

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FOURSQUARE LABS, INC.,

Petitioner,

v.

BOARDACTIVE CORPORATION,

Patent Owner.

IPR2023-00919

U.S. Patent No. 10,692,108 B1

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 10,692,108**

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EXHIBIT LIST

No	Name
1001	U.S. Patent No. 10,692,108
1002	Declaration of Dr. Steven Goldberg, Ph.D.
1003	Petitioner's Power of Attorney
1004	U.S. Patent Application Publication No. 2015/0095124 ("Verizon")
1005	U.S. Patent Application Publication No. 2015/0262214 ("Geer")
1006	U.S. Patent Application Publication No. 2011/0171976 ("Creemer")
1007	U.S. Patent No. 9,516,470 ("Scofield")
1008	European Patent Publication No. 2424278 A1 ("Alcatel")

APPENDIX OF CLAIMS

INDEPENDENT CLAIM 1

Claim 1, Preamble: A method comprising:

Element 1(a): specifying a content distribution campaign, the content distribution campaign comprising;

1(a)(i): a geolocation, and

1(a)(ii): media content associated with the geolocation;

Element 1(b): specifying a plurality of rules for the content distribution campaign, wherein specifying the plurality of rules comprises:

1(b)(i): specifying a first rule corresponding to a period of time,

1(b)(ii): specifying a second rule corresponding to at least one element of profile data associated with a consumer, and

1(b)(iii): specifying a third rule corresponding to a course of travel associated with the consumer;

Element 1(c): receiving a first indication that the consumer is at a first location within a radius of the geolocation;

Element 1(d): assessing, in response to the first indication, the at least one element of profile data associated with the consumer;

Element 1(e): receiving a second indication that the consumer is at a second location;

Element 1(f): determining the course of travel based, at least in part, on an analysis of the first location and the second location; and

Element 1(g): establishing that the consumer is eligible for the content distribution campaign when the plurality of rules is satisfied.

APPENDIX OF CLAIMS

CLAIM 2: The method of claim 1, wherein specifying the third rule corresponding to the course of travel associated with the consumer comprises specifying a destination as the second location.

CLAIM 3: The method of claim 1, further comprising providing a first aspect of the media content associated with the content distribution campaign when the following delivery rules are satisfied:

Element 3(a): the first rule corresponding to the period of time, and

Element 3(b): the second rule corresponding to the at least one element of profile data associated with the consumer.

CLAIM 4: The method of claim 3, further comprising tracking the consumer during the course of travel.

CLAIM 5: The method of claim 3, further comprising providing a second aspect of the media content associated with the content distribution campaign when the third rule associated with the second location is satisfied.

CLAIM 6: The method of claim 3, further comprising, receiving a third indication that the consumer has interacted with the first aspect of the media content during the course of travel.

CLAIM 7. The method of claim 6, wherein specifying the first rule comprises specifying a limited timeframe, during the course of travel, in which the consumer has to interact with the first aspect of the media content.

CLAIM 8: The method of claim 6, further comprising tracking the consumer during the course of travel in response to the third indication.

CLAIM 9: The method of claim 8, wherein tracking the consumer during the course of travel comprises receiving, from a mobile computing device associated with the consumer, at least one of the following:

Element 9(a): location data,

Element 9(b): sensor data,

Element 9(c): telemetry data,

Element 9(d): device usage data, and

Element 9(e): a unique identifier.

CLAIM 10: The method of claim 7, further comprising providing a second aspect of the media content associated with the content distribution campaign when the third rule associated with the second location is satisfied.

CLAIM 11: The method of claim 1, wherein specifying the first rule comprises specifying a limited timeframe, during the course of travel, in which the consumer is eligible to receive the media content associated with the content distribution campaign.

CLAIM 12: The method of claim 3, wherein specifying the first rule comprises specifying a limited timeframe, during the course of travel, in which the consumer is eligible to receive a second aspect of the media content associated with the content distribution campaign.

INDEPENDENT CLAIM 13:

Claim 13, Preamble: A method comprising:

Element 13(a): specifying a content distribution campaign comprising media content associated with a geolocation;

Element 13(b): specifying a plurality of rules for the content distribution campaign, wherein specifying the plurality of rules comprises:

13(b)(i): specifying the geolocation,

13(b)(ii): specifying a period of time, and

13(b)(iii): specifying at least one action to be performed by a consumer;

Element 13(c): receiving a first indication that the consumer is within a radius of the geolocation;

Element 13(d): tracking the consumer in response to receiving the first indication to determine whether the consumer has performed the at least one action; and

Element 13(e): establishing that the consumer is eligible for the content distribution campaign when the plurality of rules is satisfied.

