IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

S3G TECHNOLOGY LLC, Plaintiff, v. HENNES & MAURITZ AB (dba H&M), Defendant.	Case No. 2:22-cv-328 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff S3G Technology LLC ("S3G") alleges as follows for its complaint against Defendant Hennes & Mauritz AB (dba H&M) ("Defendant" or "H&M"):

JURISDICTION AND VENUE

1.   This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§ 1 et seq.

2.   This Court has original and exclusive subject matter jurisdiction over patent infringement claims for relief under 28 U.S.C. §§ 1331 and 1338(a).

3.   The Court has specific and general personal jurisdiction over H&M pursuant to due process and/or the Texas Long Arm Statute, due at least to H&M's substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

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4.   Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) because, among other things, H&M is subject to personal jurisdiction in this judicial district, H&M has a regular and established place of business in Texas and in this judicial district, H&M has purposely transacted business involving the accused products in this judicial district, including sales to one or more customers in Texas, and committed infringing acts complained of herein in this judicial district.

PARTIES

5.   S3G is a limited liability company organized under the laws of the State of California with its principal place of business in Foster City, California. S3G has been, and continues to, develop technology-based solutions that facilitate economic empowerment and development. For example, S3G is developing mobile solutions that enable the authenticated access to different types of spaces, including to buildings and portions thereof. The information that S3G's technology solutions may collect and maintain about its users further enable the delivery of educational and other services that may help these users to emerge from poverty and change their lives and those of their families. In connection with its mobile solutions, S3G has obtained patents covering its technology in the United States. S3G is a Massachusetts Institute of Technology (MIT) Computer Science and Artificial Intelligence Lab (CSAIL) Startup, and is a member of MIT CSAIL Alliances' Startup Connect.

6.   The Managing Member of S3G, who is also the named inventor of the asserted patents, is an award-winning MIT-trained researcher, technologist and inventor who has used and continues to use innovative technologies to address many of the world's critical problems, including poverty, access to financial services and access to clean drinking water. The World

Economic Forum has recognized him for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.

7.   On information and belief, H&M Corporation ("H&M") is a corporation organized and existing under the laws of Sweden with its principal place of business located at Master Samuelsgatan 46A Stockholm, 106 38 Sweden. On information and belief, H&M sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing methods or processes into the stream of commerce knowing that they would be sold in Texas and this judicial district. S3G is further informed and believes, and on that basis alleges, that Defendant derives a significant portion of its revenue from the use, promotion and distribution of its products and services, including through the use of Defendant's H&M mobile applications for devices running the Android operating system[1] and the H&M mobile applications for iOS2[2] (collectively, "Defendant app"), and its systems, methods, computing devices, including servers, software, and non-transitory computer readable storage medium that execute, run, store, support or facilitate the use of the Defendant app (collectively, "Accused Instrumentalities" or "Accused System").

8.   S3G is informed and believes, and on that basis alleges, that, at all times relevant hereto, Defendant has conducted and continues to conduct business, including the use, distribution, promotion, and/or the offer for sale and sale of its products and services using the Accused Instrumentalities, including the Defendant app, in this Judicial District. On information and belief, Defendant does business itself, or through its subsidiaries, affiliates, and franchisees, in the State of Texas and the Eastern District of Texas.

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[1] https://play.google.com/store/apps/details?id=com.hm.goe&hl=en_US&gl=US

[2] https://apps.apple.com/us/app/h-m-we-love-fashion/id834465911

PATENTS

9.   United States Patent No. 8,572,571 (the "'571 patent") entitled "Modification of Terminal and Service Provider Machines Using an Update Server Machine" was duly and legally issued on October 29, 2013. A true and correct copy of the '571 patent is attached hereto as Exhibit "A" and incorporated herein by this reference. By assignment, S3G is now the assignee of the entire right, title and interest in and to the '571 patent, including all rights to enforce the '571 patent and to recover for infringement. The '571 patent is valid and in force.

10.   United States Patent No. 9,940,124 (the "'124 patent") entitled "Modification of Terminal and Service Provider Machines Using an Update Server Machine" was duly and legally issued on April 10, 2018. A true and correct copy of the '124 patent is attached hereto as Exhibit "B" and incorporated herein by this reference. S3G is the owner of the entire right, title and interest in and to the '124 patent, including all rights to enforce the '124 patent and to recover for infringement. The '124 patent is valid and in force.

11.   United States Patent No. 11,210,082 (the "'082 patent") entitled "Modification of Terminal and Service Provider Machines Using an Update Server Machine" was duly and legally issued on December 28, 2021. A true and correct copy of the '082 patent is attached hereto as Exhibit "C" and incorporated herein by this reference. S3G is the owner of the entire right, title and interest in and to the '082 patent, including all rights to enforce the '082 patent and to recover for infringement. The '082 patent is valid and in force.

