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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Unified Patents Inc.
Petitioner

v.

Anuwave LLC
Patent Owner

IPR2018-00223
U.S. Patent 8,295,862

PETITION FOR *INTER PARTES* REVIEW

TABLE OF CONTENTS

LIST OF EXHIBITS

Exhibit	Description
EX1001	U.S. Pat. No. 8,295,862 to Suresh ("the '862 patent")
EX1002	Prosecution History of the '862 patent (Serial No. 11/734,295)
EX1003	US Publication No. 2007/0244811 to Tumminaro ("*Tumminaro*")
EX1004	US Provisional Application No. 60/744,013, filed on March 30, 2006
EX1005	US Provisional Application No. 60/744,930, filed on April 15, 2006
EX1006	Declaration of Dr. Michael Shamos ("Dr. Shamos")
EX1007	US Publication No. 2005/0245241 to Durand et al. ("*Durand*")
EX1008	Scott B. Guthery et al., *Mobile Application Development with SMS and the SIM Toolkit* ("*Guthery*")
EX1009	US Publication No. 2007/0202884 to Nykanen et al. ("*Nykanen*")
EX1010	US Patent No. 6,125,281 to Wells et al. ("*Wells*")
EX1011	U.S. Patent No. 6,263,447 to French et al. ("*French*")
EX1012	U.S. Patent No. 6,438,690 to Patel et al. ("*Patel*")
EX1013	U.S. Patent No. 6,684,248 to Janacek et al. ("*Janacek*")
EX1014	Declaration of Emily R. Florio

I. PRELIMINARY STATEMENT

The ’862 patent claims a method for communicating through a Short Message Service (SMS) communication channel. But that claimed method was obvious at the time of filing. Accordingly, Petitioner, Unified Patents Inc. (“Unified”) requests *inter partes* review and cancellation of claims 1-7 of the ’862 patent under 35 U.S.C. § 103.

II. STATEMENT OF PRECISE RELIEF REQUESTED

A. Claims for Which Review Is Requested

Petitioner requests *inter partes* review and cancellation of claims 1-7 of the ’862 patent under 35 U.S.C. § 311.

B. Statutory Grounds of Challenge

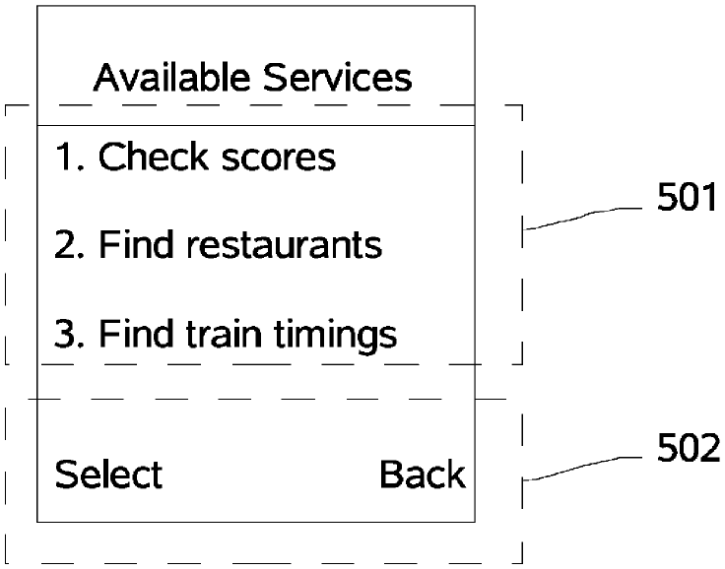
This Petition presents the following grounds:

Ground	Basis	Claims
1	Obviousness over U.S. Publication No. 2007/0244811 to Tumminaro (“*Tumminaro*”)	1, 7
2	Obviousness over U.S. Publication No. 2005/0245241 to Durand et al. (“*Durand*”) in view of Scott B. Guthery et al., *Mobile Application Development with SMS and the SIM Toolkit* (“*Guthery*”)	1-7

III. THE ’862 PATENT

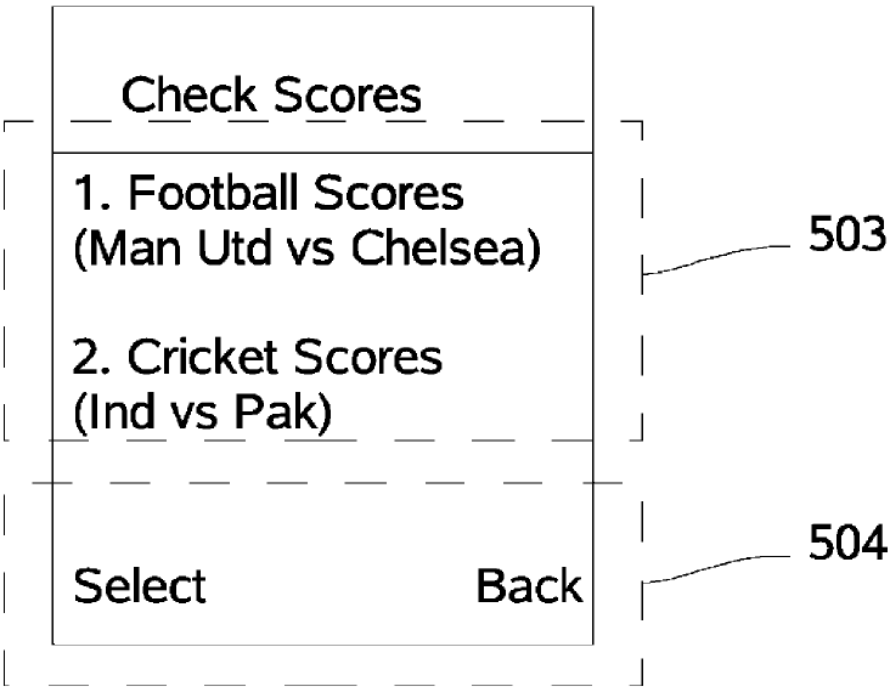
The ’862 patent indicates it was filed on April 12, 2007, claiming priority to IN Application No. 1378/CHE/2006, filed on August 3, 2006. EX1001, cover. There are seven claims, of which claims 1 and 7 are independent.

The disclosure is directed to a terminal station, e.g., a mobile phone, that contains meta information of available SMS-based services, a mobile number for an SMS gateway delivering the services, and parameters for each of the services. EX1001, 3:25-27, 4:28-33.[1] The terminal station lists the available services and allows a user to make a selection. *Id*., 2:50-55, 4:67-5:4. Fig. 5A (below) depicts a terminal station listing available services. *Id*., 4:66-67.

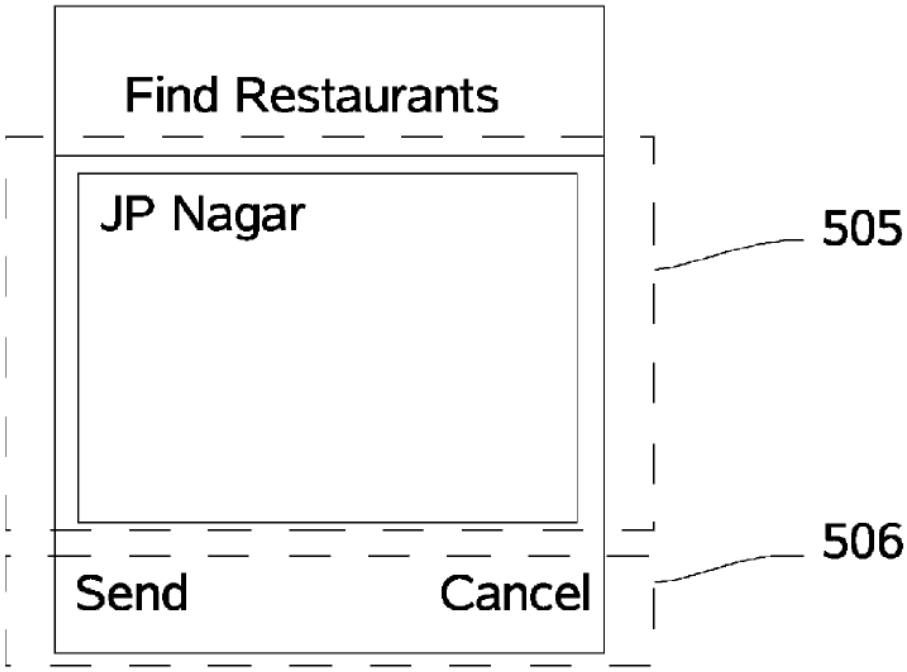


[1] SMS is a standardized text messaging service component widely available over wireless networks and used by billions of active users. EX1006, ¶ [12].

Upon selection, a network-aware application (NWA) displays the parameters for the selected service, where the user either selects or enters the parameters. *Id*., 4:36-39. For example, if the user selects "Check scores" from the service list, the NWA displays a list of scores, i.e., parameters, for the user to select. *Id*., 5:5-12. Fig. 5B (below) depicts the list of scores from which a user may select.



Additionally, if the user selects "Find restaurants" from the list of services, the NWA displays an interface allowing the user to type a parameter regarding the desired restaurant. *Id*., 5:20-25. Fig. 5C (below) depicts an example of this interface.



The terminal station then sends the request, including the specified service and parameters, as an SMS message to the SMS gateway. *Id*., 4:36-59, 5:5-45. The gateway decodes the request and hands the request to a central station, such as a server, which provides the application services. *Id*., 2:34-40, 4:40-42. The central station gets a response to the request and sends the response through the SMS gateway to the terminal station. *Id*., 3:46-60.

The encoding and sending of commands as an SMS message to the SMS gateway can be performed by middleware at the terminal station and the central station. *Id*., 3:44-60. The middleware at the terminal station also checks whether a message received at the terminal station is intended for an NWA and handles the message accordingly to either the NWA or an SMS module. *Id*., 3:25-40.

Independent claim 1 of the ’862 patent is exemplary:

[1.a] A method of enabling communication through SMS communication channel, comprising:

[1.b] listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station;

[1.c] upon selecting a service, a network aware application displaying associated parameters that a user needs to select or enter;

[1.d] upon user selection, submitting a request to the SMS gateway; and

[1.e] the SMS gateway responding back with a response,

[1.f] wherein the associated parameters include the parameters listed at the terminal station and the parameters desired by the user and not listed at the terminal station.

A. Prosecution History

In response to the Examiner’s first rejection of the claims, Applicant amended independent claim 1 to recite the following limitation:

wherein the associated parameters include the services listed at the

> terminal station and one or more other services not listed at the terminal station.

EX1002, 216. Applicant argued that the prior art:

> at best allows a user to select a parameter which is already embedded in the multi-level menu page. However, in contrast, the claimed subject matter enables a user to select and/or enter any parameter which may or may not be already embedded in the multi-level menu page.

Id., 219.

The Examiner again rejected the claims, *id*., 201-08, prompting Applicant to amend independent claim 1 to recite:

> wherein the associated parameters include the ~~services~~ parameters listed at the terminal station and the parameters desired by the user and ~~one or more other services~~ not listed at the terminal station.[2]

Id., 186. Applicant argued that the prior art lacked the ability to enter any parameter not already embedded in a multi-level menu page. *Id*., 189-91. The Examiner then allowed the claims, reasoning that the prior art did not disclose element [1.f]. *Id*., 164-66.

The Examiner, however, did not consider *Tumminaro*, *Durand*, and *Guthery*.

[2] Applicant mislabeled its amendments during prosecution, but Petitioner corrected the annotations to show the claim amendments. EX1002, 186, 216.

Unlike the Examiner's cited art, *Tumminaro* and *Durand* disclose the ability to enter unlisted parameters, which the Examiner found missing in the cited art.

B. The Level of Ordinary Skill in the Art

A person of ordinary skill in the art ("POSITA") for the '862 patent would have a Bachelor of Science in Electrical Engineering, Computer Science or a related subject and two or more years of experience working with digital telecommunications systems. EX1006, ¶ [23]. Less work experience may be compensated by a higher level of education, and vice versa. *Id.*

IV. CLAIM CONSTRUCTION

The broadest reasonable construction should be applied to all claim terms in the '862 patent and no explicit construction is needed for any claim term here.

V. GROUNDS

A. Overview of *Tumminaro*

Tumminaro, filed March 30, 2007, claims priority to provisional application nos. 60/744,013, filed on March 30, 2006, and 60/744,930, filed on April 15, 2006. EX1003, cover.

Tumminaro is prior art as of March 30, 2006 because the provisional application provide written description and enablement support for at least claim 1 of *Tumminaro*, as shown in the claim chart below. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015); *see also* EX1006,

¶ [36]. Accordingly, *Tumminaro* qualifies as prior art under pre-AIA § 102(e).

Claim Limitation	**Support from the Provisional Applications**
1. A method comprising:	Preamble
displaying a first screen on a display of a mobile phone to show a plurality of options comprising a first option to pay money to another and a second option to request balance information;	"This will bring the account holder to the main menu screen which displays a menu of the features of MCA including Pay, Balance, History, Request Pay, Refer or Invite, Add Money (i.e., Load), Settings, and Help." EX1004, ¶ [135].
upon a user selecting the first option, displaying a second screen where the user enters a target phone number to which to send payment;	"The account holder then selects the Pay option to send a payment. This will take the account holder to the Pay screen where the account holder will enter the telephone number to which they want to send their payment." EX1004, ¶ [136].
after the user enters the target phone number, displaying a third screen where the user enters a transaction amount;	"This will bring them to the amount screen where the account holder will enter the amount that they want to pay." EX1004, ¶ [138].
after the user enters the phone number, displaying a fourth screen where the user enters a PIN code; and	"Once the account holder selects OK they will be brought to the PIN screen where they will enter their PIN and select OK." EX1004, ¶ [140].

<table>
<tr><th>Claim Limitation</th><th>Support from the Provisional Applications</th></tr>
<tr><td>after the user enters the PIN code, wirelessly sending transaction information comprising the target phone number, transaction amount, and PIN code to a server for processing.</td><td>“To send a payment to another person or a merchant using the SMS method, the account holder would enter the command string shown in Table 1.”
<table>
<tr><td>Keyword</td><td>PIN</td><td>Target mobile #</td><td>Amount</td><td>Messages (optional)</td></tr>
<tr><td>pay</td><td>###</td><td>##########</td><td>#.##</td><td>Abcd</td></tr>
</table>
EX1004, ¶¶ [79]-[80].