CLAIM 14: The method of claim 13, wherein specifying the at least one action comprises specifying at least one of the following:

Element 14(a): a target destination; and

Element 14(b): a particular path towards the target destination.

CLAIM 15: The method of claim 13, further comprising:

Element 15(a): receiving a second indication that the consumer is engaged in a potential fulfillment of the at least one action.

CLAIM 16: The method of claim 15, wherein receiving the second indication comprises establishing that the consumer is performing at least one of the following actions: moving at a particular path, towards a target destination, and within the period of time.

CLAIM 17: The method of claim 13, further comprising:

Element 17(a): providing a first aspect of the media content in response to the first indication.

CLAIM 18: The method of claim 17, further comprising providing, upon a fulfillment of the at least one action, a second aspect of the media content.

CLAIM 19: The method of claim 18, wherein the second aspect of the media content comprises a modification of the first aspect of the media content.

INDEPENDENT CLAIM 20:

Claim 20, Preamble: A method, comprising:

Element 20(a): defining at least one of the following for a registered asset:

20(a)(i): a physical asset, and

20(a)(ii): a virtual asset;

Element 20(b): defining a media content associated with the registered asset, the media content comprising a first message and a second message;

Element 20(c): defining a consumer audience segment to be delivered the media content;

Element 20(d): defining a set of rules for providing the media content to the consumer audience segment, the set of rules comprising:

20(d)(i): a first rule corresponding a consumer's location in association with the registered asset, and

20(d)(ii): a second rule corresponding to at least one action performed by a consumer during a course of travel related to the consumer's location in association with the registered asset;

Element 20(e): receiving a first determination that the first rule has been satisfied;

Element 20(f): associating the first message with the consumer upon the first rule being satisfied;

Element 20(g): receiving a second determination that the second rule has been satisfied; and

Element 20(h): associating the second message with the consumer upon the second rule being satisfied.

CLAIM 21: The method of claim 20, wherein defining the set of rules further comprises defining at least one additional rule specifying the following:

Element 21(a): the consumer's relative presence at a first location associated a delivery of the first message;

Element 21(b): the consumer's relative presence at a second location associated with a delivery of the second message;

Element 21(c): the consumer's path from the first location to the second location; and

Element 21(d): a period of time in which the consumer traveled from the first location to the second location.

CLAIM 22: The method of claim 21, further comprising providing the media content to the consumer.

CLAIM 23: The method of claim 22, wherein providing the media content comprises:

Element 23(a): providing the first message when the at least one additional rule has not been satisfied, and

Element 23(b): providing the second message when the at least one additional rule has been satisfied.

Foursquare Labs, Inc., (hereinafter “Petitioner”), petitions for *inter partes* review (“IPR”) of claims 1-23 (the “Challenged Claims”) of U.S. Patent No. 10,692,108 (Ex. 1001, the “‘108 Patent”), assigned to BoardActive Corp.

I. IDENTIFICATION OF CHALLENGES

Petitioner requests institution of IPR of claims 1-23 of the ‘108 Patent on the grounds indicated below, and requests each Challenged Claim be found unpatentable. A detailed explanation of each identified ground is found in Sections V-IX. Arguments and evidence for each claim is incorporated by reference for all claims dependent thereon.

‘108 CHART		
Ground	Challenged Claims	Statutory Ground and Prior Art
Ground 1	1-23	Anticipated under 35 U.S.C. §102 by Verizon (Ex. 1004)
Ground 2	1-23	Obvious under 35 U.S.C. §103 over Verizon
Ground 3	13-19	Obvious under 35 U.S.C. §103 over Verizon in view of Geer (Ex. 1005)
Ground 4	1-23	Obvious under 35 U.S.C. §103 over Verizon in view of Creemer (Ex. 1006) or Scofield (Ex. 1007)
Ground 5	13-19	Obvious under 35 U.S.C. §103 over Verizon and Creemer or Scofield, further in view of Geer
Ground 6	1-23	Obvious under 35 U.S.C. §103 over Alcatel (Ex. 1008) in view of Verizon
Ground 7	13-19	Obvious under 35 U.S.C. §103 over Alcatel and Verizon, further in view of Geer