The Technical Problems Addressed by the Patents-in-Suit

12.   The '124, '571, and '082 patents (collectively, the "Asserted Patents") disclose that at the time of the invention, often times, after a computerized system has been initially constructed, modifications may be required, either to improve the functionality of the system or

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to customize the system to meet new requirements. Typically, a software application includes computer-executable instructions that are not able to be edited or modified directly by a developer. Instead, the developer may make the required changes by either creating or editing original source code. Once edited or modified, the updated source code must then be recompiled or translated into an updated set of computer-executable instructions. These updated set of computer-executable instructions often includes a relatively large amount of information, which must then be distributed to the hardware devices in the system as an updated software application. '571 Patent, Col. 2:1-17.[3]

13.   At the time of the invention, in many situations it may be difficult to distribute a newly compiled version of the updated software application to all of the devices in the system. This is particularly true if the system is distributed over a large geographic area making it difficult to locate each system device and transport it to a central location where the newly updated computer-executable instructions can be uploaded. This lack of physical access to the devices often means that the new software application cannot be uploaded using a traditional wired connection (*e.g.*, an interface cable). Col. 2:18-26.

14.   The Asserted Patents further explain that using a wireless communications network to upload the updated computer-executable instructions also has several significant drawbacks. First, the size of the updated computer-executable instructions may exceed the transmission capabilities of the communications network, *i.e.*, the size of the file is too large to be uploaded. Second, even if the updated computer-executable instructions can be uploaded and transmitted over the wireless network, it may take an excessive amount of time. Third, these problems are exacerbated if (1) the computer system includes a large number of devices that

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[3] Unless otherwise indicated, all citations are to the '571 patent.

must be updated with the modified computer-executable instructions and (2) the devices contain

different versions of the application or multiple applications need updates. Col. 2:26-52.

The Claimed Solution to the Technical Problems

15.   The Asserted Patents are directed to a technological solution, *i.e.*, improving the

way computers operate. In particular, the Asserted Patents claim a specific computerized system

able to provide efficient modification of a specific type of software applications that are

distributed across a network of remote devices. Col. 2:53-55. As an example, FIG. 1 (below)

discloses, and the Asserted Patents claim, a unique and very specific type of computer system

structure involving three entities: a service provider machine 110, a terminal machine 120 and an

update server machine 102. Within this specific system, a terminal machine 120 and a service

provider machine 110 communicate via applications running on the machines (as depicted by the

vertical arrows in the figure).

FIG. 1
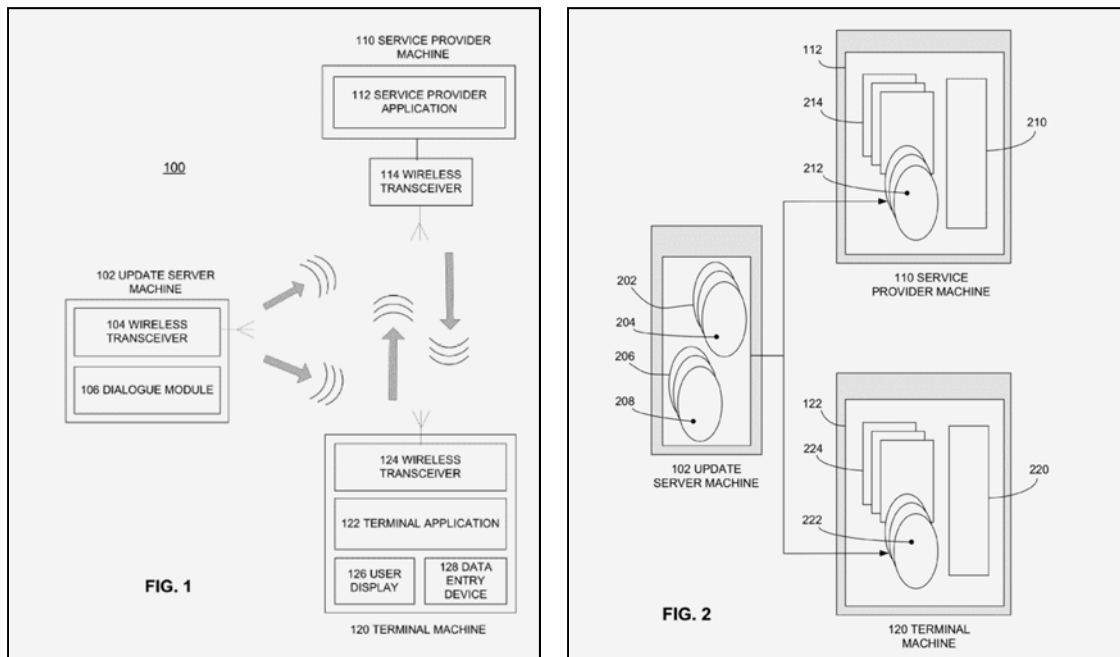
FIG. 2

16.   As shown above in FIG. 2, the applications running on these machines have a

very specific structure: namely, the terminal application 122 comprises first computer-executable

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instructions 224, which has been construed to mean "computer instructions that can be directly executed on a processor,"[4] and first code 222. Col. 7:40-45. The Asserted Patents expressly define that "code" is not just any generic software code; instead, the Asserted Patents teach a very specific structure for "code," clearly stating that "[t]he code represents at least some information that *must be translated* by the software application before it can be implemented on the machine processor." Col. 4:21-25 (emphasis added).[5] The terminal application conducts the terminal machine's portion of the dialogue with the service provider machine.