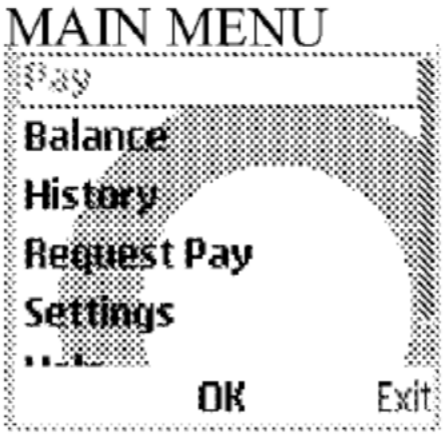
“(6) Once the account holder selects OK they will be brought to the PIN screen where they will enter their PIN and select OK. When entering the PIN, the alphanumeric characters do not appear on the screen but rather a pseudo-character is displayed instead. Also, the PIN cannot be found in a message log or other logs on the mobile device. If another person were to have access to the mobile device, they would not be able to determine the PIN.” EX1004, ¶ [140].

“By way of illustration, if an account holder associated with mobile device 2501 initiates a transfer to mobile device 2502, the pay request is transferred to server platform 2503 as indicated by reference arrow 2504.” EX1004, ¶ [599].

“Specifically, when a payment is made from a mobile device 2801 to another mobile device 2801, the request for the transfer is passed to the payment server 2803.” EX1004, ¶ [628].transfer is passed to the payment server 2803.” EX1004, ¶ [628].</td></tr>
</table>

Tumminaro discloses a mobile client application (MCA) on a mobile phone and interfaces with a mobile payment platform via SMS messaging. EX1003,

¶¶ [0188], [0204]. The MCA provides various services, including "Pay, Balance, History, Request Pay, Refer or Invite, Add Money (i.e., Load), Settings, [and] Help," which it displays in a main menu, as illustrated in Fig. 81 (below). *Id*., ¶¶ [0701]-[0703].



For example, a Request Pay transaction allows a user to request money from another account holder. *Id*., ¶ [0765].

B. Ground 1: *Tumminaro* Renders Obvious Claims 1 and 7

1. Claim 1

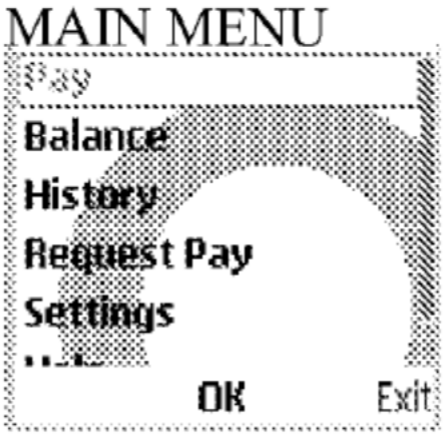
a. Preamble [1.Pre]

To the extent the preamble is deemed limiting, *Tumminaro* discloses the recited "[a] method of enabling communication through SMS communication channel" because it discloses using "SMS text messaging to provide account holders access to the payment server from any SMS capable mobile phone or other SMS-enabled device." EX1003, ¶ [0204]; EX1004, ¶ [77].

b. Element [1.a]

Tumminaro discloses the claimed "listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station" because it discloses a mobile client application (MCA) residing on a cell phone (claimed "terminal station") displaying "a menu of the features of MCA including Pay, Balance, History, Request Pay, Refer or Invite, Add Money, Settings and Help" (claimed "listing all services at a terminal station") upon starting the MCA. EX1003, ¶¶ [0460], [0701], [0736]; EX1004, ¶¶ [135], [168]. Indeed, the '862 patent's NWA on a mobile device "is bundled with a meta information of available SMS based services" and, "when opened, lists all the services that are available with a SMS gateway according to the meta information." EX1001, 2:46-52. *Tumminaro* discloses the same configuration.

Tumminaro discloses that the MCA "only requires account holders to have a mobile phone number and the prepaid debit account" and "[o]nce the mobile client application is installed, the account holder can begin using the mobile phone for concluding financial transactions." EX1003, ¶¶ [0118]; EX1004, ¶ [53]. Fig. 81 (below) depicts a sample main menu screen listing the available services at the terminal station.



EX1003, Fig. 81; EX1004, [p. 103 of PDF]. As Dr. Shamos explains, the data representing the available services as shown in the Main Menu above is incorporated in the mobile client application and will reside in the terminal station once the mobile client application is installed on the terminal station. EX1006, ¶ [48]. Thus, a POSITA would have understood this to constitute the claimed "meta information available at the terminal station."

Tumminaro discloses "services … available with an SMS gateway" because Fig. 64 (below) discloses a system that includes gateways to receive and send SMS messages. EX1003, ¶ [0541]; EX1004, ¶ [342]. The SMS message sent to the SMS gateway includes a keyword that identifies which of the listed services the user selected, meaning the listed services are "available with an SMS gateway." EX1003, ¶ [0568]; EX1004, ¶ [75].

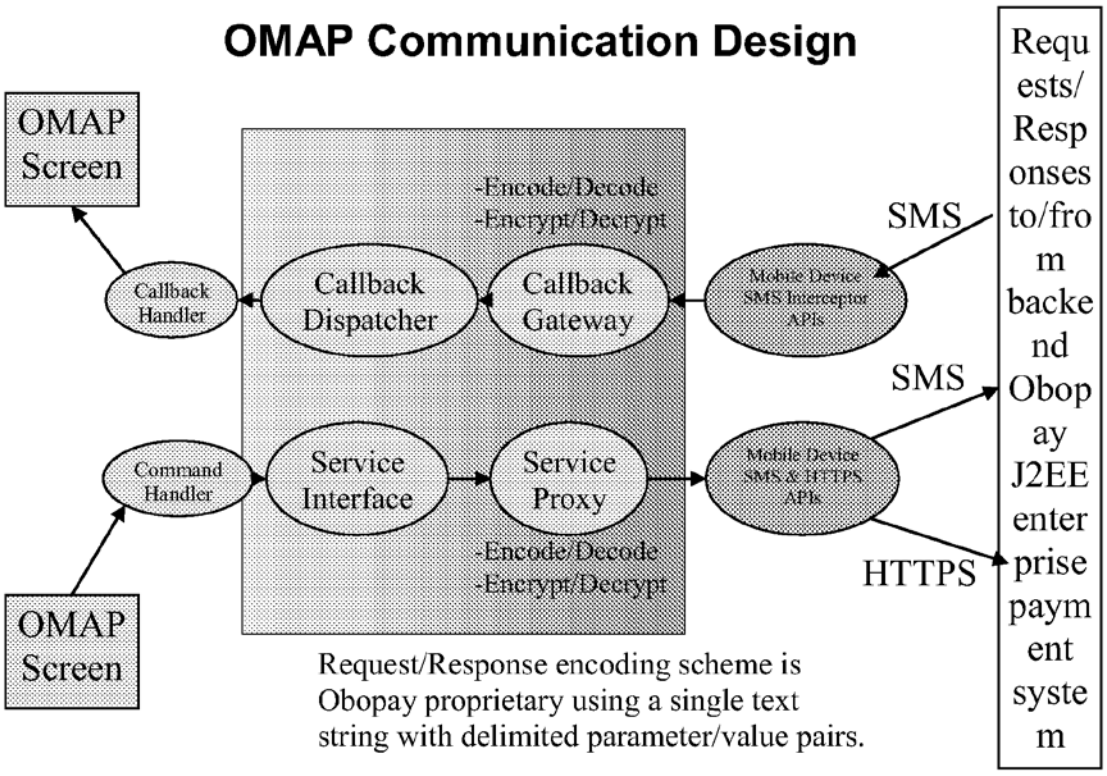


Fig. 64

Moreover, it would have been an obvious design choice to a POSITA to include an SMS gateway in a communication system because the usage of a gateway to facilitate message exchange is well-known in the art before August 3, 2006. EX1006, ¶ [50]; For example, the ’930 application filed on April 15, 2006, to which *Tumminaro* claims priority, discloses that “the account holder transmits an SMS message over SMS gateway 1002 to server 1004 to initiate a transaction from their cell phone 1006 as indicated by flow arrow 101.” EX1005, ¶ [125], Fig. 48 (reproduced below).

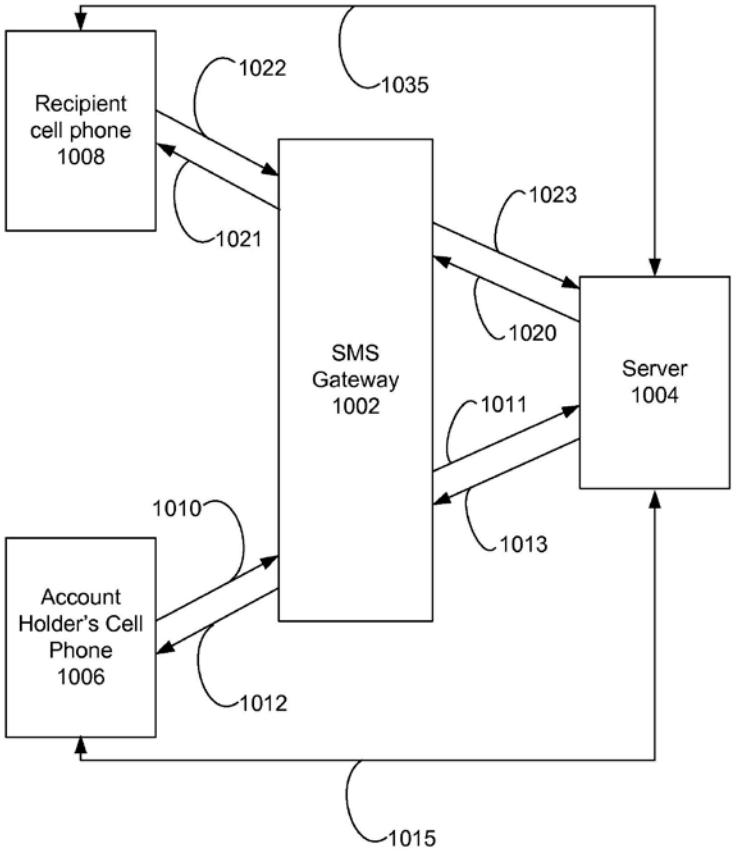


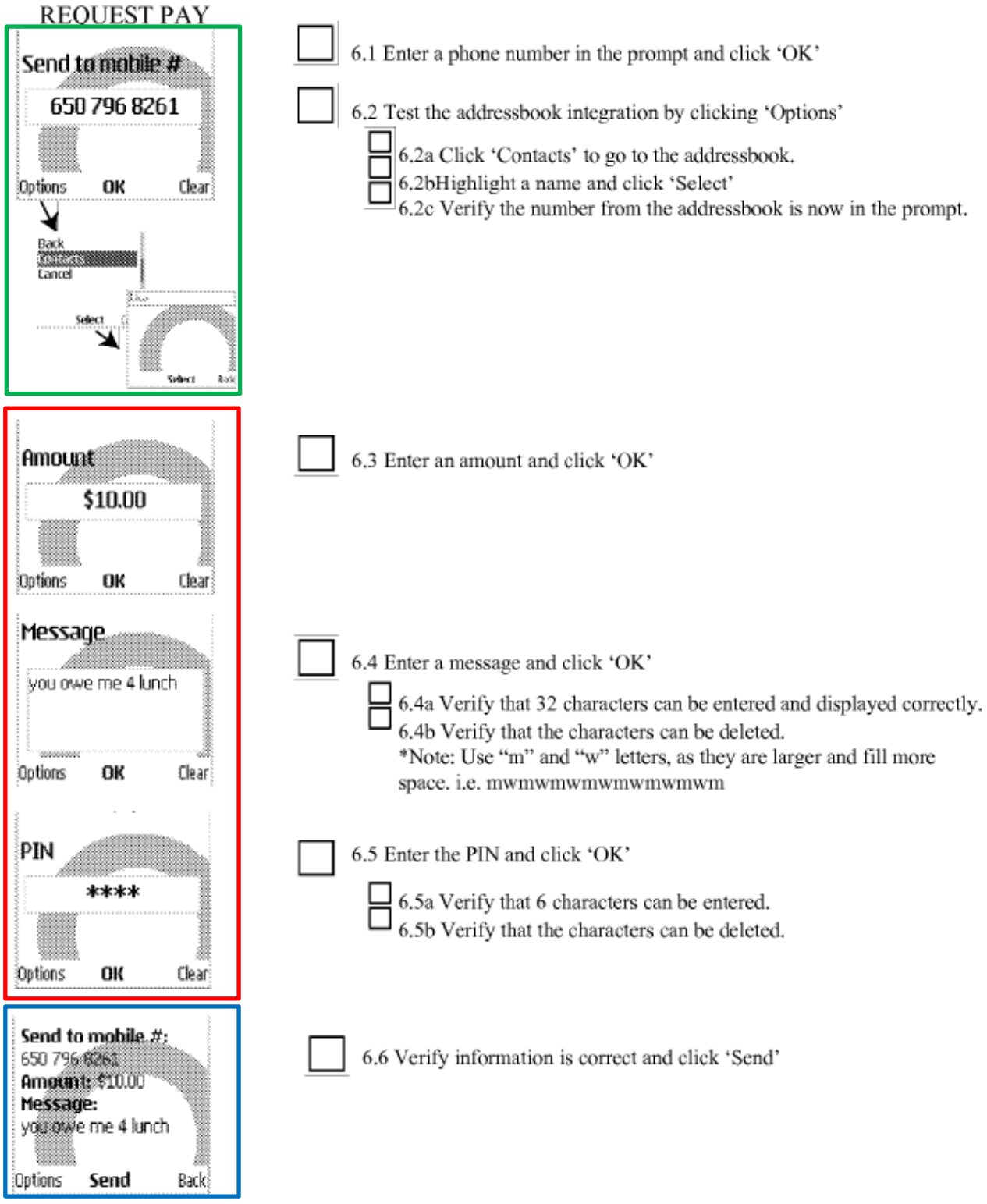
Figure 10

c. Element [1.c]

Tumminaro discloses the claimed "upon selecting a service, a network aware application displaying associated parameters that a user needs to select or enter" because it discloses the MCA providing "a user interface (UI) on the display screen of the mobile device to guide the account holder for concluding the financial transaction." EX1003, ¶ [0568]; EX1004, ¶ [75]. Depending on the service selected, the MCA guides the user "through the process of constructing the SMS

text message by the automatic insertion of the keyword, amount, target telephone number, password, and messages, if any." *Id*. That is, *Tumminaro* discloses displaying parameters associated with the service.

