such contexts "format for transmitting data" is sufficient construction of "protocols." But Claim 1 refers to "different protocols" of "disparate individual golf course reservation systems" without reference to communication, transaction, or application:

... apparatus for implementing ... access ... to a plurality of disparate individual golf course reservation systems ... at least some of which use different protocols ...

said interface module having a data link connection with each of said plurality of disparate individual golf course reservation systems and being arranged to interface with each different protocol of said plurality of disparate individual golf course reservation systems....

Patent at 9:63-67, 10:11-16. As previously construed, "disparate individual golf course reservation systems" means systems that use different software platforms. Claim 1 therefore discloses an invention that provides access to and can interface with golf reservation systems that use different software platforms *and* different protocols.

The Abstract states, "Each vendor software platform is linked with a dedicated network server that can accordingly translate all standard communications to the specific protocol of the individual software vendor." *Id*. at page 1. The Background of the Invention concludes there is a need for a golf reservation system that, among other things, "can accommodate a communication protocol such that the system can

communicate with any vendor reservation network or individual vendor reservation software platform." *Id*. at 2:37-43.

The Summary of the Invention states:

[I]t is an object of the present invention to provide a seamless user/service reservation network which can establish a *communication protocol* that is capable of interfacing with a plurality of different reservation systems.... It is a further object of the present invention to provide a *communications protocol* that allows the user to communicate with the seamless interface network irrespective of, and via multiple forms of entry, including an Internet web application, ...

... Thus, the user interface varies the display format of the input means to correspond with and accommodate the needs of the particular type of user, while keeping *transaction protocol* standardized....

... Because its transactions are conducted through the interface module, and because all user inputs incorporate the same *protocol,* the vendor service module processes all transactions irrespective of the embodiment of user input.

Id. at 2:50-64, 3:16-19, 3:37-40 (italics added). In the drawings, Fig. 6 "is an example of the preferred communication protocol of the present invention."

The Detailed Description of the Preferred Embodiment includes the following:

... Because each vendor module may or may not be running software specifically designed to *communicate* directly with the interface module [ ], each server within the network [ ] must be s ecifically programmed to correspond with and *translate the standard transactions* supported by the present invention into the specific *protocol* for each vendor reservation system....

By standardizing the *communications* between modules, the present invention allows multiple user inputs to utilize the same instructions to *access different vendors running different software platforms*. Accordingly, the interface module[ ] receives these transactions and processes them accordingly. FIG. 6 represents the preferred format for *all communication*. By following this format all communications are decoded and processed by the interface module [ ] in the same manner by the decoding server. In the preferred embodiment, the *communication protocol* includes a header segment[ ], an originating system code [ ], a message[ ], a time stamp of transaction origination[ ], a time stamp of response[ ], and a user ID[ ]. As would be understood, this template could be modified and still be considered within the scope of the present invention.

... As mentioned in the above-mentioned discussion, the current prior art reservations systems in the golfing industry cannot accommodate multiple software platforms. Additionally, each prior art reservation system has its own unique user interface. The present invention includes a method of supporting multiple user inputs incorporating identical *transactional protocols* which are connected, via an interface, to multiple vendor software reservation platforms. Currently, the golf tee time reservation industry cannot incorporate both the *translational and communication functions* into one single reservation network. The present invention provides the industry with such a method.

Id. at 6:56-62, 8:44-58, 9:17-29.

In their October 2003 remarks to the examiner, distinguishing the Tagawa system, patentees represented:

In the present invention, each golf course operates independently from the other, whereby no relationship exists between networking, computer hardware, communication protocols, or software applications. The present invention is novel in that it provides a true seamless network coupling all non-related golf reservation systems/networks into a single golf course reservation system/network regardless of the hardware, software, or protocols used. *It provides the translation of differing protocols* in order to communicate a tee-time request from any one of the independent networks.

File History at 397 (italics added).

In their May 2005 submission, distinguishing the Hunt system, patentees represented:

GolfSwitch not only provides a normalized way of connecting to multiple disparate golf reservations systems from multiple disparate Tee Time Resellers (Travel Agents, Hotel Concierge, Websites, Kiosks, etc.) but also affords a single Wide Area Network link from the location (either Golf Course or Tee Time Reseller) into the "real-time" GolfSwitch *communications switching engine that provides the appropriate routing and protocol conversion*. GolfSwitch provides the following normalizations for both the Golf Course and the Tee Time Reseller:

Wide Area Network Communications Mediums:

-> Private Frame Relay Connection

-> Private T1 Lease Data Line Connection

-> Private Satellite (VSAT) Data Link Connection

-> Private Wireless CDPD Data Link Connection

-> Virtual Private Network (VPN) Via The Public Internet

Communications Protocols:

-> TCP/IP

-> UDP/IP

-> X.25

-> SNA 6.2

Electronic Messaging Protocols:

-> GolfSwitch Standarized Messaging Protocol

-> Golf Tee Sheet Reservation Proprietary Messaging Protocol

-> Tee Time Reseller Proprietary Messaging Protocol

....