17.   In like fashion, as shown in FIG. 2, the service provider machine runs an application having a very specific structure: namely, the provider application 112 comprises second computer-executable instructions 214, which can be directly executed on a processor, and second code 212, which must be translated before it can be executed on a processor. The provider application conducts the service provider's portion of the dialogue with the terminal machine.

18.   FIGS. 1 and 2 also show that the computer system structure in the Asserted Patents is unique in having a third entity, an update server machine. The update server machine is able to communicate with both the terminal machine and the service provider machine (as depicted by the diagonal arrows in the FIG. 1). The update server machine also has a unique and very specific data structure for communicating with the terminal and service provider machines:

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[4] *See also S3G Tech. LLC v. Unikey Techs., Inc.,* Civil Action No. 6:16-cv-400-RWS-KNM, Dkt. 74 [Report and Recommendation of United States Magistrate Judge], attached hereto as Exhibit D; *see also* Dkt. 91 [Order Adopting Rep. & Rec. of Mag. Judge], attached hereto as Exhibit E.
[5] Consistent with the specification, the term "code" has been construed to mean "information that must be translated before it can be executed on a processor." *See* Exhibit D, Appendix A.

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namely, the update server machine sends one or more dialogue modules, which has been
construed to mean "code or instructions related to a dialogue sequence."[6]

19.   As part of the dialogue between the terminal machine and the service provider
machine, the terminal machine is modified by receiving a terminal dialogue module. As noted,
the dialogue module is a specific structure that contains information that must be translated by
the software application before it can be implemented on the machine processor. After receiving
the dialogue module, specific actions can be taken. For example, the dialogue module may
replace existing terminal code already saved on the terminal machine or the terminal code may
supplement other code previously saved on the terminal machine. Col. 8:44-52. These steps
produce first updated code, which adapts the terminal application to display a further prompt for
the terminal machine's portion of a modified dialogue sequence with the service provider
machine. Significantly, when terminal and service provider applications are modified using a
dialogue module it does not result in replacing the prior applications with entirely new
applications. This is important because this system with its specific software structures results in
a number of technological benefits: namely, computing resource, improved network utilization,
and design efficiencies. Col. 6:47-49; 14:43-48; FIGS. 8A-8B.

20.   During litigation of the Asserted Patents, a Court also held that the "dialogue
module" is a very specific type of structure:

> The recital [in the claims] of "sending a . . . dialogue module" demonstrates that
> the claim uses the term "module'" to refer to *a particular type of structure rather
> than to any structure for performing a function*. Further, the specification is
> consistent with such an interpretation by disclosing that a "dialogue module" can
> contain code or other data and can be communicated….

Exhibit D at 12 (emphasis added).

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[6] *Id*.

21.   The Court also held that the claimed three entity system of the Asserted Patents also is a particular structure. Specifically, this Court stated that "the surrounding claim language [of terminal machine] provides details regarding how the terminal machine interacts with other components . . . in a way that . . . inform[s] the structural character of [it] or otherwise impart[s] structure." *Id*. at 23. The Court held that "[s]ubstantially the same analysis" applies to service provider and update server machines. *Id.* at 26, 29.

22.   Among other features, the Asserted Patents thus claim an unconventional and inventive solution to the problem of transmitting large executable files required to replace applications running on remote devices, which previously required networks having massive bandwidth. Specifically, the Asserted Patent disclose the unconventional and inventive system and method of transmitting dialogue modules to terminal and service provider machines to modify and/or update software applications running on those machines. The software applications also are unconventional and inventive in utilizing both computer-executable instructions, which can be directly executed on a processor, and code, which must be translated before it can be executed on a processor, to solve this technological problem.

23.   The use of "dialogue modules" containing "code" also results in various technical benefits. For example, as the Asserted Patents explain, transmitting an entire software application may represent a "large amount of information" that may not be feasible to transmit due to bandwidth limitations on data transfer over the network. Col. 2:31-32. And, even if an upload of the entire modified application is possible, "it may take an unacceptable amount of time due to the slow transfer rate of a wireless network." Col. 2:40-44. By comparison, the Asserted Patents disclose that, "[i]n a preferred embodiment, the dialogue module is less than 1 Mb to facilitate communication over a network with limited data transfer capacity." Col. 6:47-

49. Therefore, the use of the "dialogue modules" reduces network bandwidth utilization, thereby

allowing efficient modification of applications running on remote devices on a network. Another

benefit of using "dialogue modules" is that it enables the use of design tools that facilitate their

development and modification. Col. 14:43-48, FIGS. 8A, 8B. These tools thus enable and

improve the efficiency of modifying applications.

     24.   During the prosecution of patents related to the Asserted Patents, the United

States Patent Examiner allowed the claims because, among other things, this unique structure

described and claimed in the Asserted Patents was not known and would not have been obvious:

> As Applicants pointed out in the Remarks, **the prior art of record do not disclose and/or fairly suggest at least claimed limitations recited** in such manners in independent claim 1 " ... an update server machine comprising a processor and operable for sending a terminal dialogue module to the terminal machine and a provider dialogue module to the service provider machine to allow the terminal machine and the service provider machine to conduct a dialogue sequence with each other []....wherein the **terminal application comprises a first set of computer-executable instructions and a first set of code, wherein the first set of computer-executable instructions are able to execute directly on a terminal processor of the terminal machine, and wherein the first set of code is not able to execute directly on the terminal processor**; ... wherein the first set of updated code adapts the terminal application to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine...
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> These **claimed limitations are not present in the prior art of record and would not have been obvious**, thus all pending claims are allowed.