Tumminaro provides the series of steps to initiate a transaction for each of the listed available services using the MCA (claimed "network aware application"). For example, to initiate a "Request Pay" transaction, the user selects "Request Pay" from the main menu (claimed "upon selecting a service"). EX1003, ¶¶ [0737], [0766]; EX1004, ¶¶ [169], [198]. The MCA then prompts the user using a series of screens for input on the requested payer's phone number, the payment amount, a message to accompany the payment request, and the user's PIN (claimed "displaying associated parameters"). EX1003, ¶¶ [0738]-[0740], [0766]-[0768]; EX1004, ¶¶ [170]-[173], [198]-[200]. The user may select the requested payer's phone number from the phone's address book (claimed "associated parameters that a user needs to select"), (EX1003, ¶¶ [0738], [0766]; EX1004, ¶¶ [170], [198]), and enter the payment amount, the message, and the PIN using the phone's keypad (claimed "associated parameters that a user needs to . . . enter"), (EX1003, ¶¶ [0739]-[0740], [0767]-[0768]; EX1004, ¶¶ [138]-[140], [199]-[200]). Fig. 84 (annotated) of *Tumminaro* depicts the series of screens displaying the associated parameters that a user needs to select or enter.



☐ 6.1 Enter a phone number in the prompt and click 'OK'

☐ 6.2 Test the addressbook integration by clicking 'Options'

- ☐ 6.2a Click 'Contacts' to go to the addressbook.
- ☐ 6.2bHighlight a name and click 'Select'
- 6.2c Verify the number from the addressbook is now in the prompt.

☐ 6.3 Enter an amount and click 'OK'

☐ 6.4 Enter a message and click 'OK'

- ☐ 6.4a Verify that 32 characters can be entered and displayed correctly.
- ☐ 6.4b Verify that the characters can be deleted.

*Note: Use "m" and "w" letters, as they are larger and fill more space. i.e. mwmwmwmwmwmwmwm

☐ 6.5 Enter the PIN and click 'OK'

- ☐ 6.5a Verify that 6 characters can be entered.
- ☐ 6.5b Verify that the characters can be deleted.

☐ 6.6 Verify information is correct and click 'Send'

EX1003, Fig. 84; EX1004, [p. 106 of PDF].

d. Element [1.d]

Tumminaro discloses the claimed "upon user selection, submitting a request to the SMS gateway" because it discloses that "if an account holder associated with mobile device 401 initiates a transfer to mobile device 402, the pay request is transferred to server platform 403 as indicated by reference arrow 404," as depicted in Fig. 4 (below). EX1003, ¶ [0233]; EX1004, ¶ [599].

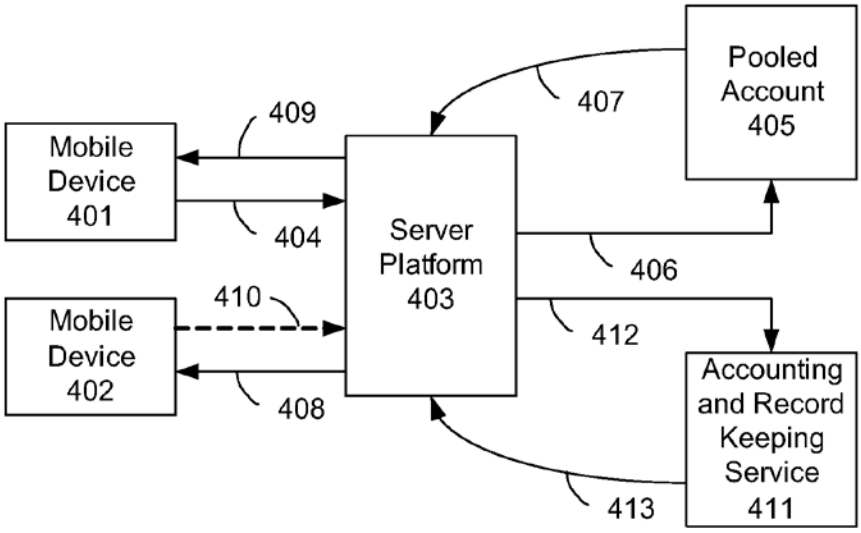


Fig. 4

EX1003, Fig. 4; EX1004, Fig. 25.

The SMS message sent to server platform 403 is a "request," as claimed, where the MCA constructs the SMS message automatically based on the user inputs discussed *supra* Section V.B.1.c (claimed "upon user selection"). EX1003, ¶ [0568]; EX1004, ¶ [75]. *Tumminaro* in Table C depicts a sample command string representing a pay command sent as an SMS message:

TABLE C

Keyword	PIN	Target mobile #	Amount	Messages (optional)
pay	###	##########	#.##	Abcd

EX1003, ¶¶ [0559]-[0560]; EX1004, ¶¶ [79]-[80]. The command string is part of "Transaction Requests to the Server." EX1003, ¶ [0185]; EX1004, ¶ [64]. For example, "[w]hen a request for payment is made to an account holder" via the server, the account holder "may either accept or decline the request using the manual SMS text messaging system." EX1003, ¶ [0204]; EX1004, ¶ [85].

Tumminaro also discloses that "the account holder sends a text message to the payment server" to initiate a "Request Pay" or "Balance" inquiry. EX1003, ¶ [0558]; EX1004, ¶ [78]. Accordingly, "[t]he account holder enters the keyword together with additional information in the body of the text message to construct a command that is then sent to the server." *Id*. It discloses that "[a]ccess to the server may be by way of a toll free telephone number, a short code or an e-mail address,

all of which identify the server to" the SMS text messaging system. *Id*. Indeed, as discussed *supra* Section V.B.1.c it would have been an obvious design choice to a POSITA to include an SMS gateway in the SMS text messaging system to facilitate message exchange between a mobile station and a server, and the gateway can be assigned a telephone number, a short code or an e-mail address. Thus, it would have been an obvious design choice to a POSITA to allow the MCA first submits the request for service to an SMS gateway, which then relays the request to the server based on identification information of the server contained in the request.

e. Element [1.e]

Tumminaro discloses the claimed "the SMS gateway responding back with a response" because it discloses that server platform 403 sends reply SMS message (claimed "response") to mobile phone 401 (claimed "responding back"). EX1003, ¶ [0235]; EX1004, ¶ [601]. For example, after initiating a request pay transaction, the user of mobile phone 401 receives a reply message displaying the details of the transaction. EX1003, ¶¶ [0774]-[0780]; EX1004, ¶¶ [214]-[219].

The user requesting payment also "will receive a notification regarding whether their payment request was accepted or declined." EX1003, ¶ [0799]; EX1004, ¶ [231]. The user may also receive a notification if a problem with the payment, such as insufficient funds, arises. EX1003, ¶ [0741]; EX1004, ¶ [173].

Additionally, if the user of mobile phone 401 initiates a payment to the user of mobile phone 402, a financial institution handles the requested transaction by debiting the account associated with the user of cell phone 401 and sends a confirmation via server platform 403 to cell phone 401. EX1003, ¶ [0234]; EX1004, ¶ [600].

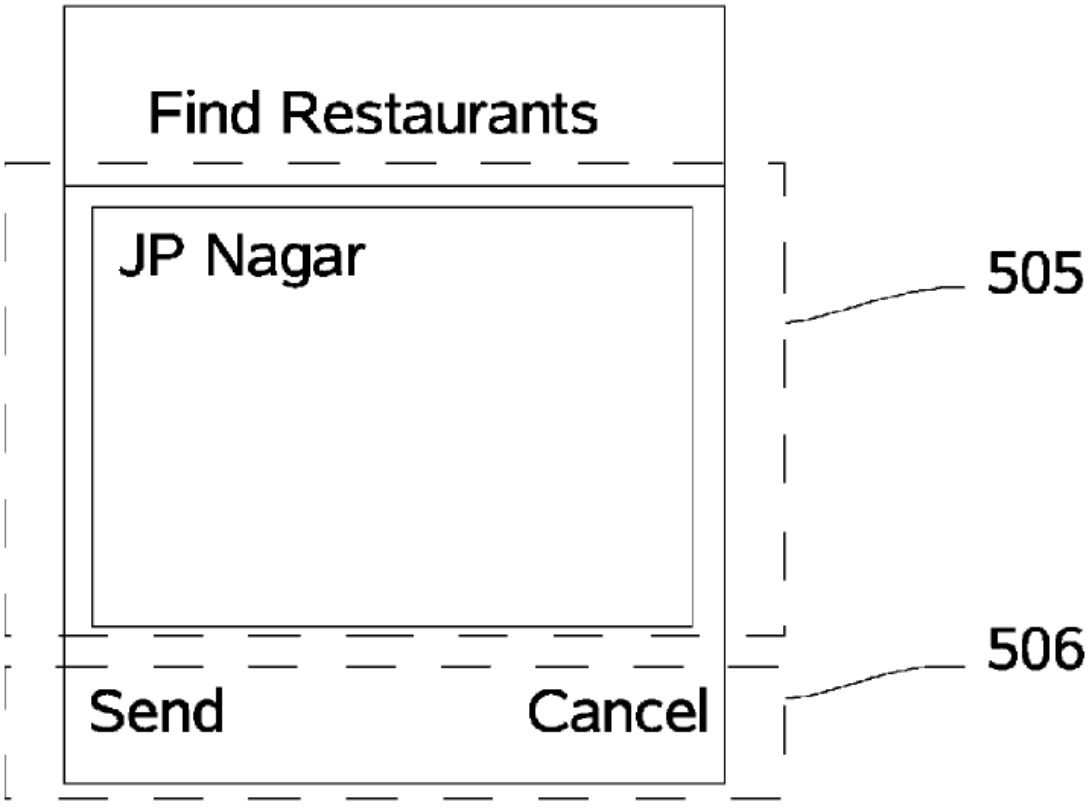
Moreover, as discussed *supra* Section V.B.1.c it would have been an obvious design choice to a POSITA to include an SMS gateway in the SMS text messaging system to facilitate message exchange between a mobile station and a server. Thus, it would have been an obvious design choice to use an SMS gateway to replay a reply SMS message sent from server platform 403 to mobile phone 401.

f. Element [1.f]

Tumminaro discloses the claimed "wherein the associated parameters include the parameters listed at the terminal station and the parameters desired by the user and not listed at the terminal station" because it discloses, for example, associated parameters for a request pay transaction, including the requested payer's phone number, the payment amount, a message to accompany the payment request, and the user's PIN (claimed "associated parameters"). *Supra* Section V.B.1.c; EX1003, ¶¶ [0738]-[0740], [0766]-[0768]; EX1004, ¶¶ [170]-[173], [198]-[200].

As discussed *supra* Section III.A, Fig. 5C (below) of the '862 patent depicts an example of the user selects "Find restaurants" from the list of services and

"types further details regarding the restaurant he wishes to find." EX1001, 5:20-25. The SMS message subsequently sent from the user's mobile phone is "76548, 00056765, Find Restaurant, 'J P Nagar'", in which "'Find Restaurant' is the option selected by the user" (i.e., the claimed "parameters listed at the terminal station") and "'J P Nagar' is the text entered by the user indicating the location" (the claimed "parameters desired by the user and not listed at the terminal station"). *Id*., 5:29-32.

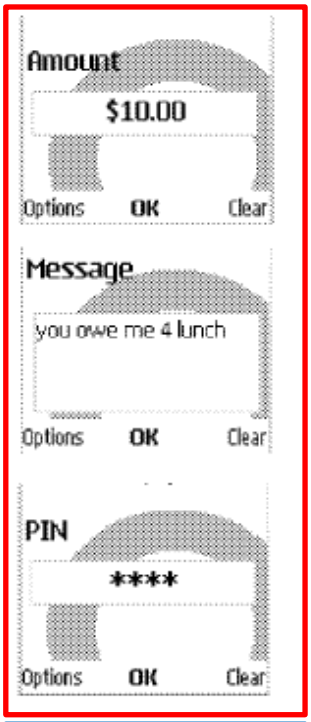


Tumminaro discloses the same features. Referring to Fig. 84 (annotated) below, the MCA may "programmatically integrate with the 'address book' of the mobile device such that a specific entry field can be 'linked' to the address book."

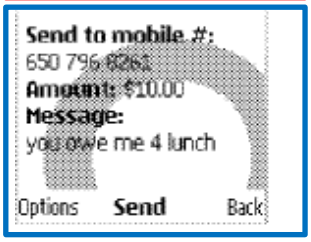
EX1003, ¶ [0879]; EX1004, ¶ [339]. Thus, when the user selects the requested payer's phone number from the phone's address book, the contacts included in the phone's address book are "parameters listed at the terminal station," as claimed. EX1003, ¶¶ [0738], [0766], [879]; EX1004, ¶¶ [170], [198], [339].

Whereas when the user enters the payment amount, the message, and the PIN using the phone's keypad, the entered values, like the restaurant name typed by the user in *Tumminaro*, are "parameters desired by the user and not listed at the terminal station," as claimed. EX1003, ¶¶ [0739]-[0740], [0767]-[0768]; EX1004, ¶¶ [138]-[140], [199]-[200].

- [ ] 6.1 Enter a phone number in the prompt and click 'OK'
- [ ] 6.2 Test the addressbook integration by clicking 'Options'
  - [ ] 6.2a Click 'Contacts' to go to the addressbook.
  - [ ] 6.2bHighlight a name and click 'Select'
  - [ ] 6.2c Verify the number from the addressbook is now in the prompt.



- [ ] 6.3 Enter an amount and click 'OK'
- [ ] 6.4 Enter a message and click 'OK'
  - [ ] 6.4a Verify that 32 characters can be entered and displayed correctly.
  - [ ] 6.4b Verify that the characters can be deleted.
  *Note: Use "m" and "w" letters, as they are larger and fill more space. i.e. mwmwmwmwmwmwmwm
- [ ] 6.5 Enter the PIN and click 'OK'
  - [ ] 6.5a Verify that 6 characters can be entered.
  - [ ] 6.5b Verify that the characters can be deleted.