The ‘108 Patent issued on June 23, 2020 from U.S. Application No. 16/823,323, filed March 18, 2020, and purports to claim priority, as a continuation application, to an earlier filed patent application, U.S. Application No. 15/950,019, filed April 10, 2018, which purports to claim priority as a continuation-in-part of U.S. Application No. 15/483,790, filed April 10, 2017. As such, the Challenged Claims of the ‘108 Patent are entitled to a priority date no earlier than April 10, 2017, as the earliest potential effective filing date (“EPEFD”).

U.S. Patent Application Publication No. 2015/0095124 (“Verizon”) was filed on September 27, 2013 and published on April 2, 2015, Ex. 1004.

Geer, U.S. Patent Application Publication No. 2015/0262214 (“Geer”) was filed on February 10, 2015 and published on September 17, 2015, Ex. 1005.

Creemer, U.S. Patent Application Publication No. 2011/0171976 (“Creemer”) was filed on December 15, 2010 and published on July 14, 2011, Ex. 1006.

Scofield et al., U.S. Patent No. 9,516,470 (“Scofield”) was filed March 8, 2007 and issued on December 6, 2016, Ex. 1007.

European Patent Publication No. 2424278 A1 (“Alcatel”) was filed on December 21, 2010 and published on February 29, 2012, Ex. 1008.

Verizon, Geer, Creemer, Scofield, and Alcatel are each prior art to the ‘108 Patent under 35 U.S.C. § 102(a)(1) by publication date predating the EPEFD, and/or under 35 U.S.C. §102(a)(2) as a published patent application naming another

inventor, and effectively filed before the EPEFD. None of Verizon, Geer, Creemer, Scofield, and Alcatel were before the Examiner during prosecution.

II. GROUNDS FOR STANDING

Petitioner certifies the ‘108 Patent is eligible for, and Petitioner is not barred or estopped from requesting, IPR on the grounds identified herein. Petitioner was first served with a complaint alleging infringement of the ‘108 Patent on May 9, 2022. This Petition is timely filed within the one-year period of 35 U.S.C. §315(b).

III. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art at the time of the alleged invention of the ‘108 Patent (“POSITA”) would have had a Bachelor of Science Degree in Computer Science, Electrical Engineering, Computer Engineering or equivalent, and about two to three years of practical experience. Additional experience may substitute for specific education, or specific education may substitute for experience. Ex. 1002, Declaration of Dr. Goldberg, Ph.D., (“DEC.”), ¶26.

IV. CLAIM CONSTRUCTION

Pursuant to 37 C.F.R. §42.100(b), the applicable claim construction standard is the same standard used in federal district court. Petitioner believes that the constructions of terms can be appreciated from their overall discussion herein and

application of the prior art, and does not require express construction at this time, reserving all rights to support its interpretations.¹

V. OVERVIEW

The Challenged Claims concern the use of location information in determining advertising content, and may additionally consider other factors such as time, profile, or travel. These concepts were well-known before the '108 Patent was filed.

As discussed herein, with reference to the Appendix of Claims, each of Verizon and Alactel teaches the architecture of the claims, and, at times, even discloses or suggests additional aspects such as routine processing operations for travel, controls, or interfaces, as recited therein.

For example, as discussed in detail herein, Verizon discloses methods for distribution of advertisements in consideration of the user's location relative to points-of-interest, such as businesses. Verizon distributes advertisements to mobile phones, displays, and vehicles, provides advertisement updating, and considers user activity in providing content. Alcatel discloses content delivery, such as for advertisements, based on the user's travel in a particular direction.

¹ Petitioner's expressed or implied constructions are made without admission regarding the suitability of such terms for construction based on grounds not appropriate for IPR. Petitioner reserves all rights to challenge such terms, including under 35 U.S.C. §112.

To the extent that either Verizon or Alcatel lacks discussion on certain aspects such as the underlying processes supporting their disclosed location-travel operations and/or administrative options, such aspects were known to the artisan and/or taught by other prior art.