Exhibit F ['571 FH, Notice of Allowability, dated July 11, 2013, at Examiner's Statement of

Reasons for Allowance] (emphasis added).

FIRST CLAIM FOR RELIEF

Infringement of the '571 Patent

     25.   S3G refers to and incorporates herein by reference the preceding paragraphs.

     26.   Defendant, by the acts complained of herein, and by making, using, selling,

offering for sale, and/or importing in the United States, including in the Eastern District of

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Texas, instrumentalities embodying the invention, has in the past, does now, and continues to infringe the '571 patent directly, contributorily, and/or by inducement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

27.   At least since the filing of this Complaint, Defendant has had actual knowledge of the '571 patent.

28.   On information and belief, Defendant has directly infringed one or more claims of the '571 patent by making, using, importing, supplying, selling, or offering for sale the Accused Instrumentalities. By doing so, Defendant has directly infringed at least claim 2 of the '571 patent.

29.   For example, Defendant provides a system for modifying a terminal machine and a service provider machine ("Accused System").

30.   The Accused System includes an update server machine (*e.g.,* a smart phone or other computing device accessing the Defendant system) comprising a processor and operable for sending a terminal dialogue module (*e.g.,* terminal machine portion of a favorite item[7]) to the terminal machine (*e.g.,* an Android smart phone or other Android computing device running the Defendant app) and a provider dialogue module (*e.g.,* service provider machine portion of a favorite item) to the service provider machine (*e.g.,* Defendant server) to allow the terminal machine (*e.g.,* an Android smart phone or other Android computing device running the Defendant app) and the service provider machine (*e.g.,* Defendant server) to conduct a dialogue sequence (*e.g.,* series of prompts and corresponding user data entries) with each other. The Accused System includes an update server machine (*e.g.,* a smart phone or other computing

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[7] The analysis herein applies equally to other aspects of the Accused System, including, but not limited to, payment methods, my orders, account settings, my addresses, subscription, membership, rate & review, favorites, shopping bag, and search.

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device accessing the Accused System) comprising a processor. Alternatively, the Accused

System includes an update server machine (*e.g.*, Defendant server) comprising a processor. One

of ordinary skill would understand that smart phones or other computing devices necessarily

comprise a processor, *e.g.,* to run the operating system, applications, etc. The Accused System

includes an update server machine (*e.g.,* a smart phone or other computing device accessing the

Defendant system) that is operable for sending a terminal dialogue module (*e.g.,* terminal

machine portion of a favorite item) to the terminal machine (*e.g.,* an Android smart phone or

other Android computing device running the Defendant app). Alternatively, the Accused System

includes an update server machine (*e.g.*, Defendant server) that is operable for sending a terminal

dialogue module (*e.g.*, terminal machine portion of a favorite item) to the terminal machine (*e.g.*,

an Android smart phone or other Android computing device running the Defendant app (terminal

application)). The Accused System can be accessed from any device, including PCs, Android

and iOS tablets, and Android and iOS phones. Therefore, these and other devices that can access

the Accused System constitute update server machine, which is a computing device capable of

sending one or more dialogue modules. For example, without limitation, a dialogue module is

sent from a user's device accessing the Accused System to the Defendant server. The Defendant

server then sends information to an user's Defendant app. On information and belief, the format

of the information that is sent from the Defendant server to the Defendant app is, for example,

JSON. The Accused System includes an update server machine (*e.g.,* a smart phone or other

computing device accessing the Accused System) that is operable for sending a provider

dialogue module (*e.g.,* service provider machine portion of a favorite item) to the service

provider machine (*e.g.,* Defendant server). This is done using, for example, HTTP. For

example, without limitation, after receiving the respective dialogue module, users can view

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favorite item. For example, without limitation, after receiving a respective dialogue module, a user will be prompted with one or more favorite item to, for example, review a favorite item result. In response to these prompts, the user selects the appropriate data entry (*e.g.*, button). Thereafter, the user is provided additional prompts. Alternatively, the Accused System includes an update server machine (*e.g.*, Defendant server) that is operable for sending a provider dialogue module (*e.g.*, service provider machine portion of a favorite item) to the service provider machine (*e.g.*, Defendant server).

     31.   The Accused System includes a terminal machine (*e.g.,* an Android smart phone or other Android computing device running the Defendant app) that is configured to run a terminal application (*e.g.,* Defendant app for Android) that conducts the terminal machine's portion of the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the service provider machine (*e.g.,* Defendant server). The terminal application conducts the terminal machine's portion of the dialogue sequence with the service provider machine because, for example, without limitation, using the Defendant app, a user is able to access, edit and update a favorite item. The user is prompted to edit or update the favorite item, *e.g.*, by editing favorite item criteria. This information is necessarily communicated to the Defendant server because, for example, without limitation, it must be stored and available to the user in the future. The terminal application is operable for displaying a prompt in a first sequence of prompts and accepting a user data entry in an associated first sequence of user data entries as explained herein, including above. The Accused System includes a terminal application (*e.g.*, Defendant app for Android), and one of ordinary skill would understand that the Defendant app for Android comprises a first set of computer executable instructions and a first set of code, wherein the first set of computer-executable instructions are able to execute directly on a

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terminal processor of the terminal machine, and wherein the first set of code is not able to execute directly on the terminal processor. For example, without limitation, the Android Runtime (ART) comprises computer executable instructions that are able to execute directly on a terminal processor, while the app's bytecode is not able to execute directly on the terminal processor.