- [ ] 6.6 Verify information is correct and click 'Send'

2. Claim 7

a. Element [7.a]

Tumminaro discloses the claimed "[a] method of enabling communication

through SMS communication channel" for the reasons discussed *supra* Section V.B.1.a.

b. Element [7.b]

Tumminaro discloses the claimed "listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station" for the reasons discussed *supra* Section V.B.1.b.

c. Element [7.c]

Tumminaro discloses the claimed "upon selecting a service, a network aware application configured to allow a user to type in a desired parameter" because it discloses element [1.c], discussed *supra* Section V.B.1.c, and element [7.c] is broader than element [1.c].

Tumminaro provides the series of steps to initiate a transaction for each of the listed available services using the MCA (claimed "network aware application"). For example, to initiate a "Request Pay" transaction, the user selects "Request Pay" from the main menu to request a payment (claimed "upon selecting a service"). EX1003, ¶¶ [0737], [0766]; EX1004, ¶¶ [169], [198]. The MCA then prompts the user using a series of screens to receive user input (claimed "configured to allow a user to type") for the requested payor's phone number, the payment amount, a message to accompany the payment request, and the user's PIN (claimed "a desired parameter"). EX1003, ¶¶ [0738]-[0740], [0766]-[0768];

EX1004, ¶¶ [170]-[173], [198]-[200]. The user may enter the payment amount, the message, and the PIN using the phone's keypad (claimed "configured to allow a user to type"). EX1003, ¶¶ [0739]-[0740]. [0767]-[0768]; EX1004, ¶ [138]-[140], [199]-[200].

d. Element [7.d]

Tumminaro discloses the claimed "upon user entering the desired parameter, submitting a request to the SMS gateway" for the reasons discussed *supra* Section V.B.1.d.

e. Element [7.e]

Tumminaro discloses the claimed "the SMS gateway responding back with a response" for the same reasons discussed *supra* Section V.B.1.e.

f. Element [7.f]

Tumminaro discloses the claimed "wherein the desired parameter is not listed at the terminal station" because it discloses element [1.f], discussed *supra* Section V.B.1.f, and element [7.f] is broader than element [1.f]. For example, when the user enters the payment amount, the message, and the PIN using the phone's keypad, each value entered corresponds to "the desired parameter [that] is not listed at the terminal station," as claimed. EX1003, ¶¶ [0739]-[0740], [0767]-[0768]; EX1004, ¶¶ [138]-[140], [199]-[200].

C. Overview of *Durand*

Durand was filed on April 28, 2005, published on November 3, 2005, claiming priority to provisional application no. 60/566,016. EX1007, cover page. Accordingly, *Durand* qualifies as prior art under pre-AIA §§ 102(a) and (e).

Durand discloses a client-side content delivery application (CDA client) residing on a mobile station such as a cellular telephone. EX1007, ¶ [0012]. "The CDA client facilitates retrieval of content such as directory assistance data associated with one or more merchant providers of goods and services that are of interest to the user." *Id*.

D. Overview of *Guthery*

Guthery is a printed publication indexed at the Library of Congress on January 8, 2002, and therefore publicly available in January 2002 or shortly thereafter in a matter of within a few days or weeks. EX1014. Accordingly, *Guthery* qualifies as prior art under pre-AIA § 102(b). *Guthery* was not cited in the prosecution history of the '862 patent.

Guthery discloses various technical information for the creation of mobile applications that utilizes SMS communication. EX1008. It includes general tutorials on programming as well as specific examples of different applications utilizing SMS communication. *Id*.

E. Ground 2: *Durand* in view of *Guthery* renders obvious claims 1-7

1. Claim 1

a. Preamble [1.Pre]

To the extent the preamble is limiting, *Durand* discloses "[a] method of enabling communication through SMS communication channel" because it discloses communicating search criteria "via any suitable wireless voice or data communications protocol, including but not limited to SMS . . . ." EX1007, ¶ [0018].

b. Element [1.b]

The combination of *Durand* and *Guthery* renders obvious the claimed "listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station" because *Durand* discloses "services at a terminal station" and *Guthery* discloses "listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station," and combining these disclosures would have been obvious to a POSITA. The claimed "meta information" is the data representing the available services listed in the menu of *Guthery*.

Durand discloses "services at a terminal station" because *Durand* discloses a user accessing a client-side content delivery application (CDA client) residing on or otherwise controlled by "a mobile station such as a cellular telephone" (claimed

"terminal station"). EX1007, ¶ [0012]. "The CDA client facilitates retrieval of content such as directory assistance data associated with one or more merchant providers of goods and services that are of interest to the user." *Id*.

The mobile station "includes a graphical user interface (GUI)," and "the user's interaction with the GUI" launches the CDA client. EX1007, ¶ [0013]. "To generate a search query, the user of a mobile station accesses a GUI provided by the CDA client 145, and enters keywords and other parameters that identify the type of content that the user wishes to receive." EX1007, ¶ [0072]. "Examples of keywords include words or phrases that identify a particular merchant or other entity by name (e.g., "Pizza Joes"), a merchant type (e.g., "restaurant" or "movie theater"), or a product or service (e.g., "pizza" or "shoe repair")." EX1007, ¶ [0072]. These keywords correspond to the "services" discussed in the '862 patent and claimed. For example, *Durand* discloses that the keywords include a merchant type, such as "restaurant" (EX1007, ¶ [0072]), and the '862 patent discloses "Find Restaurants" as an example of a service (EX1001, 5:20-25, Fig. 5A).

It would have been obvious to list these services of *Durand* in a main menu of the CDA client (claimed "listing all services at a terminal station . . . according to meta information available at the terminal station"). EX1006, ¶ [88]. For example, *Guthery* discloses an application called Gismo, which "was based on a combination of pushing SMS messages to the user handset with a predetermined

menu of services loaded onto the SIM via the SAT" (claimed "listing all services at a terminal station . . . according to meta information available at the terminal station"). EX1008, 200-03. The claimed "meta information" is the data representing the available services listed in the menu. EX1008, 200-03; EX1006, ¶ [88]. "Users could select from this menu to activate particular services or to pull information from the Gismo portal through a query function." *Id*., Fig. 11-1 of *Guthery* depicts examples of available services on Gismo. EX1008, 201, Fig. 11-1. The phone downloads the available services via the SMS channel from a Wireless Internet Gateway. (claimed "services . . . available with an SMS gateway"). EX1008, 205-06, 186.

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008. Indeed, a POSITA implementing the SMS-based mobile application (i.e., the CDA client) in *Durand* would have been motivated to consult *Guthery* for various technical information for the creation of mobile applications that utilizes SMS communication.

Second, a POSITA would have been motivated to make this combination to provide a main menu listing the types of search queries "available with an SMS

gateway according to meta information available at the terminal station," as claimed, using the GUI of the CDA client, at least because *Guthery* expressly discloses that it allows customers to add "any new applications they want from the Sonofon portal over the air (OTA) onto their existing SIM. This capability encourages subscribers to sample new services and motivates content providers to keep upgrading their services." EX1008, 204; EX1006, ¶ [91].

Third, implementing these features from a textbook would have been not only predictable but also expected because there would be no point in offering services at a terminal if the user were unable to find them from a listing. EX1006, ¶ [92].

Thus, a POSITA would have the teachings of *Durand* and *Guthery* to provide a directory of all available services. *Id*., ¶ [93].

c. Element [1.c]

The combination of *Durand* and *Guthery* renders obvious the claimed "upon selecting a service, a network aware application displaying associated parameters that a user needs to select or enter" because *Durand* discloses "a network aware application displaying associated parameters that a user needs to select or enter" and *Guthery* discloses "upon selecting a service," and combining these disclosures would have been obvious to a POSITA.

Durand discloses a "network aware application" because it discloses a CDA

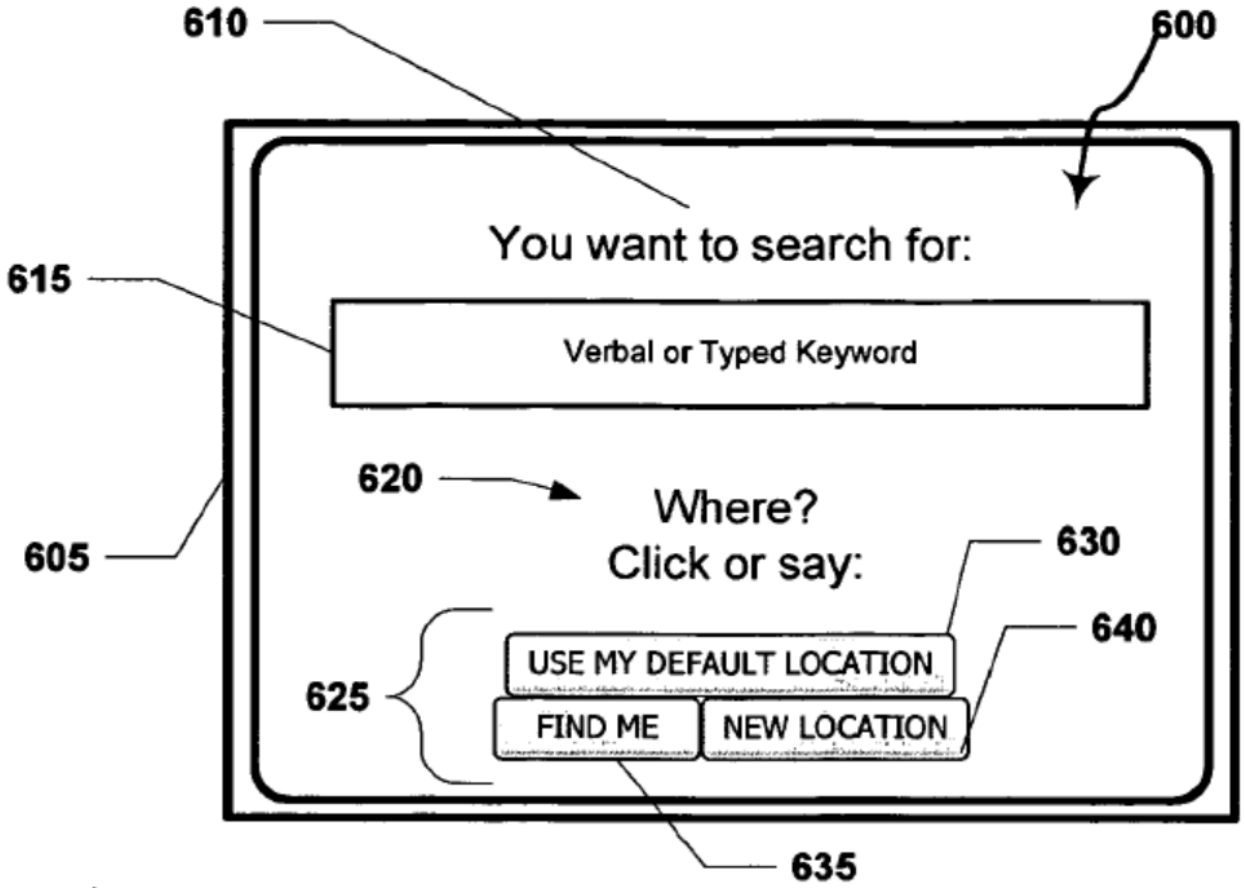
client containing a GUI that displays options and receives user inputs via primary user interface, such as a keypad or tough screen. EX1007, ¶ [0013].

Durand does not explicitly disclose that it does so "upon selecting a service," but it would have been obvious for the CDA client to list the available services at the terminal station, *supra* Section V.E.1.b, and it further would have been obvious—and is strongly implied—to provide a user with the capability to select one of the listed services using the primary user interface (claimed "upon selecting a service") and, upon selecting the service, displaying the interface associated with that service. EX1006, ¶ [96]. Otherwise, the user would have no way of using the service. *Id*. For example, *Guthery* discloses a main menu providing the user with several options and the user selecting one of the options. EX1008, 180-81, 186-87, 200.

Durand discloses the claimed "displaying associated parameters that a user needs to select or enter" because it discloses, upon launch of the CDA client, displaying an interface for a user to enter or select parameters for the search query. EX1007, ¶¶ [0103], [0110]. *Durand* discloses the following parameters as examples: "the user's current or target location (e.g., ZIP code, city/county/state; cross streets; landmarks (e.g., airports, hotels, highway access points, and area codes); category of goods or services desired; merchant name; merchant status (e.g., search only merchants offering special deals or search only stores that are

currently open); and any other information that will limit the response to the search query to useful, practical, and desirable results." EX1007, ¶¶ [0017], [0072] ("Additional parameters include location identifiers, business hours, and merchant status (e.g., "open now" or "open 24 hours").").

The parameters can be manually entered (claimed "associated parameters that a user needs to . . . enter") or selected when the parameter is saved, such as with a default location (claimed "associated parameters that a user needs to select"). EX1007, ¶¶ [0017], [0110]. For example, in operation, the user could select the keyword "restaurants" from the main menu (claimed "upon selecting a service"), which would launch the search query interface. EX1007, ¶ [0072]; EX1006, ¶ [98]. Fig. 6 of *Durand* depicts an example of this interface, except the CDA client would automatically populate the keyword based on the selection from the main menu. EX1007, ¶ [0072], Fig. 6; EX1006, ¶ [99].



The interface includes "a visual or audible prompt 610 that directs the user to enter a search query which includes parameters that are displayed in field 615 as the parameters are entered manually or verbally." EX1007, ¶ [0108]. The user could, for example, type "pizza" into field 615 and select "use my default location" from field 625 (claimed "displaying associated parameters that a user needs to select or enter"). EX1007, ¶¶ [0075], [0108], Fig. 6; EX1006, ¶ [99].

d. Element [1.d]

Durand discloses or renders obvious the claimed "upon user selection, submitting a request to the SMS gateway" because it discloses that "[t]he

parameters are passed to the CDA client 145, which then formulates the search query, and generates the request for content. As an example, the user enters the following parameters—PRODUCT="pizza" and GEOGRAPHIC TARGET="home", preferably in predefined fields that are displayed" (claimed "upon user selection" and "a request"). EX1007, ¶ [0075]. "Once the search query has been formulated, the CDA client, either proactively or in response to additional user commands, issues the request by sending it over the access network 110 to the content server 125" (claimed submitting a request"). EX1007, ¶ [0076]. "The request can be transmitted via any suitable text messaging protocol, examples of which include . . . SMS . . . . EX1007, ¶ [0077].