VI. GROUNDS 1, 2, & 4: VERIZON / VERIZON AND CREEMER OR SCOFIELD

A. INDEPENDENT CLAIM 1

1. Claim 1, Preamble

2. Element 1(a)

Verizon discloses a method, as recited in claim 1, including specifying a content distribution campaign, by its establishing a communication platform specifying geolocation and related media content. *E.g.*, Verizon, Abstract (“method for displaying marketing content at predetermined locations ... distributed to a mobile device.”), ¶¶[0002] (presenting advertisements based on the location), [0015] (content), [0028] (advertiser content, geographical locations of businesses or displays), [0036] (proximity), [0038] (content), [0042] (geolocations and associated content), [0054] (“businesses associated with marketing content”), [0065], FIGs. 1-9; DEC., ¶239. For example, as suggested in FIG. 1, excerpted below, Verizon communicates tailored content, including advertisements, to various devices like mobile phones and vehicles.

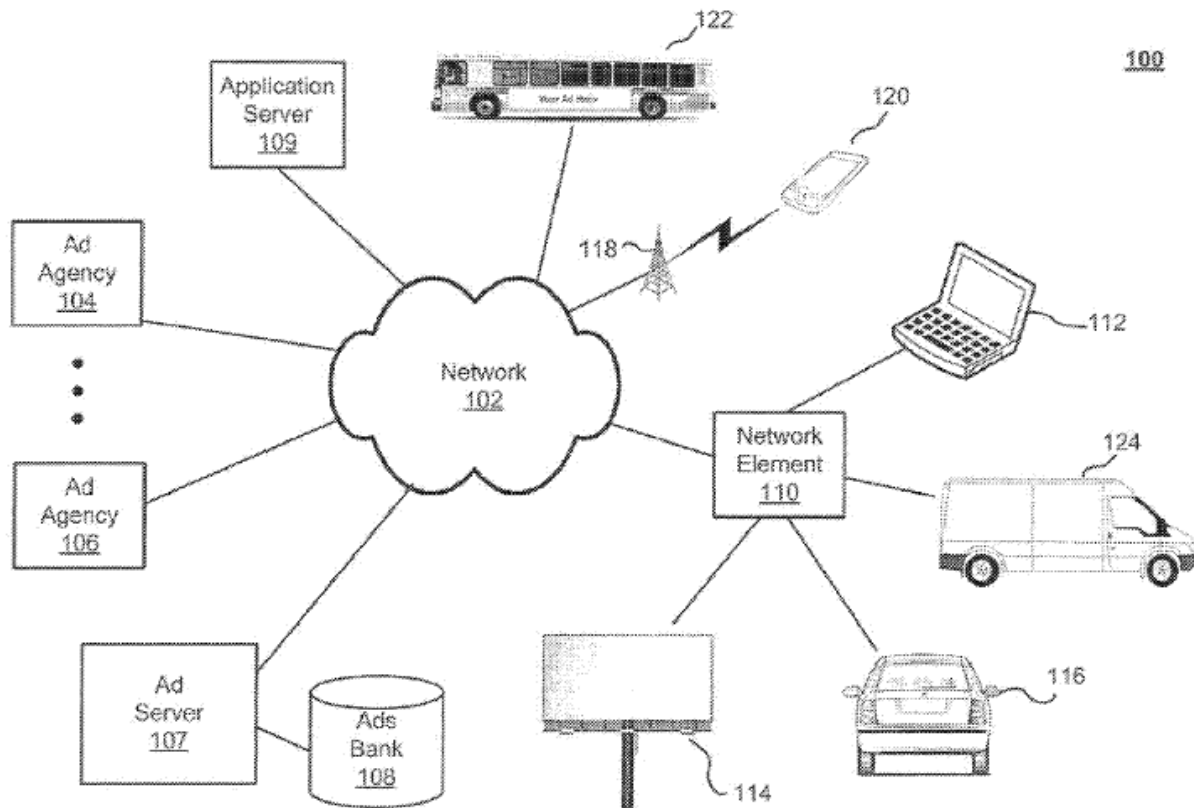


Fig. 1

Verizon – FIG. 1

Verizon specifies delivering content as the user/consumer travels from place to place, where associated media content are delivered responsive to this travel, according to its campaign. Verizon, ¶¶[0042], [0043], [0053], [0054]; DEC., ¶240. Verizon's media content includes advertisements, coupons, and related communications. *E.g., id.*, ¶¶[0042], [0043], [0050].