32.   The Accused System includes a service provider machine (*e.g.,* Defendant server) that is configured to run a provider application (*e.g.,* Defendant server application) that conducts the service provider machine's portion of the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the terminal machine. As explained herein, user data entries (corresponding to the prompts) are communicated from the terminal application on the terminal machine to the provider application on the service provider machine. The Accused System includes a provider application (*e.g.,* Defendant server application, which, upon information and belief, is, for example, a .Net application), and one of ordinary skill would understand that the Defendant server application comprises a second set of computer-executable instructions and a second set of code, wherein the second set of computer-executable instructions are able to execute directly on a provider processor of the service provider machine, and wherein the second set of code is not able to execute directly on the provider processor. For example, without limitation, the CLR engine that manages the execution of the .Net program comprises computer-executable instructions which are able to execute directly on a provider processor, while the .Net program is not able to execute directly on the provider processor.

33.   In the Accused System, the terminal dialogue module (*e.g.,* terminal machine portion of a favorite item) modifies the first set of code to produce a first set of updated code wherein the first set of updated code adapts the terminal application to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified

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dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the service

provider machine. As explained above, when a user inputs a favorite item using the Accused

System, information is communicated to the Defendant app (terminal application on the terminal

machine). As also explained above, without limitation, the dialogue sequence (*e.g.*, series of

prompts and corresponding user data entries) is evidenced in the one or more prompts associated

with a favorite item. In response, the user selects the appropriate data entry (*e.g.*, button), e.g.,

edit, delete, etc. Additional prompts and associated data entries include, for example, without

limitation, selecting one or more favorite item and their associated information, e.g., to make an

order. At least a portion of the information is necessarily stored on the terminal machine

because, for example, without limitation, the favorite item is necessarily available, even later, on

the user's device and allows the user to select a favorite item, even at a later time. Therefore, the

terminal dialogue module modifies the first set of code to produce a first set of updated code.

The first set of updated code adapts the terminal application to use a second sequence of prompts

and a second sequence of data entries for the terminal machine's portion of a modified dialogue

sequence with the service provider machine. For example, without limitation, as already

explained herein, a second sequence of prompts and a second sequence of data entries is

demonstrated when new favorite item are added or updated, and they appear on the user's

device. This necessarily represents a modified dialogue sequence with the service provider

machine. In the Accused System, the provider dialogue module (*e.g.,* service provider machine

portion of a favorite item) modifies the second set of code to produce a second set of updated

code wherein the second set of updated code adapts the provider application to use a second

sequence of prompts and a second sequence of data entries for the service provider machine's

portion of the modified dialogue sequence with the terminal machine. As discussed herein, when

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a user inputs a favorite item using their device (*e.g.*, PC or mobile device), information is communicated to the Defendant server application (provider application on the service provider machine). As also explained herein, the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) is evidenced by the one or more prompts and the corresponding user data entry (*e.g.*, button). Additional prompts and data entries include, for example, without limitation, editing and deleting a favorite item. At least a portion of the information is necessarily stored on the provider machine because, for example, without limitation, the favorite item is available on the Defendant server as well as on different devices, including at a later time. Therefore, the provider dialogue module modifies the second set of code to produce a second set of updated code. The second set of updated code adapts the provider application to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine. For example, without limitation, as already explained herein, a second sequence of prompts and a second sequence of data entries is demonstrated when new favorite item are added or updated, and they appear on a user's device. In the Accused System, the terminal dialogue module (*e.g.,* terminal machine portion of a favorite item) does not modify the first set of computer-executable instructions, as is readily understood by one of ordinary skill. For example, without limitation, as already explained herein, ART comprises the first set of computer-executable instructions and is not modified by the terminal dialogue module. In the Accused System, the provider dialogue module (*e.g.,* service provider machine portion of a favorite item) does not modify the second set of computer-executable instructions, as is readily understood by one of ordinary skill. For example, without limitation, as already explained herein, the CLR engine comprises the second set of computer-executable instructions and is not modified by the provider dialogue module.

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34.   On information and belief, at least since the filing of this Complaint, Defendant has knowingly and actively induced the infringement of one or more of the '571 patent claims by, *inter alia*, marketing, promoting, and offering for use the Accused Instrumentalities, knowingly and intending that the use of such instrumentalities by Defendant customers and by users infringes the '571 patent. For example, Defendant intends to induce such infringement by, among other things, promoting users to download and run the Defendant app knowing that the use of its applications on a user's portable device or smart phone in connection with supporting systems such as its server(s) infringes one or more claims of the '571 patent.