Durand discloses sending the request "to the SMS gateway," as claimed. The access network 110 includes a text transport system 120 with an SMS gateway mobile services switching center (SMS-GMSC) 255 (claimed SMS gateway"). EX1007, ¶¶ [0079], [0082], Figs. 1-2. From this disclosure in *Durand*, a POSITA would have understood that when the mobile phone transmits the request as an SMS message, the request is sent to an SMS gateway, such as SMS-GMSC 255 (claimed "submitting a request to the SMS gateway"). EX1006, ¶ [101]. For example, *Guthery* discloses sending user requests as an SMS message from a mobile phone to a Wireless Internet Gateway (WIG). EX1008, 180-188.

e. Element [1.e]

Durand renders obvious the claimed "the SMS gateway responding back with a response" because *Durand* discloses "responding back with a response" and discloses an "SMS gateway," and it would have been obvious to send the response back as an SMS message through the SMS gateway.

Durand discloses "responding back with a response" because it discloses "[t]he request for content triggers a series of interactions" that "involve providing an initial response to the request for content (i.e., the list of hits that identifies content that corresponds to the search query) . . . . EX1007, ¶¶ [0088], [0090]. "The interactions take place using the Internet as the data network 130, and a GSM network as the access network 110." EX1007, ¶ [0088].

Durand discloses sending the response in MMS format. As discussed *supra* Section V.E.1.d, *Durand* discloses sending a request as an SMS message to an SMS gateway in a text transport system 120. It would have been obvious to a POSITA to similarly send the initial response to the request for content to the mobile station through SMS gateway in the text transport system 120 because *Durand* discloses that utilizing the text transport system 120 "optimize[s] the efficient use of the access network 110." EX1007, ¶ [0077]; EX1006, ¶ [104]. Indeed, *Durand* discloses such an embodiment, as it discloses providing a hit list to a search query to phones without multimedia capabilities as "one or more text

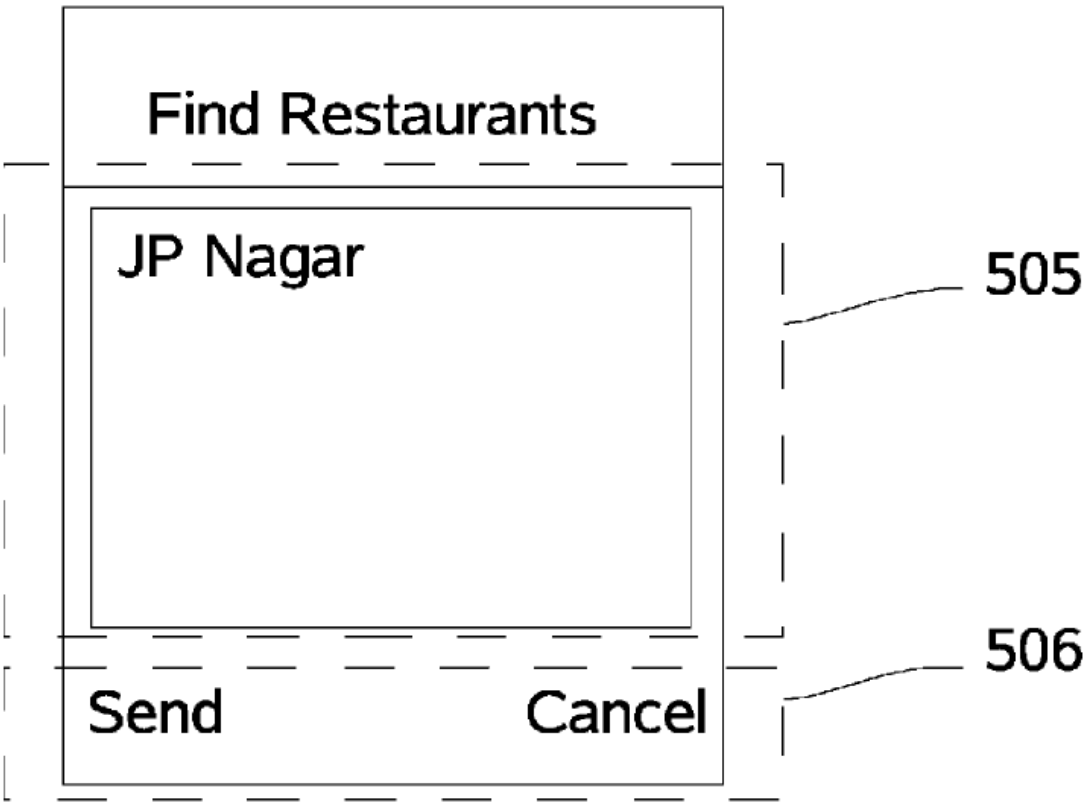
messages, each message corresponding to a particular merchant." EX1007, ¶ [0045].

f. Element [1.f]

Durand discloses the claimed "wherein the associated parameters include the parameters listed at the terminal station and the parameters desired by the user and not listed at the terminal station" because it discloses, for example, the following non-exclusive parameters: "the user's current or target location (e.g., ZIP code, city/county/state; cross streets; landmarks (e.g., airports, hotels, highway access points, and area codes); category of goods or services desired; merchant name; merchant status (e.g., search only merchants offering special deals or search only stores that are currently open); and any other information that will limit the response to the search query to useful, practical, and desirable results." EX1007, ¶ [0017]. These parameters can be manually entered (claimed "the parameters desired by the user and not listed at the terminal station") or selected when the parameter is saved, such as with a default location (claimed "the parameters listed at the terminal station"). EX1007, ¶¶ [0017], [0110].

This reading of the claim is consistent with the example provided in the specification. For example, as discussed *supra* Section III.A, Fig. 5C (below) of the '862 patent depicts an example of the user selects "Find restaurants" from the list of services and "types further details regarding the restaurant he wishes to

find," in which "'Find Restaurant' is the option selected by the user" (i.e., the claimed "parameters listed at the terminal station") and "'J P Nagar' is the text entered by the user indicating the location" (the claimed "parameters desired by the user and not listed at the terminal station"). EX1001, 5:20-32. Like "Find Restaurant," the selected parameters in *Durand* the claimed "parameters listed at the terminal station." Moreover, like "J P Nagar," the manually entered parameters in *Durand* are the claimed "parameters desired by the user and not listed at the terminal station."

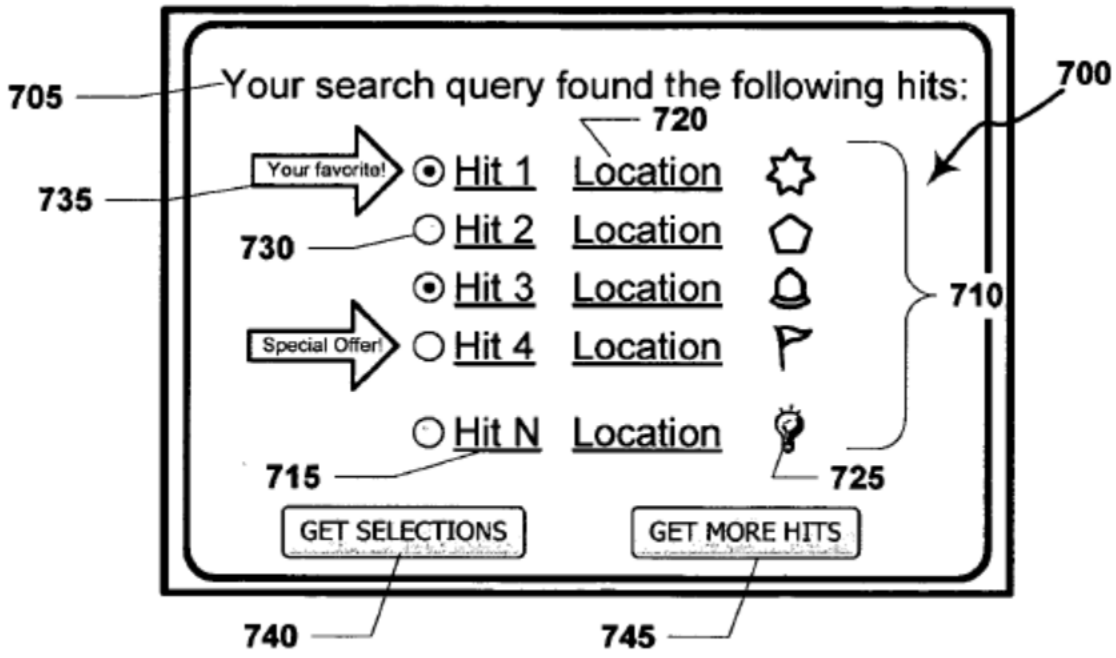


2. Claim 2

a. Element [2.a]

Durand renders obvious the claimed "receiving a message with a question and a set of options to be chosen at the terminal station" because *Durand* discloses "receiving a message with . . . set of options to be chosen at the terminal station," and it would have been obvious to include a question with the set of options and to send the message as an SMS message, as discussed *supra* Section V.E.1.e.

Durand discloses delivering to the mobile station a list of hits (claimed "receiving a message") that "identifies decks that meet the criteria specified by the search query." EX1007, ¶ [0090]. "The list of hits is interactive in that the user of the mobile station 105 can craft a pick query by selecting one or more items from the list of hits, where each selection identifies a deck that the user wants to download to the mobile station." EX1007, ¶ [0091]. Fig. 7 depicts the CDA client interface when receiving the list of hits.



EX1007, Fig. 7.

To the extent a list of hits is not "a question and a set of options to be chosen at the terminal station," as claimed, it would have been an obvious design choice to a POSITA to so modify the list of hits to incorporate such a challenge, which was conventional at the time. EX1006, ¶ [110]. Each hit in the list gives the user the option to either select it and retrieve further information related to that hit, or leave it unselected (claimed "set of options to be chosen at the terminal station"). EX1007, ¶¶ [0026], [0091]; EX1006, ¶ [110]. It would have been obvious to a POSITA—a matter of semantics—to frame the list as a question asking about which of the listed hits the user wants to receive further information on (claimed "question"). EX1006, ¶ [110]. The use of such challenge questions was conventional. For example, U.S. Patent No. 6,263,447 to French et al. (EX1011),

filed May 20, 1999, discloses authenticating users by asking multiple-choice questions that the user must answer correctly in order to obtain access to data. *Id*. Likewise, U.S. Patent No. 6,438,690 to Patel et al. (EX1012), filed December 31, 1998, discloses a challenge question to which the user must provide a correct response before processing will continue. *Id*. Further, U.S. Patent 6,684,248 to Janacek et al. (EX1013), filed May 2, 2000, discloses posing a challenge question to a user. *Id*. Conventionally, asking such a question would have helped the user understand how to interact with the list of hits. *Id*.

Durand discloses responding back with an MMS message, but a POSITA would have found it obvious to respond with an SMS message via an SMS gateway. *Supra* Section V.E.1.e. For example, *Durand* discloses that "the hit list may consist of one or more text messages, each message corresponding to a particular merchant." EX1007, ¶ [0045].

b. Element [2.b]

The combination of *Durand* and *Guthery* renders obvious the claimed "a middleware at the terminal station checking the message and sending it to the network aware application before the message is processed by a standard SMS module on the terminal station" because *Durand* discloses "the terminal station checking the message and sending it to the network aware application before the message is processed by a standard SMS module on the terminal station" and

Guthery discloses "a middleware at the terminal station," and combining these disclosures would have been obvious to a POSITA.

Durand discloses delivering the response MMS messages differently "from regular MMS messages, which are delivered to an inbox or other message store in the mobile station 105. Rather, MMS messages bearing the requested advertising, directory assistance, and associated multimedia content are distinguished from regular messages so that the CDA client 145 recognizes responses to search and pick queries, and automatically provides interactive access to and/or launches presentation of the requested decks." EX1007, ¶ [0094]. Additionally, it would have been obvious to provide the message as an SMS, instead of an MMS message. *Supra* Section V.E.2.a. Thus, *Durand* discloses "the terminal station checking the message and sending it to the network aware application before the message is processed by a standard SMS module on the terminal station," as claimed.

To the extent that *Durand* does not explicitly disclose "a middleware at the terminal station," *Guthery* does. *Guthery* discloses modifying "the SMS header with a bit that said that this message was to be given to the Swisscom application on the SIM rather than stored in the SMS messages file." EX1008, 174. *Guthery* discloses two different types of middleware located at the SIM. *Guthery* discloses using a USAT Interpreter when the application is stored on an application server

and a USAT Virtual Machine when the application is stored on the mobile device. In both configurations, the SIM located on the phone (claimed middleware at the terminal station") checks the message and sends it to the application for display (claimed "checking the message and sending it to the network aware application before the message is processed by a standard SMS module on the terminal station"). EX1008, 187 ("The SIM operating system looks at the TAR and finds that the bits are destined for the microbrowser application. It fires up the microbrowser and passes it the bits."), *id*., 226 ("Make sure the SMS is from RTT Central"; "Put the notification and list of options on the screen and get a choice").

Guthery further discloses "a middleware at the terminal station checking the message and sending it to the network aware application before the message is processed by a standard SMS module on the terminal station" because it discloses using SmartSignature to handle incoming SmartSignature traffic differently than normal SMS messages. EX1008, 240-41, 246-47. "[T]he transactions are not stored on the normal SMS side of the SIM; they go into a separate SmartSignature region and the user has to enter a separate Login PIN to access them." *Id*.