3. *Element 1(b)*

Verizon discloses specifying rules corresponding to period of time, profile data, and course of travel as recited. For example, Verizon discloses content rules corresponding to hours of store operation (Verizon, ¶¶[0028] (11am-7pm), [0042] (breakfast/lunch, evening), [0058]), as well as “predetermined times or intervals” (*id.*, ¶[0054]; *see also id.*, ¶[0047]); DEC., ¶241. Verizon further discloses specifying rules corresponding to user/consumer profile data as recited. *E.g.*, Verizon, ¶¶[0040] (user profiles and/or settings, preferences), [0041] (user settings), [0047], [0048] (age, ethnicity, employment status, income, education, languages, identity), [0049], [0050], [0053], [0055]-[0056], [0066]-[0067]; DEC., ¶241.

Verizon discloses specifying rules corresponding to consumer course of travel as recited. *E.g.*, Verizon, ¶¶[0036] (speed/direction of travel), [0042], [0045], [0053] (physical travelling), [0058]-[0060]. By example, Verizon discloses that the consumer’s course of travel affects the content delivery including by speed and/or direction of travel (*id.*, ¶¶[0036], [0045]); proximity to interests during travel (*id.*, ¶¶[0028], [0036], [0036], [0042] (near), [0044] (nearby), [0054] (proximity to businesses associated with content), [0065], [0071]-[0072]); and also the manner of travel (*id.*, ¶¶[0058] (street/highway, walking/driving), [0047] (walking)). Accordingly, Verizon discloses each aspect of this limitation on its own. DEC., ¶¶242-246.

However, to the extent that Verizon's rules for speed/direction, proximity, and/or manner of travel do not explicitly or elaborately discuss a course of travel as recited, in the same area of technology, Creemer discloses targeted-content delivery including rules corresponding to a consumer's course of travel by consideration of the user's path of travel. Creemer, ¶¶[0062]-[0064], FIG. 8. For example, Creemer discloses applying user position and time information to determine rate of travel "along the user's path," and averages "for the overall journey." *Id.*, ¶[0062]. Creemer discloses consideration of the user's direction. *Id.*, ¶¶[0063] ("along the user's path."), [0064] ("user's rate and direction of travel along segments of the user's path, or for the overall journey."). Creemer discloses consideration of mode of transportation such as whether a user is walking or riding in a vehicle in content distribution. *Id.*, ¶[0065], FIG. 8. Creemer also considers "estimated future position" in providing content, which can be based on the path information already available. Creemer, ¶[0068]; *see also id.*, ¶[0071]. Creemer illustrates Verizon's speed/direction, proximity, and/or manner of travel constitute the recited course of travel. Nevertheless, to the extent lacking, POSITA would have modified Verizon to have Creemer's more express consideration of the consumer's course of travel (path) to improve precision, consider of user circumstances, refine known information, and/or otherwise to improve accuracy, reduce noise, and/or promote

efficiency in targeted communications. *See* Creemer, Abstract, ¶¶[0010]-[0015]; DEC., ¶¶41-43, 247-252.

Alternatively, in the same area of technology, Scofield discloses the recited rule of course of travel through traffic patterns, navigational paths, and/or user trails to provide content. *E.g.*, Scofield, Cols. 3:42-47 (navigational paths and/or user trails for directing advertising content), 4:43-55, 5:23-32 (order in which locations visited), 5:33-54 (paths), 5:64-67 (“how (e.g., by what geographic path, trail, or avenue) a mobile device user is traveling between locations.”), 6:19-36 (path/time/location), 6:48-56, 8:42-45, 9:15-45, 11:40-12:24 (deviations), 14:42-50, 16:39-63 (different paths, weighting), 17:34-41, 18:40-47, 19:1-28, 20:16-48, 21:21-25. For example, Scofield applies the user’s path (or “trail”) to determine desirable advertisements. Cols. 4:43-55, 5:17-32. Scofield expansively considers such paths as consumer courses of travel including the user’s movements generally. *Id.*, Cols. 5:33-6:36. Scofield discloses using consumer paths to provide targeted advertising and to increase visibility for businesses, and POSITA would have modified Verizon by Scofield’s express course of travel to increase accuracy, reduce noise, and/or otherwise promote efficiency in targeted communications. Scofield, Col. 4:56-5:16; DEC., ¶¶253-256.