GolfSwitch improves upon the prior art of Hunt by allowing for only a single data connection from both the Travel Agents/Web Sites/Hotels/Vacation Packagers to the *centralized real-time switching network of GolfSwitch* as well as only a single data connection from each of the Golf Courses.

Id. at 152-53.

In their October 2005 submission, distinguishing the Arnold system, patentees stated, "Since Arnold is silent to the protocol used to interact with the different golf courses who are all running the same software, it is impossible for the examiner to make the statement that Arnold teaches the use of different protocols." *Id*. at 61. Patentees' remark was directed to the examiner's parenthetical comment that "using multiple protocol[s] is inherent in a web system, i.e. HTTP and SOAP," which suggested that any web-based system such as Arnold necessarily uses multiple protocols. *Id*. Contrary to Defendants' arguments, patentees' remark does not disclaim the inclusion of application protocols in the term "protocols," as used in Claim 1, but rather requires the inclusion of more than HTTP and SOAP. In other words, "different protocols" in Claim 1 is not satisfied if the only way tee-time requests can be processed at disparate golf course reservation systems is via the Internet.

The intrinsic evidence, supported by Plaintiffs' expert's hearing testimony, shows that "different protocols" as used in Claim 1 means the "disparate individual golf course reservation systems" include systems that use different communication protocols *and* different application protocols and the interface module is able to communicate with "*each* different protocol" of the disparate golf course reservation systems. As used in other parts of the Patent, the context adequately indicates whether "protocols" refers to communication protocols, application protocols, or both.

The court therefore construes "protocols" as "format for transmitting data." The court further construes "different protocol(s)" in claim 1 as "different communication protocols and different application protocols."

F. "Access concurrently," "Concurrently receiving one or more tee-time requests," "Sending one or more tee-time requests concurrently," and "Concurrently process one or more tee-time requests"

All parties agree that "concurrently" means, at a minimum, "simultaneously." Plaintiffs propose that "access concurrently," "concurrently receiving one or more tee-time requests," and "sending one or more tee-time requests concurrently" all be construed as "simultaneously with other user input modules." Plaintiffs propose that "concurrently process one or more tee-time requests" be construed as "an interface that allows one user to make at least one tee-time request (as defined) for golf at multiple different courses, and where more than one request is made, they are acted on simultaneously."

The Cypress Defendants and the Tee Connect Defendants propose that "access concurrently" be construed as "simultaneous interaction between a user and a plurality of disparate golf course reservation systems by bundling multiple transactions within a single communication and processing them within the same clock cycle using multi-threaded processing." Defendants propose that "sending one or more tee-time requests

concurrently" be construed as "simultaneously sending one or more tee-time requests as bundled transactions within a single communication." They propose that "concurrently receiving one or more tee-time requests" be construed as "simultaneously receiving one or more tee-time requests as bundled transactions within a single communication." They propose that "concurrently process one or more tee-time requests" be construed as "simultaneously process one or more tee-time requests within the same clock cycle using multi-threaded processing."

The Abstract and the Summary of Invention portions of the Patent establish that multi-threaded processing of bundled transactions from and to each user input module is an essential component of the invention and not merely a preferred embodiment. The Abstract expressly states:

... all user inputs accept the same input format and *send all transactions via a bundled communication*. The interface module comprises multiple servers designed to communicate with the user in ut module and the vendor service module and decode and *process all bundled requests*. *Utilizing multi-thread processing, all transactions from either module are concurrently processed*.

Patent at page 1 (italics added). The Summary of Invention also states:

It is yet another object of the present invention to provide a seamless user/service reservation network that allows the user to issue *multiple concurrent transactions* to multiple vendor reservation systems *within a single communication*....

The interface module serves the dual function of a transaction switch and an information dissemination system. *Utilizing a multi-threaded process input means, the interface module processes multiple user transactions bundled into a single communication and concurrently divides and processes each transaction*. The interface module communicates with both the user input module and the vendor service module accepting and sending communications to each module.... *Because of the multi-thread, multiple server configuration, the interface module facilitates concurrent processing of all bundled communications*....

Combined, the system of the present invention provides the golf reservation industry with a complete network capable of *connecting multiple user inputs* having *bundled transactions* to multiple vendor systems running different software reservation platforms.

Id. at 2:53-56, 3:21-34, 3:41-45 (italics added). Thus, the network is capable of connecting multiple user inputs, each of which has bundled transactions, to multiple vendor systems.