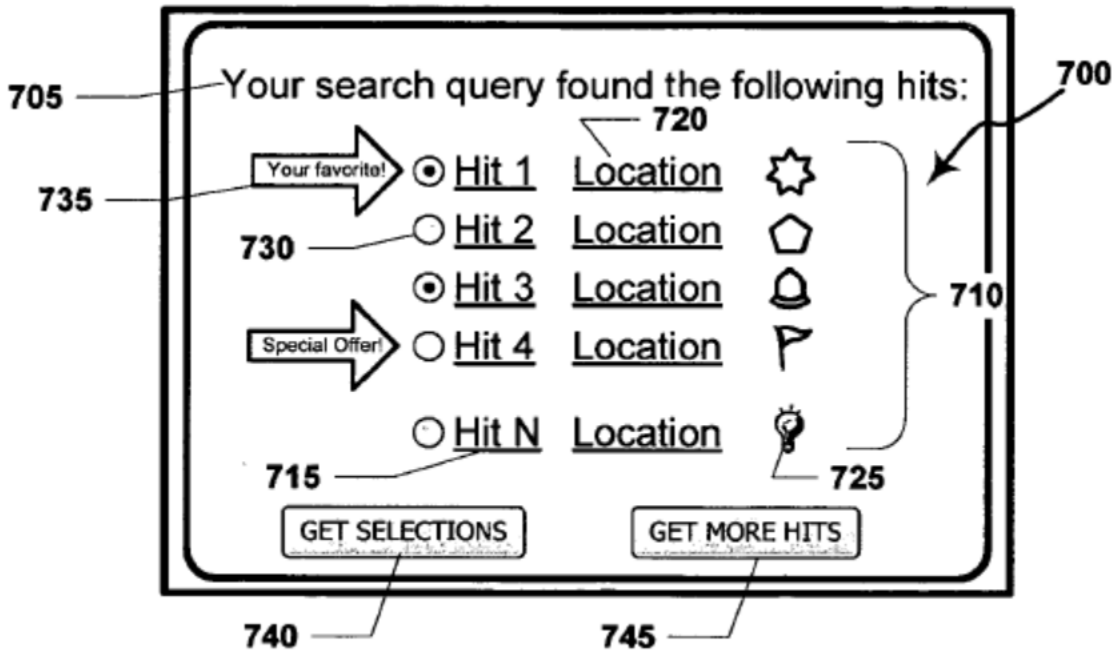
A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor. *Durand* similarly discloses the mobile station containing a SIM that would contain the capability described in *Guthery*. EX1007, ¶[0096];

EX1006, ¶ [116]. Additionally *Durand* discloses the CDA client having the same capability with respect to MMS messages. EX1007, ¶ [0094].

Moreover, a POSITA would have been motivated to consider the advantages of the middleware in *Guthery*. *Guthery* discloses that the ability "to tell the difference between an SMS message that is intended to be read by the subscriber and an SMS message that is meant to be treated as an input to a SIM-based application" is critical. EX1008, 174. Thus, a POSITA would have been motivated to use the middleware to separate SMS messages intended to be read by the CDA client of *Durand* from SMS messages meant to be received by other applications. EX1006, ¶ [116].

c. Element [2.c]

Durand discloses the claimed "the network aware application presenting an interface for the user to select or enter a choice" because it discloses that "[t]he list of hits is interactive in that the user of the mobile station 105 can craft a pick query by selecting one or more items from the list of hits, where each selection identifies a deck that the user wants to download to the mobile station." EX1007, ¶ [0091]. Fig. 7 depicts the CDA client interface when receiving the list of hits.



EX1007, Fig. 7.

d. Element [2.d]

Durand discloses the claimed "converting the choice selected or entered by the user into a command that can be interpreted by the middleware at the terminal station" because it discloses that "[t]he list of hits is interactive in that the user of the mobile station 105 can craft a pick query by selecting one or more items from the list of hits, where each selection identifies a deck that the user wants to download to the mobile station." EX1007, ¶ [0091].

To the extent *Durand* does not disclose "a command that can be interpreted by the middleware at the terminal station," *Guthery* does. *Guthery* discloses a USAT Interpreter on the SIM (claimed "middleware") that composes a "GET INPUT Byte Code TLV to capture the user's key hits." EX1008, 193-94.

Similarly, it discloses application code for a USAT Virtual Machine (claimed "middleware") application, which includes the code for getting a choice selected by a user. EX1008, 225-26. A POSITA would have understood this to be "a command that can be interpreted by the middleware at the terminal station." EX1006, ¶ [121].

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and *Durand* does not teach away from using middleware separate from the CDA client. Second, a POSITA reading *Durand* would have been motivated to consider the advantages of the teachings of *Guthery* of USAT Interpreter. *Supra* Section V.E.2.a. *Durand* discloses that "[t]he CDA client is a software application or other executable code that resides on the mobile station or is otherwise activated and controlled at least in part by commands issued from the mobile station." EX1007, ¶ [0012]; EX1006, ¶ [122]. A POSITA would have understood that using the USAT Interpreter disclosed in *Guthery* to capture and interpret user input would facilitate controlling the CDA client. EX1006, ¶ [122].

e. Element [2.e]

The combination of *Durand* and *Guthery* renders obvious the claimed "the middleware at the terminal station encoding the command and sending the command as an SMS through the SMS gateway" because *Durand* discloses

"sending the command as an SMS through the SMS gateway" and *Guthery* discloses "the middleware at the terminal station encoding the command," and combining these disclosures would have been obvious to a POSITA.

Durand discloses "sending the command as an SMS through the SMS gateway" because it discloses sending the pick query "to the content server 125, which retrieves the selected decks from the publishing system 135 for delivery to the mobile station 105." EX1007, ¶ [0091]. The CDA client appends information to the SMS message, including "a destination code" and "one or more origination identifiers" to the request (claimed "encoding the command"). EX1007, ¶ [0078].

While *Durand* does not explicitly disclose a middleware at the terminal station, *Guthery* does. *Supra* Section V.E.2.b. *Guthery* discloses a USAT Interpreter of the SIM (claimed "middleware at the terminal station") translating the user input into byte codes and sending the bytes containing the user input as an SMS message to a Wireless Internet Gateway (WIG) (claimed "encoding the command and sending the command as an SMS through the SMS gateway"). EX1008, 180-81, 193-95. Similarly, *Guthery* discloses the USAT Virtual Machine (claimed "middleware at the terminal station") sending the choice selected back to the central server. EX1008, 226-27.

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same

field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008. Indeed, a POSITA implementing the SMS-based mobile application (i.e., the CDA client) in *Durand* would have been motivated to consult *Guthery* for various technical information for the creation of mobile applications that utilize SMS communication.

Moreover, a POSITA would have been motivated to consider the advantages of using middleware for message encoding in *Guthery*. *Guthery* discloses that encoding the content of SMS messages using, for example, ETSI TS 03.48 "provide[s] end-to-end security for any SMS message going to or coming from the SIM." EX1008, 158. Additionally, long before the filing date of *Durand*, encoding had been used by POSITA in SMS communication. EX1006, ¶ [128] (citing EX1010). Thus, the results or advantages of encoding the content of SMS messages were predictable. *Id*. Accordingly, a POSITA would have been motivated to use "the middleware at the terminal station [to] encod[e] the command and send[] the command as an SMS," as claimed. EX1006, ¶ [129].

f. Element [2.f]

The combination of *Durand* and *Guthery* renders obvious the claimed "the gateway decoding the command of the message and handling the command to a middleware at a central station" because *Durand* discloses "the gateway" and

Guthery discloses "the gateway decoding the command of the message and handling the command to a middleware at a central station," and combining these disclosures would have been obvious to a POSITA.

Durand discloses "the gateway" because it discloses transmitting the request as an SMS message to the text transport system 120, which includes an SMS gateway. *Supra* Section V.E.1.d; EX1007, ¶ [0077].

While *Durand* does not explicitly disclose "the gateway decoding the command of the message and handling the command to a middleware at a central station," *Guthery* does. *Guthery* discloses that the WIG (claimed "gateway") "unwraps the SMS and examines the TAR value . . . and, using HTTP, reaches out to the [application server] and pulls back the [requested file] from the mobileapps directory" (claimed "decoding the command of the message and handling the command to a middleware at a central station"). EX1008, 180-81. The WIG operates the same for USAT Interpreter applications as it does for USAT Virtual Machine Applications, except for the latter, the WIG does not have to translate the messages, meaning the messages move faster. EX1008, 224-25.

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both of them discloses a mobile phone can exchange SMS message with a gateway. EX1007, ¶ [0077]; EX1008, 180-81.

Second, a POSITA would have been motivated to make this combination to allow the gateway "decod[e] the command of the message and handl[e] the command to a middleware at a central station," as claimed, at least because *Guthery* discloses that programs may reside on the WIG, so the WIG decodes the command to determine, for example, how to handle the request sent from the mobile device. EX1008, 204; EX1006, ¶ [134].

Third, implementing these features of *Guthery* would have been not only predictable but also expected because the gateway would not be able to process the command without first decoding it. EX1006, ¶ [135].

Thus, a POSITA would have the teachings of *Durand* and *Guthery* to provide a "gateway decoding the command of the message and handling the command to a middleware at a central station," as claimed. *Id*., ¶ [136].

g. Element [2.g]

The combination of *Durand* and *Guthery* renders obvious the claimed "the middleware at the central station getting the response based on the command."

Durand discloses "the central station getting the response based on the command" because it discloses sending the pick query (claimed command") as an SMS message via the text transport system 120 to the content server 125 (claimed "central station"), which retrieves the selected decks from the publishing system 135 for delivery to the mobile station 105" (claimed "getting the response based on

the command"). EX1007, ¶¶ [0069], [0091].

As discussed *supra* Section V.E.2.b. *Guthery* discloses using middleware in a mobile phone to facilitate SMS communication. While *Guthery* does not explicitly disclose a "middleware at the central station," a POSITA would have understood that including a middleware on content server 125 would have been obvious. EX1006, ¶ [139]. For example, content server 125 uses a GSM network as the access network 110 for communicating with the mobile station and uses the Internet as data network 130 to retrieve the results of the search and pick queries from publishing system 135. EX1007, ¶ [0088].

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008. Indeed, a POSITA implementing the SMS-based mobile application (i.e., the CDA client) in *Durand* would have been motivated to consult *Guthery* for various technical information for the creation of mobile applications that utilize SMS communication.

Moreover, a POSITA would have been motivated to consider the advantages of using middleware for handing SMS message in a content server in *Guthery*. *Guthery* discloses that it is critical for a mobile phone to handle regular SMS

messages differently from SMS message that is meant to be treated as an input to a SIM-based application. EX1008, 174. Thus, a POSITA would have been motivated to use middleware in the content server to separate SMS messages intended to be read by the CDA client of *Durand* from SMS messages meant to be received by other applications. EX1006, ¶ [143].

h. Element [2.h]

The combination of *Durand* and *Guthery* renders obvious the claimed "converting the response into a command that the network aware application can understand by the middleware at the central station" because *Durand* discloses "the response" and *Guthery* discloses "converting the response into a command that the network aware application can understand by the middleware at the central station" and combining these disclosures would have been obvious to a POSITA.

Durand discloses "the response" because it discloses that "the decks identified in the search query and selected in the pick query are delivered to the mobile station 105 as MMS messages. Preferably, however, these MMS messages are delivered differently from regular MMS messages, which are delivered to an inbox or other message store in the mobile station 105." EX1007, ¶ [0094]. As explained *supra* Section V.E.1.e, it would have been obvious for the response to be sent as an SMS instead of an MMS. EX1006, ¶ [145].

Further, *Guthery* discloses "converting the response into a command that the

network aware application can understand by the middleware at the central station" because it discloses that the central server and application on the mobile can communicate using the 03.48 standard without having to translate the messages, meaning the claimed "middleware at the central station" is "converting the response into a command that the network aware application can understand," as claimed. EX1008, 224-25.

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008.

Moreover, a POSITA would have been motivated to consider the advantages of using middleware for message encoding in *Guthery*. *Guthery* discloses that encoding the content of SMS messages using, for example, ETSI TS 03.48 "provide[s] end-to-end security for any SMS message going to or coming from the SIM." EX1008, 158. Additionally, long before the filing date of *Durand*, encoding had been used by POSITA in SMS communication. EX1006, ¶ [148] (citing EX1010). Thus, the results or advantages of encoding the content of SMS messages were predictable. *Id*. Accordingly, a POSITA would have been motivated to "convert[] the response into a command that the network aware application can understand by the middleware at the central station," as claimed.

Id., ¶ [149].

i. Element [2.i]

The combination of *Durand* and *Guthery* renders obvious the claimed "encoding the command and sending the encoded command back to the terminal station as one or more SMS messages" because *Durand* discloses "sending the . . . command back to the terminal station" and *Guthery* discloses "encoding the command and sending the encoded command back to the terminal station as one or more SMS messages" and combining these disclosures would have been obvious to a POSITA.

Durand discloses "sending the . . . command back to the terminal station" because it discloses that "the decks identified in the search query and selected in the pick query are delivered to the mobile station 105 as MMS messages. Preferably, however, these MMS messages are delivered differently from regular MMS messages, which are delivered to an inbox or other message store in the mobile station 105." EX1007, ¶ [0094]. As explained *supra* Section V.E.1.e, it would have been obvious for the response to be sent as an SMS instead of an MMS. EX1006, ¶ [151].

Further, *Guthery* discloses "encoding the command and sending the encoded command" because it discloses the USAT Virtual Machine application executing code to identify the bytes in the message, meaning the message was sent as an

encoded message. EX1008, 226-27; EX1006, ¶ [152]; *see also* EX1008, 187 ("On its way through the WIG, it gets translated to the following byte codes").

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008.

Moreover, a POSITA would have been motivated to consider the advantages of using middleware for message encoding in *Guthery*. *Guthery* discloses that encoding the content of SMS messages using, for example, ETSI TS 03.48 "provide[s] end-to-end security for any SMS message going to or coming from the SIM." EX1008, 158. Additionally, long before the filing date of *Durand*, encoding had been used by POSITA in SMS communication. EX1006, ¶ [154] (citing EX1010). Thus, the results or advantages of encoding the content of SMS messages were predictable. *Id*. Accordingly, a POSITA would have been motivated to "convert[] the response into a command that the network aware application can understand by the middleware at the central station," as claimed. *Id*., ¶ [155].

j. Element [2.j]

The combination of *Durand* and *Guthery* renders obvious the claimed "the middleware at the terminal station decoding the command of the message and

handling the command to a network aware application" because *Durand* discloses "the terminal station decoding the command of the message and handling the command to a network aware application" and *Guthery* discloses "the middleware at the terminal station," and combining these disclosures would have been obvious to a POSITA.

Durand discloses "the middleware at the terminal station decoding the command of the message and handling the command to a network aware application" because it discloses delivering the response MMS messages differently "from regular MMS messages, which are delivered to an inbox or other message store in the mobile station 105. Rather, MMS messages bearing the requested advertising, directory assistance, and associated multimedia content are distinguished from regular messages so that the CDA client 145 recognizes responses to search and pick queries, and automatically provides interactive access to and/or launches presentation of the requested decks." EX1007, ¶ [0094]. Thus, *Durand* discloses "the terminal station decoding the command of the message and handling the command to a network aware application," as claimed.

Guthery discloses "the middleware at the terminal station decoding the command of the message and handling the command to a network aware application" for the same reasons discussed *supra* Section V.E.2.b.

A POSITA would have found it obvious to combine *Durand* with the

teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008.