4. *Element 1(c)*

Verizon discloses receiving a first indication as recited, by proximity to the geolocation. For example, Verizon discloses a radius about a geolocation of interest as a proximity for distributing content. *E.g.*, Verizon, ¶¶[0036] (location/proximity including radius from display/business), [0039] (proximity), [0044], [0046], [0052] (location/proximity module), [0055], [0071]-[0072]. By receiving indication of adequate proximity (within the radius), Verizon determines appropriate marketing content for distribution. *Id.*, ¶¶[0065], [0071]-[0072]. Verizon's examples of traveling near geolocations, such as Newark airport, illustrate receiving a first indication of the consumer within the proximity of the geolocation, and receiving media content such as advertisements. *Id.*, *e.g.*, ¶¶[0041]-[0044]; DEC., ¶¶257-260.

5. *Element 1(d)*

Verizon discloses assessing as recited, at least by its location-based content delivery. In Verizon's examples, the user travels near locations 1, 2, and 3. Verizon, ¶¶[0042]-[0043], FIG. 4 (450). When Verizon's system receives indication that the user's mobile device is in proximity to the geolocation of interest, the system determines content to be distributed, including by assessing consumer profile data for correspondence. *Id.*, ¶¶[0040], [0047] (profile comparator), [0048] (address, email, gender, financials, age, language), [0049]-[0056], [0067]-[0068], [0076]-[0076], FIG. 8. Verizon, thus, assesses profile data as a part of its content delivery. *Id.*, ¶[0067] (inundation); DEC., ¶¶261-263.

6. *Elements 1(e)-(f)*

Verizon discloses receiving a second indication and determining the course of travel, as recited, by execution of its rules. *E.g.*, Verizon, ¶¶[0036] (speed/direction of travel), [0042]-[0043], [0045], [0053] (physical travelling), [0058]-[0060]. By example, Verizon discloses that the consumer's course of travel, including consumer speed and/or direction of travel; consumer proximity to interests during travel; and consumer manner of travel, affects content delivery to the consumer. *See supra*, VI(A)(3)(element 1(b)). POSITA would have appreciated Verizon's location tracking, such as by GPS, to disclose comparison of discrete locations indicating course of travel, or would have implemented these known techniques to yield predictable results. *Id.*, ¶¶[0027], [0036]; DEC., ¶¶264-268 (GPS as discrete location comparison in determining speed/direction).

However, continuing from above (*supra* VI(A)(3)(element 1(b))), to the extent that Verizon does not expressly or elaborately discuss execution of its rules for course travel, Creemer and Scofield disclose such receiving and determining as recited.

For example, Creemer discloses considering first and second locations of the consumer's mobile device to determine the user's path as the course of travel. Creemer, ¶¶[0062]-[0066], FIG. 8. Creemer discloses such comparison to apply the user's path for targeted content. *Id.*, ¶¶[0059]-[0066]; DEC., ¶¶270-271.

Alternatively, Scofield discloses analyzing periodic position information to determine “how (e.g., by what geographic path, trail, or avenue) a mobile device user is traveling between locations.” *See* Scofield, Col. 5, ll. 64-67; *see also* Cols. 5:55-6:10, 6:14-36. This periodic information includes at least first and second locations indicated from the mobile device to the remote system. *Id.*, Cols. 6:14-36; DEC., ¶272.

POSITA would have incorporated the recited receiving and determining, as taught by Creemer or Scofield, in furtherance of execution of Verizon’s rules, to increase precision, consider user circumstances, refine information and visibility, and/or otherwise improve accuracy, reduce noise, and/or promote efficiency in targeted communications. DEC., ¶273.

7. *Element 1(g)*

Verizon discloses establishing eligibility as recited, at least by its delivery of content upon satisfaction of the rules. For example, Verizon discloses delivery of content under conditions satisfying its rules (e.g., Verizon, ¶¶[0042], [0043], FIG. 4), including appropriate aspects of the user profile (e.g., *id.*, ¶¶[0047]-[0049]). *See also supra*, Section VI(A)(3)(element 1(b)). Moreover, Verizon’s general intent to provide targeted content provides rules-based content determination and delivery. DEC., ¶¶274-275.