35.   On information and belief, at least since the filing of this Complaint, Defendant has contributed to the infringement of the '571 patent by, *inter alia*, marketing and promoting products and services. Defendant has used and promoted within the United States the Accused Instrumentalities. The Accused Instrumentalities are not staple articles or commodities of commerce suitable for substantial non-infringing use and are known by Defendant to be especially made or especially adapted to the infringe the '571 patent. As a result, Defendant's Accused Instrumentalities have been used by its customers and by users to infringe the '571 patent. Defendant continues to engage in acts of contributory infringement of the '571 patent.

36.   By reason of the acts of Defendant alleged herein, S3G has suffered damage in an amount to be proved at trial.

37.   Defendant threatens to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to S3G's irreparable injury. It would be difficult to ascertain the amount of compensation that would afford S3G adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. S3G does not have an adequate remedy at law to compensate it for the injuries threatened.

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SECOND CLAIM FOR RELIEF

Infringement of the '124 patent

38.   S3G refers to and incorporates herein by reference the preceding paragraphs.

39.   Defendant, by the acts complained of herein, and by making, using, selling, offering for sale, and/or importing in the United States, including in the Eastern District of Texas, instrumentalities embodying the invention, has in the past, does now, and continues to infringe the '124 patent directly, contributorily, and/or by inducement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

40.   At least since the filing of this Complaint, Defendant has had actual knowledge of the '124 patent.

41.   On information and belief, Defendant has directly infringed one or more claims of the '124 patent by making, using, importing, supplying, selling, or offering for sale the Accused Instrumentalities. By doing so, Defendant has directly infringed at least claim 1 of the '124 patent.

42.   The Accused System performs a method of conducting a dialogue between a terminal machine and a service provider machine.

43.   The Accused System performs a method comprising displaying a first prompt on a terminal display of a terminal machine (*e.g.,* an Android smart phone or other Android computing device running the Defendant app) by running a terminal application (*e.g.,* Defendant app for Android), the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue. The terminal application displays a first prompt and accepts a first data entry at the terminal machine, wherein the first data entry is associated with the first prompt. For example, without limitation, using the

Defendant app, a user is able to review items on a favorite items list[8] and place orders. The user

is prompted with one or more favorite items to, for example, place an order. The user is also

able to share and delete favorite items. This information is necessarily communicated to the

Defendant's server because, for example, without limitation, it must be stored and available to

the user in the future. One of ordinary skill would understand that the terminal application (*e.g.*,

Defendant app for Android) comprises first computer executable instructions and first code. For

example, without limitation, the Android Runtime (ART) comprises computer executable

instructions, while the app's bytecode comprises code.

44.   As explained above, the Accused System performs a method comprising

accepting a first data entry at the terminal machine (*e.g.*, an Android smart phone or other

Android computing device running the Defendant app), wherein the first data entry is associated

with the first prompt.

45.   The Accused System performs a method comprising communicating information

associated with the first data entry from the terminal machine (*e.g.*, an Android smart phone or

other Android computing device running the Defendant app) to the service provider machine

(*e.g.*, Defendant server), wherein the service provider machine (*e.g.*, Defendant server) uses a

provider application (*e.g.*, Defendant server application) comprising second computer-executable

instructions and second code that conduct the service provider machine's portion of the dialogue,

and wherein the provider application is capable of sending an authorization code to the terminal

machine. In the Accused System, information associated with the first data entry is

communicated from the terminal machine to the service provider machine. For example, without

limitation, using the Defendant app, a user is able to review favorite items and place orders. This

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[8] *See supra*, footnote 7.

information is necessarily communicated to the Defendant server because, for example, without limitation, otherwise it would not be ordered. Additionally, a favorite item can be deleted. This information is necessarily communicated to the Defendant server because, for example, without limitation, it must not show in the favorite item list in the future. The provider application (*e.g.,* Defendant server application, which, upon information and belief, is a .Net application) runs on the service provider machine (*e.g.,* Defendant server), and one of ordinary skill would understand that the Defendant server application comprises second computer-executable instructions and second code. For example, without limitation, the execution environment of .Net, including the Common Language Runtime (CLR) that manages the execution of .NET programs, virtual machine, operating system, libraries, compiled .Net programs, or portions thereof, comprise computer-executable instructions, while the .Net program comprises code. In the Accused System, the provider application is capable of sending an authorization code to the terminal machine, for example, without limitation, by authorizing logging into the Accused System.

46.   The Accused System performs a method storing at least a portion of the information associated with the first data entry in memory for analysis. For example, the service provider stores for analysis at least a portion of the information associated with the first data entry, e.g., an order of a favorite item, so that these orders may be analyzed and added to the order history. If at least a portion of the information was not stored in memory, the order history would not be available to the user.

47.   The Accused System performs a method comprising receiving, at the terminal machine (*e.g.,* an Android smart phone or other Android computing device running the Defendant app), a terminal dialogue module (*e.g.,* terminal machine portion of a favorite item)

that updates at least a portion of the first code to produce first updated code, wherein the first

updated code adapts the terminal application (*e.g.,* Defendant app for Android) to display a

second prompt for the terminal machine's portion of a modified dialogue sequence (*e.g.*, series of

prompts and corresponding user data entries) with the service provider machine, wherein at least

one of the first code, the second code, and the first updated code comprise intermediate code.