In addition, the Detailed Description of the Preferred Embodiment states:

The present invention relates to a method of implementing a seamless user/service reservation network capable of establishing a *concurrent* communication link *between multiple users and multiple vendor reservation systems*....

... Accordingly, *the use of bundled transactions to a system using multithreaded technology allows for true concurrent processing* of system requests from either the user input module or the vendor service module.

As would be understood by someone skilled in the relevant art, *multi-thread processing technologies allows a processor to divide allotted CPU time into multiple sub-processes that are processed within one clock*

cycle. By bundling each request as sub-processes within a larger process, a CPU would be allowed to process multiple booking, shopping, maintenance or internal processes within one clock cycle as opposed to having [to] process an individual request or communication in multiple clock cycles. Depending on the number of processors bundled within a single communication, this would reduce the processing time by a linear factor. *Because of the multiple thread technology, an end user or vendor can bundle requests and have these requests within each bundle processed immediately and more efficiently by the system*.

Id. at 4:4-7, 5:54-6:6 (italics added).

Patentees distinguished the invention from the THISCO system because "the THISCO system can only process a single transaction per each communication" and "transactions to different systems cannot be processed concurrently." *Id*. at 2:17-25. Patentees also distinguished the GolfSwitch system from the Hunt, Germain, and Arnold systems based on GolfSwitch's concurrent processing of tee-time requests. File History at 49-62. They told the examiner that their invention enables "multiple user interfaces to concurrently access multiple vendor reservation systems," "allows the user to issue multiple concurrent transactions to multiple vendor reservation systems within a single communication," and "processes multiple user transactions bundled into a single communication and concurrently divides and processes each transaction." *Id*. at 50. Patentees asserted:

The use of Multi-Thread technology allows the GolfSwitch technology to truly concurrently (simultaneously) process a pluraliof reservation transactions to a plurality of disparate individual golPcourse reservation systems situated in different locations. This is clearly distinct over the prior art.

Id. at 51. Patentees specifically contrasted "the sequential Germain approach" with "the concurrent GolfSwitch approach" using as an example of querying 30 golf courses for tee-time availability:

The GolfSwitch User Input module bundles one single communication that includes a request for tee time availability for each of the 30 golf courses....

-This single communication bundle is transmitted to the Central GolfSwitch System,

-the communication is then un-bundled where each [of] 30 tee time availability requests is handled by a different processing thread so that they all can be processed within the same CPU clock cycle (Concurrent Multi-Thread Processing-refer to GolfSwitch Patent page 10, paragraph 3).

-Each thread transmits the electronic tee time availability request message to the specific golf course concurrently (simultaneously).

-Each thread receives its independent response from the specific golf course transaction it is serving.

-All responses are bundled into a single reply communication back to the user input module.

Id. at 53. As an appendix to their paper explaining GolfSwitch's concurrent processing of tee-time requests, patentees included the Merriam-Webster online definition of "concurrent": "occurring or operating at the same time." *Id*. at 62.

The Patent and the prosecution history describe two different types of "concurrent processing": (1)

simultaneous processing of requests from a single ("each") user input module to a "plurality of disparate individual golf course reservation systems," by bundling multiple transactions within a single communication and processing them using multi-threaded technology, and (2) simultaneous processing of requests from "a plurality of user input modules" to a "plurality of disparate individual golf course reservation systems," which does not necessarily involve bundled transactions and multi-threaded technology. The claim term "concurrently" therefore must be construed differently in each of the two different contexts.

Therefore, the court construes "access concurrently" in claim 1 as "access simultaneously with other user input modules."

The court construes "sending one or more tee-time requests concurrently" in claim 1 as "simultaneously sending one or more tee-time requests as bundled transactions within a single communication."

The court construes "concurrently receiving one or more tee-time requests" in claim 1 as "simultaneously receiving one or more tee-time requests as bundled transactions within a single communication."

The court construes "concurrently process one or more tee-time requests" in claim 1 as "simultaneously process one or more tee-time requests within the same clock cycle using multi-threaded processing."

G. "Interface"

Plaintiffs propose "interface" be construed as "means for communicating or exchanging." The Cypress Defendants and the Tee Connect Defendants propose "interface" be construed as "means by which an individual user interacts with the plurality of disparate golf course reservation systems."

Claim 1 uses "interface" as a noun, adjective, and verb:

... each user input module having an *interface* capable of sending one or more tee-time requests ...; and an *interface* module having a data link ..., said *interface* module ... being arranged to *interface* with each different protocol of said plurality of disparate individual golf course reservation systems....