To the extent that Verizon is not express or elaborate, it would have been obvious to POSITA at the time of alleged invention to have incorporated the recited rule of course of travel, and determining such course of travel based on an analysis of the first location and the second location, as recited, as taught by one or both of Creemer and Scofield. POSITA would have appreciated this to improve precision, consider user circumstances, refine information and visibility, and/or otherwise to improve accuracy, reduce noise, and/or promote efficiency in targeted communications. DEC., ¶276.

B. CLAIM 2

Verizon discloses the recited rule specifying a destination. *E.g.*, Verizon, ¶¶[0028] (e.g., businesses, addresses, parks, institutions, locations, ice cream shop), [0035], [0039], [0042] (e.g., airport, Manhattan, theater district, Times Square), [0058], [0065], [0071]. Verizon discloses general areas as destinations, such as Manhattan, (*Id.*, ¶[0042]) and also specific businesses as destinations such as Newark airport. *Id.*, [0042]; DEC., ¶277.

To the extent that Verizon does not expressly or elaborately discuss these end points as target destinations, each of Creemer and Scofield disclose specifically a destination as the second location to forecast relevant information. DEC., ¶278.

For example, Creemer discloses specifying a destination as part of the course of travel. Creemer, Abstract, ¶¶[0015], [0018] (destination), [0068] (future

position), [0071] (common point). Creemer discloses prediction of destination and likely future positions according to rate, direction, and/or manner of travel to determine destination as a course of travel of the user, as a basis of providing content. *Id.*, ¶[0068]; DEC., ¶¶279-280.

Additionally or alternatively, Scofield discloses specifying a destination as part of its course of travel. *E.g.*, Scofield, Cols. 5:33-54, 6:3-36 (analyzing user's "past movements" to "determine those locations that may be considered a part of the user's current path, pattern or trail and uses those locations to determine a next destination"), 8:54-9:5 (airport destination and content for vendors nearby destination), 9:35-45 (display device may be considered "associated with a path" when the device is located "along or near the path including a user destination at the start, end or along the path" or located at anywhere "viewable from a user traveling along a path or trail between a current location for the mobile device user and the predicted destination."); 12:41-53 (A-D), 14:42-66, 16:39-64 (multiple paths/destination), 19:7-29 (hops, traveling to destination), FIG. 3. For example, Scofield discloses determining a destination of the course of travel and selects appropriate content specific to the course of the travel and/or the destination itself. *Id.*, 6:3-36, 8:54-9:5 (ads concerning destination). DEC., ¶¶281-282.

POSITA would have appreciated that incorporating into Verizon the recited specifying the third rule including a destination as the second location, as taught by

Creemer or Scofield, in furtherance of precision, consideration of user circumstances, refinement of information, visibility, and/or otherwise to improve accuracy, reduce noise, and/or promote efficiency in targeted communications concerning end points of travel. DEC., ¶283.

C. CLAIMS 3-5

Verizon discloses providing, tracking, and providing, as recited, at least by its routine updating of initial content based on second location.² *E.g.*, Verizon, ¶¶[0034], [0036], [0042] (real-time updating), [0043] (minor modification of ads), [0051]; DEC., ¶284 (tracking during course of travel disclosed both directly ¶¶[0036] and by example [0042]). Verizon provides examples, including AD1 received near the airport, and AD2 approaching Manhattan. *Id.*, ¶[0043]. Verizon teaches that particular content is provided, such as AD1, according to rules based on time (*e.g.*, *id.*, ¶¶[0028], [0042]) and profile data (*e.g.*, *id.*, ¶¶[0039], [0040]). Such initial content (*e.g.*, AD1) constitutes the “first aspect of the media content.” Verizon further discloses location-based updating of content, both by subsequent ads of different types, such as wholly different businesses (*id.*, ¶[0042]), and also as small updates to original ads such as referring to different locations of the same business

² To the extent that any tacit additional aspects are required of claims 3-5, for example, concerning a destination such as in claim 2, arguments and evidence concerning claim 2 are incorporated as to claim 3 and its dependent claims.

(¶[0043]). Such different ads or updated ads (e.g., AD2, AD3) constitute the “second aspect of the media content.” Verizon discloses tracking during the course of travel at least by its tracking user location between the examples ads (e.g., AD1, AD2, AD3). Verizon, ¶¶[0036], [0042], [0043]; DEC., ¶¶284-286.