For example, without limitation, when a user inputs a favorite item using the Accused System,

information is communicated to the user's Defendant app (terminal application on the terminal

machine). The format of the information that is sent from the Defendant server to the user's

Defendant app is, for example, JSON. At least a portion of the information is necessarily stored

on the terminal machine because, for example, without limitation, the favorite items on the user's

Android device and allows the user to select it even at a later time. Therefore, the terminal

dialogue module updates at least a portion of the first code to produce first updated code. The

dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) is evidenced in

the one or more favorite items and the corresponding user data entry of selecting a desired

favorite item (*e.g.*, button). Additional prompts include reviewing favorite items and sharing,

ordering and deleting favorite items. For example, without limitation, the second prompt is

evidenced by the ability to access *new* favorite items. At least one of the first code, the second

code, and the first updated code comprise intermediate code. As explained above, the terminal

application is identified as, for example, without limitation, the Defendant app for Android, and

the first code as, for example, without limitation, the app's bytecode. One of ordinary skill

would understand this to comprise intermediate code.

     48.   On information and belief, at least since the filing of this Complaint, Defendant

has knowingly and actively induced the infringement of one or more of the '124 patent claims

by, *inter alia*, marketing, promoting, and offering for use the Accused Instrumentalities,

knowingly and intending that the use of such instrumentalities by Defendant customers and by

users infringes the '124 patent. For example, Defendant intends to induce such infringement by,

among other things, promoting users to download and run the Defendant app knowing that the

use of its applications on a user's portable device or smart phone in connection with supporting

systems such as its server(s) infringes one or more claims of the '124 patent.

49.   On information and belief, at least since the filing of this Complaint, Defendant

has contributed to the infringement of the '124 patent by, *inter alia*, marketing and promoting

products and services. Defendant has used and promoted within the United States the Accused

Instrumentalities. The Accused Instrumentalities are not staple articles or commodities of

commerce suitable for substantial non-infringing use and are known by Defendant to be

especially made or especially adapted to the infringe the '124 patent. As a result, Defendant's

Accused Instrumentalities have been used by its customers and by users to infringe the '124

patent. Defendant continues to engage in acts of contributory infringement of the '124 patent.

50.   By reason of the acts of Defendant alleged herein, S3G has suffered damage in an

amount to be proved at trial.

51.   Defendant threatens to continue to engage in the acts complained of herein and,

unless restrained and enjoined, will continue to do so, all to S3G's irreparable injury. It would

be difficult to ascertain the amount of compensation that would afford S3G adequate relief for

such future and continuing acts, and a multiplicity of judicial proceedings would be required.

S3G does not have an adequate remedy at law to compensate it for the injuries threatened.

THIRD CLAIM FOR RELIEF

Infringement of the '082 Patent

52.   S3G refers to and incorporates herein by reference the preceding paragraphs.

53.   Defendant, by the acts complained of herein, and by making, using, selling, offering for sale, and/or importing in the United States, including in the Eastern District of Texas, instrumentalities embodying the invention, has in the past, does now, and continues to infringe the '082 patent directly, contributorily, and/or by inducement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

54.   At least since the filing of this Complaint, Defendant has had actual knowledge of the '082 patent.

55.   On information and belief, Defendant has directly infringed one or more claims of the '082 patent by making, using, importing, supplying, selling, or offering for sale the Accused Instrumentalities. By doing so, Defendant has directly infringed at least claim 1 of the '082 patent.

56.   For example, Defendant provides a system ("Accused System") that performs a method of conducting a dialogue sequence using a service provider machine that comprises a provider application wherein the provider application conducts a portion of the dialogue sequence, as set forth herein.

57.   The Accused System performs a method of conducting a dialogue sequence using a service provider machine that comprises a provider application comprising computer-executable instructions and code, wherein the computer-executable instructions can be directly executed on a computer processor of the service provider machine and the code comprises information that must be translated before it can be executed on a computer processor of the

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service provider machine, wherein the provider application conducts a portion of the dialogue sequence. For example, without limitation, the provider application (e.g., Defendant server application, which, upon information and belief, is a .Net application) runs on the service provider machine (e.g., Defendant server), and one of ordinary skill would understand that the Defendant server application comprises computer-executable instructions and code. One of ordinary skill would understand that the computer-executable instructions can be directly executed on a computer processor of the service provider machine and the code comprises information that must be translated before it can be executed on a computer processor of the service provider machine. For example, without limitation, the CLR engine comprises computer-executable instructions, while the .Net program comprises code.

58.   The Accused System performs a method comprising receiving information associated with data entry associated with a dialogue sequence. For example, without limitation, using the Defendant app, a user is able to review, edit and delete favorite items.[9] The user is prompted to with one or more favorite items, for example, place an order. The user is also able to edit a favorite items list. This information is necessarily communicated to (and therefore, received by) the Defendant server because, for example, without limitation, it must be stored and available to the user in the future.

59.   The Accused System performs a method comprising storing at least a portion of the information associated with data entry associated with the dialogue sequence. One of ordinary skill would understand that at least a portion of the information is stored because, for example, without limitation, the information, including the favorite item, can be accessed later and using other devices.

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[9] *See supra*, footnote 7.