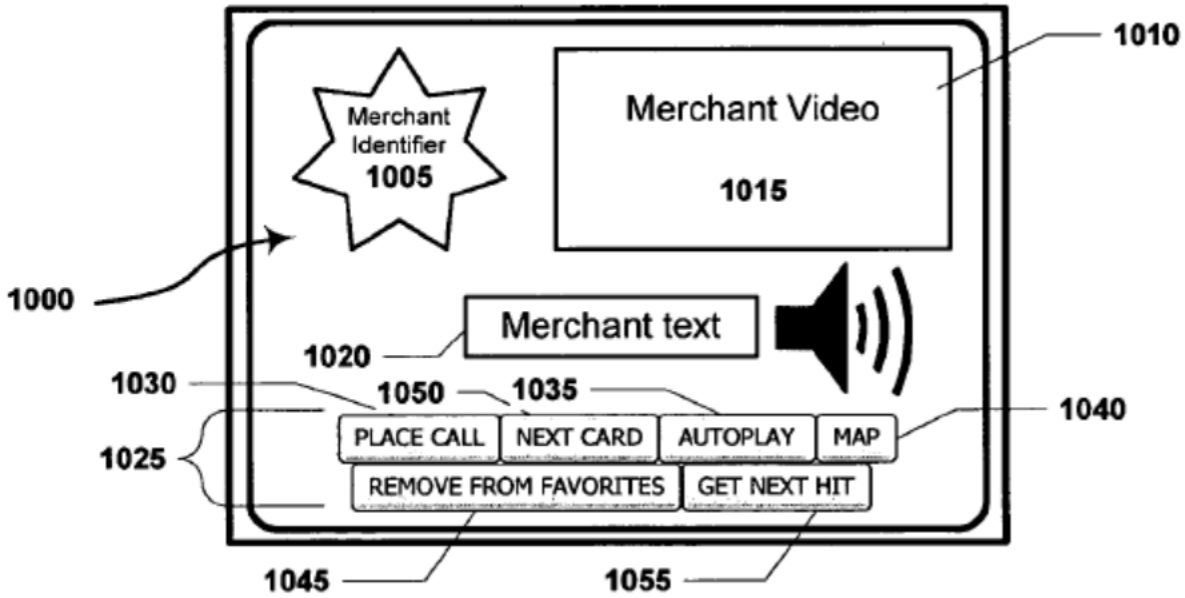
Moreover, it would have been not only predictable but also expected for a POSITA use middleware to decode the messages because the POSITA would have understood that to check if the message received is from the central server, the USAT Virtual Machine (claimed "middleware at the terminal station") would decode the command of the message, as claimed. EX1008, 226-27; EX1006, ¶ [160]. Additionally, a POSITA would have understood that decoding is required in order to process the message. EX1006, ¶ [161].

Thus, a POSITA would have the teachings of *Durand* and *Guthery* to use "the middleware at the terminal station [to] decod[e] the command of the message and handl[e] the command to a network aware application." *Id*., ¶ [161].

k. Element [2.k]

Durand discloses the claimed "the network aware application reconverting the command into the response, rendering the response and building a user interface to show the response to the user" because it discloses the CDA client 145 "recogniz[ing] responses to search and pick queries, and automatically provid[ing] interactive access to and/or launch[ing] presentation of the requested decks." EX1007, ¶ [0094]. Fig. 10 depicts a first card of a deck of a selected hit. EX1007,

¶ [0114], Fig. 10.



To the extent *Durand* does not discloses this limitation, *Guthery* does. *Guthery* discloses the USAT Virtual Machine application "process[ing] the message from [the central server]" (claimed "the network aware application reconverting the command into the response") and putting "the notification and list of options on the screen" (claimed "building a user interface to show the response to the user"). EX1008, 226; *see id*., 227 ("Display the confirming message from RTT Central").

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor because both *Durand* and *Guthery* are directed to systems and methods for utilizing SMS communication. EX1007, ¶ [0077]; EX1008.

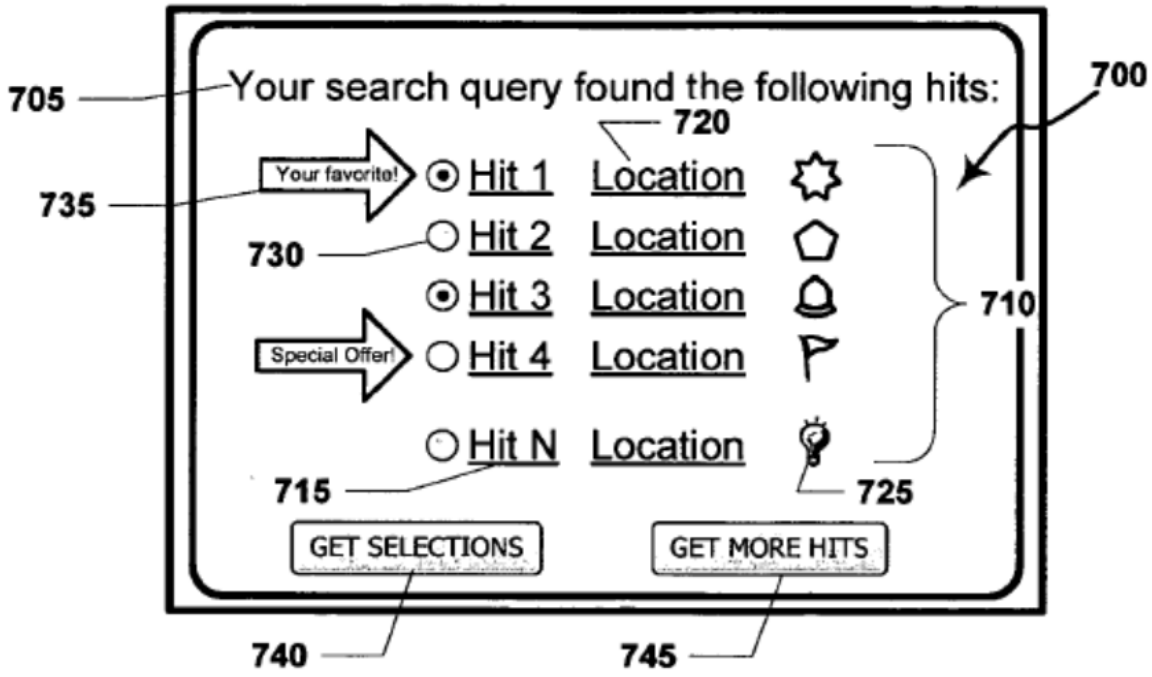
Second, a POSITA would have been motivated to make this combination to provide "the network aware application reconverting the command into the response, rendering the response and building a user interface to show the response to the user," at least because *Guthery* discloses that mobile applications can use form pages "for a uniform user experience and fast access" and "to differentiate and tailor their services." EX1008, 245. For at least these reasons, a POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. EX1006, ¶ [165].

3. Claim 3

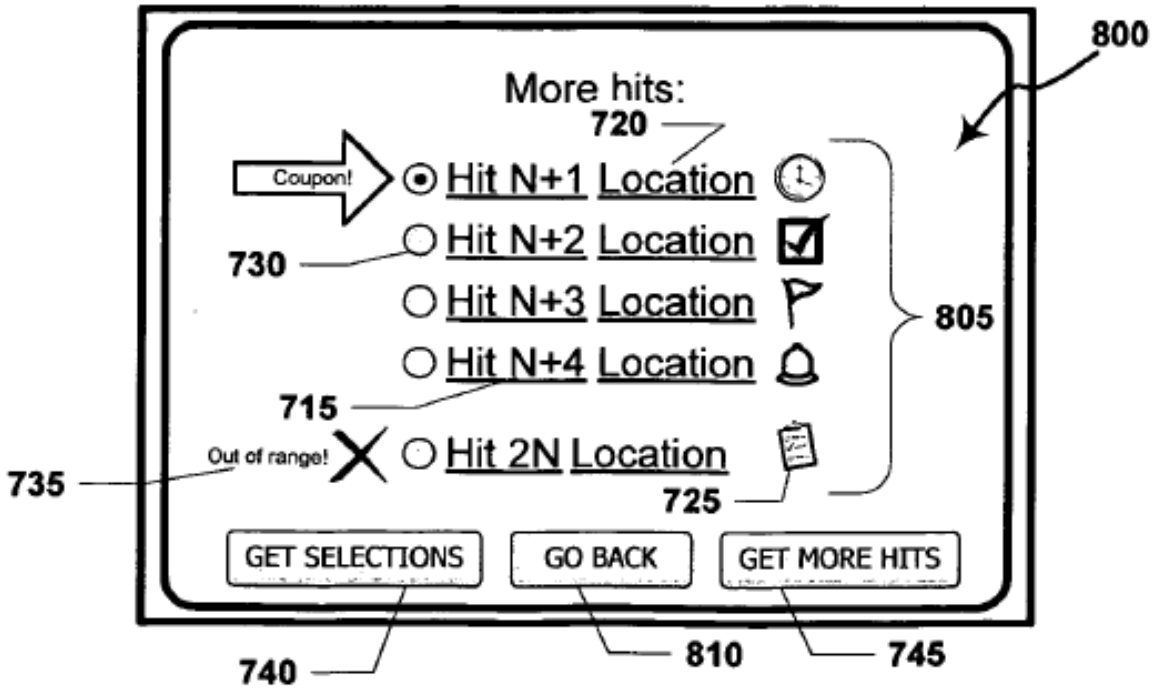
Durand renders obvious the claimed "wherein the response received at a terminal station is a set of questions and answers for retrieval of further information" because *Durand* discloses "wherein the response received at a terminal station is a set of . . . answers for retrieval of further information," and it would have been obvious to include a "set of questions" with the set of answers and to send the message as an SMS message, as discussed *supra* Section V.E.1.e.

Durand discloses "the response received at a terminal station" because it discloses delivering to the mobile station a list of hits that "identifies decks that meet the criteria specified by the search query." EX1007, ¶ [0090]. "The list of hits is interactive in that the user of the mobile station 105 can craft a pick query by selecting one or more items from the list of hits, where each selection identifies a

deck that the user wants to download to the mobile station." EX1007, ¶ [0091]. Figs. 7-8 depicts the CDA client interface when receiving the list of hits.



EX1007, Fig. 7.



EX1007, Fig. 8. As illustrated in Figs. 7-8, *Durand* discloses that the user may select "GET MORE HITS" to receive additional hits, and the CDA client displays the additional hits (claimed "set"). A POSITA would have understood the list of hits to be a "set of . . . answers for retrieval of further information," as claimed, because each hit in the list gives the user the option to either select it and retrieve further information related to that hit, or leave it unselected. EX1006, ¶ [170]. Because only the deck(s) selected by the user will be downloaded to the mobile station, the presentation of the list of hits essentially asks the question whether the user wants to download one or more of the list of hits.

To the extent that a list of hits does not also include "a set of questions," as claimed, it would have been obvious to a POSITA to so modify the list of hits. *Id*., ¶ [171]. Each hit in the list gives the user the option to either select it and retrieve further information related to that hit, or leave it unselected (claimed "set of . . . answers for retrieval of further information"). EX1007, ¶¶ [0026], [0091]; EX1006, ¶ [171]. As discussed above, the presentation of the list of hits asks the user to select one or more hits for downloading. It would have been obvious to a POSITA to include a question asking about which of the listed hits the user wants to receive further information (claimed "a question"). EX1006, ¶ [171]. Asking such a question would have helped the user understand how to interact with the list of hits. *Id*.

4. Claim 4

a. Element [4.a]

The combination of *Durand* and *Guthery* renders obvious the claimed "a middleware at the terminal station interrupting messages received by the terminal station" because *Durand* discloses "the terminal station interrupting messages received by the terminal station" and *Guthery* discloses "a middleware at the terminal station" and "messages" in the form of SMS messages, and combining these disclosures would have been obvious to a POSITA.

Durand renders obvious "the terminal station interrupting messages received by the terminal station" because it discloses "the terminal station interrupting messages received by the terminal station" because it discloses delivering "responses to search and pick queries" differently from "regular MMS messages" so that CDA client 145 recognizes the responses. EX1007, ¶ [0094]. Additionally, it would have been obvious to provide the messages as an SMS, instead of an MMS message. *Supra* Section V.E.2.a.

To the extent that *Durand* does not explicitly disclose "a middleware at the terminal station," *Guthery* does. *Guthery* discloses two different types of middleware located at the SIM. *Guthery* discloses using a USAT Interpreter when the application is stored on an application server and a USAT Virtual Machine when the application is stored on the mobile device. In both configurations, the

SIM located on the phone (claimed middleware at the terminal station") checks the message. EX1008, 187 ("The SIM operating system looks at the TAR and finds that the bits are destined for the microbrowser application."), *id*., 226 ("Make sure the SMS is from RTT Central").

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor. *Durand* similarly discloses the mobile station containing a SIM that would contain the capability described in *Guthery*. EX1007, ¶ [0096]; EX1006, ¶ [176]. Additionally *Durand* discloses the CDA client having the same capability with respect to MMS messages. EX1007, ¶ [0094].

Moreover, a POSITA would have been motivated to consider the advantages of the middleware in *Guthery*. *Guthery* discloses that the ability "to tell the difference between an SMS message that is intended to be read by the subscriber and an SMS message that is meant to be treated as an input to a SIM-based application" is critical. EX1008, 174. Thus, a POSITA would have been motivated to use the middleware to separate SMS messages intended to be read by the CDA client of *Durand* from SMS messages meant to be received by other applications. EX1006, ¶ [178].

b. Element [4.b]

The combination of *Durand* and *Guthery* renders obvious the claimed "the

middleware checking if the SMS message is intended for the plurality of applications" because *Durand* discloses "checking if the [] message is intended for the plurality of applications" and *Guthery* discloses "the middleware" and "the SMS message," and combining these disclosures would have been obvious to a POSITA.

Durand discloses "the plurality of applications" because it discloses applications residing on the mobile station, including the CDA client as well as "applications such as voicemail, multimedia messaging, address book, and system setup." EX1007, ¶ [0013]. *Durand* renders obvious "checking if the SMS message is intended for the plurality of applications" because it discloses CDA client 145 distinguishing "responses to search and pick queries" and "regular messages so that the CDA client 145 recognizes responses to search and pick queries . . . ." EX1007, ¶ [0094]. Additionally, it would have been obvious to provide the message as an SMS, instead of an MMS message. *Supra* Section V.E.2.a.