Patent at 10:3-16 (italics added). The Summary of the Invention states:

It is another object of the present invention to provide a graphical *interface* that allows a user access to multiple vendor reservation systems via the same single *interface* procedure.... It is a further object of the present invention to provide a communications protocol that allows the user to communicate with the seamless *interface* network irrespective of, and via multiple forms of entry, including an Internet web application, a graphical user *interface*, and additional *interfaces*.

....

The input module includes a plurality of potential embodiments, including a graphical user *interface*, an Internet web site *interface* and a plurality of dedicated single use computer *interfaces*. The input module allows a registrant to access the network via typical input means such as mouse, keyboard or voice commands. Regardless of the type of *interface* the user attempts to access, the user *interface* processes all transactions in the same manner. Thus, the user *interface* varies the display format of the input means to

correspond with and accommodate the needs of the particular type of user, while keeping the transaction protocol standardized.

Id. at 2:53-56, 60-65, 3:9-20 (italics added).

Construing "interface" as limited to user interactions would add redundancy where the communication or interaction expressly involves users, and confusion where it does not. Such a construction would not make the claim term more understandable to the jury.

The court therefore construes "interface" as "means for communicating or exchanging."

H. "Interface module"

Plaintiffs propose that "interface module" be construed as "a module configured for processing communication requests." Defendants contend that Plaintiffs' construction introduces a new term, "communication requests," that would require further construction. The court agrees.

The Cypress Defendants and the Tee Connect Defendants propose that "interface module" be construed as "component that provides a communication link between, and concurrently processes bundled transactions to and from, the user input module and the plurality of disparate golf course reservation systems." Defendants' proposed construction unnecessarily includes "concurrently processes bundled transactions," a feature of the invention more appropriately included in the claim terms expressly including the word "concurrently."

Claim 1 discloses "an interface module having a data link with each of said plurality of user input modules" and "having a data link connection with each of said plurality of disparate individual golf course reservation systems." Patent at 10:7-13. In the Summary of the Invention, the Patent discloses:

The interface module serves the dual function of a transaction switch and an information dissemination system. Utilizing a multi-threaded process input means, the interface module processes multiple user transactions bundled into a single communication and concurrently divides and processes each transaction. The interface module communicates with both the user input module and the vendor service module accepting and sending communications to each module. Implementing a dedicated server communication format, the interface module facilitates communication irrespective of the individual embodiments of the other modules. Because of the multi-thread, multiple server configuration, the interface module facilitates concurrent processing of all bundled communications.

Id. at 3:21-34. Further, the Abstract states, "The interface module comprises multiple servers designed to communicate with the user input module and the vendor service module and decode and process all bundled requests." *Id*. at page 1. Thus, the interface module must be able to perform certain functions, *i.e.,* concurrently receive tee-time requests from user input modules, translate and communicate requests to disparate golf course reservation systems, and effect acceptance of tee-time requests, all as real-time transactions. But those functions are disclosed by separate claim terms and should not be incorporated into the construction of "interface module."

Therefore, the court rejects all of the parties' proposed constructions of "interface module." The court construes "interface module" as "a component that transmits data between user input modules and disparate

individual golf course reservation systems."

I. "User input modules"

Plaintiffs propose that "user input modules" be construed as "modules that receive user input (information); a system or network component for receiving user input such as remote access devices." The Cypress Defendants and the Tee Connect Defendants' proposed construction is "components through which an individual user of the tee-time reservation system inputs information to and/or interacts with the plurality of disparate golf course reservation systems."

Claim 1 discloses multiple user input modules, each of which "having an interface capable of sending one or more tee-time requests concurrently." Patent 10 :1-6. The Summary of the Invention describes an invention "that allows a user access to multiple vendor reservation systems via the same single interface procedure" and "to communicate with the seamless interface network." *Id*. at 2:58-63. It teaches that the "input module includes a plurality of potential embodiments, including a graphical user interface, an Internet web site interface and a plurality of dedicated single use computer interfaces" and the "input module allows a registrant to access the network via typical input means such as mouse, keyboard or voice commands." *Id*. at 3:9-14. Thus, the Patent makes clear that the user input modules permit the end user to access and interact with the golf reservation network and not merely "input" data. The user input modules, therefore, must also provide information to the end user. Defendants' proposed construction is consistent with the specification if it is understood that the user input modules interact with the plurality of disparate golf course reservation systems through the interface module and not directly.

The court therefore construes "user input modules" as "components through which an individual user of the tee-time reservation system inputs information to and/or interacts with the plurality of disparate golf course reservation systems through the interface module."

IV. Conclusion

For the foregoing reasons, the court construes the disputed claim terms as set forth in the table above.

IT IS SO ORDERED.

D.Ariz.,2008.
GolfSwitch, Inc. v. Incuborn Solutions, Inc.