60.   The Accused System performs a method comprising receiving second code that (i) replaces at least a portion, but not all of, or (ii) supplements, the code associated with the provider application to produce first updated code, wherein the first updated code adapts the provider application to be able to conduct the provider application's portion of a modified dialogue sequence, wherein the second code comprises information that must be translated before it can be executed on a computer processor of the service provider machine. For example, without limitation, when a user inputs a favorite item using the Accused System, information is communicated to the Defendant server (provider application on the service provider machine). One of ordinary skill would understand that this at least supplements the code associated with the provider application to produce first updated code. On information and belief, the format of this information is, for example, JSON. One ordinary skill would understand that when a JSON message is received, it must first be translated or converted from the JSON format to a format that, for example, the Defendant server can use. (See, e.g., https://github.com/google/gson ("Gson is a Java library that can be used to convert Java Objects into their JSON representation. It can also be used to convert a JSON string to an equivalent Java object." (emphasis added).) The first updated code adapts the provider application to be able to conduct the provider application's portion of a modified dialogue sequence, for example, without limitation, a dialogue sequence including the inputted favorite item.

61.   The Accused System performs a method comprising sending third code that facilitates a recipient's portion of the modified dialogue sequence to be conducted, wherein the third code comprises information that must be translated before it can be executed on a computer processor of the recipient. For example, without limitation, as explained above, when a user inputs a favorite item using the Accused System, information is communicated to, for example,

the Defendant app. Using the Defendant app, a user is able to, for example, review, edit and delete a favorite item. Therefore, one of ordinary skill would understand that the provider application (on the service provider machine) sends third code that facilitates a recipient's portion of the modified dialogue sequence to be conducted. On information and belief, the format of this information is, for example, JSON. One ordinary skill would understand that when a JSON message is received, it must first be translated or converted from the JSON format to a format that, for example, the device running the Defendant app can use. (See, e.g., https://github.com/google/gson ("Gson is a Java library that can be used to convert Java Objects into their JSON representation. It can also be used to convert a JSON string to an equivalent Java object." (emphasis added).)

62.   On information and belief, at least since the filing of this Complaint, Defendant has knowingly and actively induced the infringement of one or more of the '082 patent claims by, inter alia, marketing, promoting, and offering for use the Accused Instrumentalities, knowingly and intending that the use of such instrumentalities by Defendant customers and by users infringes the '082 patent. For example, Defendant intends to induce such infringement by, among other things, promoting users to download and run the Defendant app knowing that the use of its applications on a user's portable device or smart phone in connection with supporting systems such as its server(s) infringes one or more claims of the '082 patent.

63.   On information and belief, at least since the filing of this Complaint, Defendant has contributed to the infringement of the '082 patent by, inter alia, marketing and promoting products and services. Defendant has used and promoted within the United States the Accused Instrumentalities. The Accused Instrumentalities are not staple articles or commodities of commerce suitable for substantial non-infringing use and are known by Defendant to be

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especially made or especially adapted to the infringe the '082 patent. As a result, Defendant's

Accused Instrumentalities have been used by its customers and by users to infringe the '082

patent. Defendant continues to engage in acts of contributory infringement of the '082 patent.

64.   By reason of the acts of Defendant alleged herein, S3G has suffered damage in an

amount to be proved at trial.

65.   Defendant threatens to continue to engage in the acts complained of herein and,

unless restrained and enjoined, will continue to do so, all to S3G's irreparable injury. It would

be difficult to ascertain the amount of compensation that would afford S3G adequate relief for

such future and continuing acts, and a multiplicity of judicial proceedings would be required.

S3G does not have an adequate remedy at law to compensate it for the injuries threatened.

JURY DEMAND

66.   S3G demands a jury trial on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, S3G prays for relief as follows:

A.   For an order finding that the Asserted Patents are valid and enforceable;

B.   For an order finding that Defendant has infringed the Asserted Patents directly,

contributorily and/or by inducement, in violation of 35 U.S.C. § 271;

C.   For an order finding that Defendant's infringement is willful;

D.   For an order temporarily, preliminarily and permanently enjoining Defendant, its

officers, directors, agents, servants, affiliates, employees, subsidiaries, divisions, branches,

parents, attorneys, representatives, privies, and all others acting in concert or participation with

any of them, from infringing the Asserted Patents directly, contributorily and/or by inducement,

in violation of 35 U.S.C. § 271;

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E.   For an order directing Defendant to file with the Court, and serve upon S3G's

counsel, within thirty (30) days after entry of the order of injunction, a report setting forth the

manner and form in which it has complied with the injunction;

F.   For an order awarding S3G general and/or specific damages adequate to

compensate S3G for the infringement by Defendant, including a reasonable royalty and/or lost

profits, in amounts to be fixed by the Court in accordance with proof, including enhanced and/or

exemplary damages, as appropriate, as well as all of the profits or gains of any kind made by

Defendant from its acts of patent infringement;

G.   For an order awarding S3G pre-judgment interest and post-judgment interest at

the maximum rate allowed by law;

H.   For an order requiring an accounting of the damages to which S3G is found to be

entitled;

I.   For an order declaring this to be an exceptional case pursuant to 35 U.S.C. § 285

and awarding S3G its attorneys' fees;

J.   For an order awarding S3G its costs of court; and

K.   For an order awarding S3G such other and further relief as the Court deems just

and proper.

DATED: August 24, 2022   Respectfully Submitted,

                                           By: */s/ Charles Ainsworth*

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