To the extent that *Durand* does not explicitly disclose a "middleware" or the message being an "SMS message," *Durand* does. As discussed *supra* Section V.E.4.a, *Guthery* discloses two different types of middleware. *Guthery* discloses modifying "the SMS header with a bit that said that this message was to be given to the Swisscom application on the SIM rather than stored in the SMS messages file" (claimed "checking if the SMS message is intended for the plurality of

applications"). EX1008, 174, 187 ("The SIM operating system looks at the TAR and finds that the bits are destined for the microbrowser application. It fires up the microbrowser and passes it the bits."), *id*., 226 ("Make sure the SMS is from RTT Central"; "Put the notification and list of options on the screen and get a choice").

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor. *Durand* similarly discloses the mobile station containing a SIM that would contain the capability described in *Guthery*. EX1007, ¶ [0096]; EX1006, ¶ [182]. Additionally *Durand* discloses the CDA client having the same capability with respect to MMS messages. EX1007, ¶ [0094].

Moreover, a POSITA would have been motivated to consider the advantages of the middleware in *Guthery*. *Guthery* discloses that the ability "to tell the difference between an SMS message that is intended to be read by the subscriber and an SMS message that is meant to be treated as an input to a SIM-based application" is critical. EX1008, 174. Thus, a POSITA would have been motivated to use the middleware to separate SMS messages intended to be read by the CDA client of *Durand* from SMS messages meant to be received by other applications. EX1006, ¶ [184].

c. Element [4.c]

The combination of *Durand* and *Guthery* renders obvious the claimed "the

middleware handling the message to the SMS module in the event of the message is not intended to the plurality of applications" because *Guthery* discloses "the middleware handling the message to the SMS module in the event of the message is not intended to the plurality of applications," and combining these disclosures would have been obvious to a POSITA.

Guthery discloses "the middleware handling the message to the SMS module in the event of the message is not intended to the plurality of applications." *Guthery* discloses "a middleware" for the reasons discussed *supra* Section V.E.4.a. *Guthery* discloses using SmartSignature to handle incoming SmartSignature traffic differently than normal SMS messages. EX1008, 240-41, 246-47. "[T]he transactions are not stored on the normal SMS side of the SIM [(claimed SMS module")]; they go into a separate SmartSignature region and the user has to enter a separate Login PIN to access them." *Id*.

A POSITA would have understood that the mobile device also receives "normal SMS messages" that are "stored on the normal SMS side of the SIM" (claimed "handling the message to the SMS module in the event of the message is not intended to the plurality of applications"). EX1006, ¶ [187].

A POSITA would have found it obvious to combine *Durand* with the teachings of *Guthery*. First, *Durand* and *Guthery* are analogous art and in the same field of endeavor. *Durand* similarly discloses the mobile station containing a SIM

that would contain the capability described in *Guthery*. EX1007, ¶ [0096]; EX1006, ¶ [188]. Additionally *Durand* discloses the CDA client having the same capability with respect to MMS messages. EX1007, ¶¶ [0094], [0095] ("Regular MMS messages are delivered to a mobile station 105 . . . . Certain embodiments distinguish messages directed to the CDA client 145 by utilizing an alternative interface, so that messages carrying decks are not deposited in the MMS inbox with other MMS messages.").

Moreover, a POSITA would have been motivated to consider the advantages of the middleware in *Guthery*. *Guthery* discloses that the ability "to tell the difference between an SMS message that is intended to be read by the subscriber and an SMS message that is meant to be treated as an input to a SIM-based application" is critical. EX1008, 174. Thus, a POSITA would have been motivated to use the middleware to separate SMS messages intended to be read by the CDA client of *Durand* from SMS messages meant to be received by other applications. EX1006, ¶ [190].

5. Claim 5

Durand discloses the claimed "the network aware application building the user interface using the meta data information according to the choice selected" because it discloses that the CDA client (claimed "network aware application") "is a software application or other executable code that resides on the mobile station or

is otherwise activated and controlled at least in part by commands issued from the mobile station." EX1007, ¶ [0012]. *Durand* discloses that the CDA client 145 "provides an interface for the user to enter a search query; . . . provides an interface for the user to navigate through the hits; . . . provides an interface for the user to retrieve, access, view, and/or interact with one or more decks associated with each of the hits; [and] provides an interface for the user of the mobile station 105 to set or change preferences . . ." (claimed "building the user interface using the meta data information according to the choice selected"). EX1007, ¶ [0101].

6. Claim 6

The combination of *Durand* and *Guthery* renders obvious the claimed "wherein the middleware at the terminal station is used to send messages to a short code or a value added service (VAS)." because *Guthery* discloses "wherein the middleware at the terminal station is used to send messages to . . . a value added service (VAS)," and combining these disclosures would have been obvious to a POSITA.

As discussed *supra* Section V.E.2.b, *Guthery* discloses two types of the claimed "middleware." *Gurthery* also discloses an application called Gismo that included "more than 300 services" that utilized SMS messages. EX1008, 200-01. Gismo included microbrowser displaying a menu of value-added services that allowed users to "select from this menu to activate particular services or to pull

information from the Gismo portal through a query function" (claimed "the middleware at the terminal station is used to send messages to . . . a value added service (VAS)"). EX1008, 200; *see id*., 200-07 ("In keeping with their strategy of encouraging all subscribers to use value-added services, Sonofon provides some packages even for those users who don't choose to get an upgraded SIM.").

It would have been obvious for a POSITA to combine *Durand* and *Guthery* to have the middleware send messages to a value-added service, as disclosed in *Guthery* because *Guthery* provided an explicate motivation to do so—"[v]alue-added services have become the business holy grail for wireless operators around the world." EX1008, 198; EX1006, ¶ [196]. As discussed above, *Durand* and *Guthery* are analogous art, a POSITA would have looked to *Guthery* in implementing the system of *Durand*, and implementing the text-book examples of *Guthery* in *Durand* would have been predictable. EX1008.

7. Claim 7

a. Element [7.a]

To the extent the preamble is limiting, *Durand* discloses the claimed "[a] method of enabling communication through SMS communication channel" for the reasons discussed *supra* Section V.E.1.a.

b. Element [7.b]

The combination of *Durand* and *Guthery* renders obvious the claimed

"listing all services at a terminal station that are available with an SMS gateway according to meta information available at the terminal station" for the reasons discussed *supra* Section V.E.1.b.

c. Element [7.c]

The combination of *Durand* and *Guthery* renders obvious the claimed "upon selecting a service, a network aware application configured to allow a user to type in a desired parameter" because it discloses element [1.c], discussed *supra* Section V.E.1.c, and element [7.c] is broader than element [1.c]. For example, *Durand* discloses "a network aware application configured to allow a user to type in a desired parameter" because it discloses an interface allowing a user to type parameters such as the target location or the category of goods desired. EX1007, ¶¶ [0017], [0110], Fig. 6.

d. Element [7.d]

Durand discloses or renders obvious the claimed "upon user entering the desired parameter, submitting a request to the SMS gateway" for the reasons discussed *supra* Section V.E.1.d.

e. Element [7.e]

Durand renders obvious discloses the claimed "the SMS gateway responding back with a response" for the same reasons discussed *supra* Section V.E.1.e.

f. Element [7.f]

Durand discloses the claimed "wherein the desired parameter is not listed at the terminal station" because it discloses element [1.f], discussed *supra* Section V.E.1.f, and element [7.f] is broader than element [1.f]. For example, *Durand* discloses "wherein the desired parameter is not listed at the terminal station" because it discloses parameters, e.g., the target location or category of goods and services desired, that can be manually entered. EX1007, ¶¶ [0017], [0110].

VI. MANDATORY NOTICES

A. Real Party-in-Interest

Pursuant to 37 C.F.R. § 42.8(b)(1), Petitioner certifies that Unified is the real party-in-interest and no other party exercised control or could exercise control over Unified's participation in this proceeding, the filing of this Petition, or the conduct of any ensuing trial.

B. Related Matters

Petitioner is aware of the following cases involving the '862 patent:

- *Anuwave, LLC v. TCF Financial Corp.*, 1-17-cv-01082 (D. Del. Aug. 3, 2017)
- *Anuwave, LLC v. Community Banks of Colorado*, 1-17-cv-01848 (D. Col. July 31, 2017)
- *Anuwave, LLC v. Capitol Federal Savings Bank*, 1-17-cv-01054 (D.

Del. July 31, 2017)

- *Anuwave, LLC v. Chase Bank USA*, 1-17-cv-01056 (D. Del. July 31, 2017)
- *Anuwave, LLC v. ABC Bank*, 1-17-cv-00471 (N.D. Ill. Jan. 20, 2017)
- *Anuwave, LLC v. First Busey Corp.*, 1-17-cv-00473 (N.D. Ill. Jan. 20, 2017)
- *Anuwave, LLC v. Evergreen Bank Group*, 1-17-cv-00479 (N.D. Ill. Jan. 20, 2017)
- *Anuwave, LLC v. First Bank of Highland Park*, 1-17-cv-00480 (N.D. Ill. Jan. 20, 2017)
- *Anuwave, LLC v. First Personal Financial Corp. d/b/a/ First Personal Bank*, 1-16-cv-09915 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. Huntington Bancshares Inc. d/b/a/ FirstMerit Bank*, 1-16-cv-09918 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. Royal Financial, Inc. d/b/a Royal Savings Bank*, 1-16-cv-09920 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. First Am. Bank Corp.*, 1-16-cv-09921 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. BankFinancial FSB*, 1-16-cv-09923 (N.D. Ill. Oct.

21, 2016)

- *Anuwave, LLC v. Associated Banc-Corp.*, 1-16-cv-09925 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. Community Savings Bank*, 1-16-cv-09927 (N.D. Ill. Oct. 21, 2016)
- *Anuwave, LLC v. Amarillo Nat'l Bank*, 2-16-cv-00289 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Austin Bank, Tex. NA*, 2-16-cv-00274 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Cathay Bank*, 2-16-cv-00276 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Citizens Nat'l Bank of Tex.*, 2-16-cv-00277 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Community Nat'l Bank*, 2-16-cv-00278 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. East West Bank*, 2-16-cv-00279 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. First Lockhart Nat'l Bank*, 2-16-cv-00280 (E.D. Tex. Mar. 28, 2016)

- *Anuwave, LLC v. Fort Sill Nat'l Bank*, 2-16-cv-00281 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Inter Nat'l Bank*, 2-16-cv-00282 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Jacksboro Nat'l Bancshares, Inc.*, 2-16-cv-00283 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Regions Financial Corp.*, 2-16-cv-00285 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Security Bank*, 2-16-cv-00286 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Tex. Bank*, 2-16-cv-00287 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. US Bancorp*, 2-16-cv-00288 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. WestStar Bank*, 2-16-cv-00289 (E.D. Tex. Mar. 28, 2016)
- *Anuwave, LLC v. Am. Bank Holding Corp.*, 2-15-cv-01940 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Bank of Am. Corp.*, 2-15-cv-01942 (E.D. Tex. Nov.

30, 2015)

- *Anuwave, LLC v. Bank of the West Corp.*, 2-15-cv-01944 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Comerica Bank*, 2-15-cv-01946 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Commercial Bank of Tex., N.A.*, 2-15-cv-01949 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. First Bank and Trust East Tex.*, 2-15-cv-01952 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. InTouch Credit Union*, 2-15-cv-01956 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Independent Bank Group, Inc.*, 2-15-cv-01958 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Landmark Bank, NA*, 2-15-cv-01962 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. NetSpend Corp.*, 2-15-cv-01964 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. PointBank*, 2-15-cv-01967 (E.D. Tex. Nov. 30, 2015)

- *Anuwave, LLC v. SunTrust Bank*, 2-15-cv-01969 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. UMB Financial Corp.*, 2-15-cv-01973 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. MUFG Union Bank, NA d/b/a Union Bank*, 2-15-cv-01978 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. USAA Investment mgmt.. Co.*, 2-15-cv-01980 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Veritex Holdings, Inc. d/b/a Veritex Community Bank*, 2-15-cv-01981 (E.D. Tex. Nov. 30, 2015)
- *Anuwave, LLC v. Wells Fargo & Co.*, 2-15-cv-01984 (E.D. Tex. Nov. 30, 2015)

C. Lead and Back-Up Counsel and Service Information

Petitioner designates Lionel M. Lavenue (Reg. No. 46,859), available at Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Two Freedom Square, 11955 Freedom Drive, Reston, VA 20190-5675 (phone: 571-203-2700; fax: 202-408-4000), as lead counsel; and Jonathan R. K. Stroud (Reg. No. 72,518), available at Unified Patents Inc., 1875 Connecticut Ave. NW, Floor 10, Washington, D.C. 20009 (phone: 650-999-0455), Ashraf A. Fawzy (Reg. No. 67,914), available at Unified Patents Inc., 1875 Connecticut Ave. NW, Floor 10, Washington, D.C.

20009 (phone: 202-871-0110), and Cory C. Bell (Reg. No. 75,096), available at Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., Two Seaport Lane, Boston, MA 02210-2001 (phone: 617-646-1641) as back-up counsel.

Petitioner consents to e-mail service at UnifiedPatents-IPR2018-00223@finnegan.com, afawzy@unifiedpatents.com and jonathan@unifiedpatents.com.

VII. CERTIFICATION OF GROUNDS FOR STANDING

Petitioner certifies pursuant to 37 C.F.R. § 42.104(a) that the ’862 Patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR review of the challenged claims on the Grounds herein.

VIII. CONCLUSION

Challenged claims 1-7 are unpatentable, and Petitioner respectfully requests that the Board grant this Petition and institute trial.

The required fees are submitted under 37 C.F.R. §§ 41.103(a) and 42.15(a). If any additional fees are due during this proceeding, the Office may charge such fees to Deposit Account No. 50-6990.

Date: November 22, 2017

Respectfully Submitted,

/Lionel M. Lavenue/
Lionel M. Lavenue (Reg. No. 46,859)

CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

This Petition complies with the requirements of 37 C.F.R. § 42.24. As calculated by the word count feature of Microsoft Word and manually counted in the figures, it contains 13,003 words, excluding the words contained in the following: Table of Contents, Table of Authorities, List of Exhibits, Mandatory Notices, this Certification Under § 42.24(d), and Certificate of Service.

/Lionel M. Lavenue/
Lionel M. Lavenue (Reg. No. 46,859)

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Petition for *Inter Partes* Review, the associated Power of Attorney, and Exhibits 1001 through 1014 are being served on November 22, 2017, by Express Mail at the following address of record for the subject patent.

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