D. CLAIM 6

Verizon discloses such indication of user interaction with the content as recited. For example, Verizon discloses user action on received ad content by clicking links, inquiring, saving, sharing, or approaching related businesses. *E.g.*, Verizon, ¶¶[0038], [0040], [0046], [0047], [0050] (hyperlink, updating user profile), [0053] (act upon, traveling to business location), [0057] (wishlist), [0066]; DEC., ¶287. In one example, Verizon specifically discusses that the user may “download to the mobile device 120 marketing content that was just seen while the user was walking down the street.” *Id.*, ¶[0047]. Verizon discloses acquiring content by saving/storing to the mobile device as acting on the content, and includes at least receiving the indication including the request signal from the mobile device at the same time. *Id.*, ¶[0053]; DEC., ¶288.

E. CLAIMS 7 & 10

Verizon discloses the recited specifying a limited timeframe as presenting content within predetermined timeframes. Verizon, ¶¶[0028] (11am-7pm), [0042] (breakfast/lunch, evening), [0047] (predetermined amount of time; while walking

down the street), [0054] (interval); DEC., ¶289. Moreover, Verizon's updating of content during the course of travel presents limited time for user interaction including viewing, saving, sharing, etc., as the update arrives. *E.g.*, Verizon, ¶¶[0034], [0038] (frames), [0042] (real-time), [0043], [0046], [0051], [0053]; DEC., ¶289 (explaining Verizon's course of travel to provide limited viewing time).

Verizon discloses providing the second aspect as recited, by its routine updating of initial content based on second location. *E.g.*, Verizon, ¶¶[0034], [0042], [0043] (minor modifications), [0051]; DEC., ¶290. Such second aspects are disclosed by each of Verizon's wholly new ads and modified ads. *Id.*, ¶¶[0042], [0043]; DEC., ¶290.

F. CLAIM 8

Verizon discloses user interaction with the content, including responsively tracking the consumer during the course of travel as recited. *E.g.*, Verizon, ¶¶[0040], [0046], [0047] (predetermined amount of time; download while walking down the street), [0050] (URL clicks and weighting), [0053] (act upon); [0057] (wishlist), [0066]. Verizon discloses responsively tracking the consumer during travel, and particularly tracking of user activity when the user interacts with 'acts upon' content. For example, Verizon discloses content containing hyperlinks/URLs causes recording when clicked by the consumer. Verizon, ¶¶ [0050] (acted upon, wishlist, historical actions), [0053]. In application, as the consumer travels along, content

URLs can be presented and clicked to generate “historical actions” used in content tailoring. Verizon, ¶¶ [0050] (retain information, history, historical actions), [0053]; DEC., ¶¶291-292. Verizon notes that a consumer ‘acting upon’ content includes clicking website links, e-shopping, mapping locations of businesses, and physically traveling to businesses. Verizon, ¶[0053]. Verizon implements such interaction rules, e.g., for relevance weighting in determining content distribution. *Id.*, ¶[0050] (weighted in determining content); DEC., ¶293. Accordingly, Verizon discloses responsive tracking of consumer activity when the consumer interacts with content, as recited. Further responsive activity within Verizon’s process includes updating and further tracking as the user travels. *E.g.*, Verizon, ¶¶[0042]-[0043]; DEC., ¶¶292-293.

G. CLAIM 9

As discussed above concerning claim 8, Verizon’s consumer tracking includes tracking of location data (e.g., Verizon, ¶[0040]) and device usage data at least such as clicking URLs, e-shopping, mapping locations of businesses, and physically traveling to businesses, via the consumer’s mobile device. *E.g.*, Verizon, ¶¶[0040], [0050], [0053]. Moreover, POSITA would have appreciated Verizon to conduct location tracking at least by location, telemetry data, and unique identifiers of the mobile devices such as IMEI, and also by sensor data at least by Verizon’s

use of short range communications such as Bluetooth. Verizon, ¶[0027]; DEC., ¶¶294-295.

H. CLAIMS 11 & 12

Although claims 11 and 12 differ as claim 12 depends from intermediate claim 3 and concerns a second aspect, the application of the prior art is similar, and thus, these claims are addressed together.

As discussed above concerning claim 7, Verizon discloses presenting content in predetermined intervals, affording limited timeframe for user interaction. Verizon, ¶¶[0047] (predetermined amount of time; download while walking down the street), [0054] (interval), [0065] (expiration, time); DEC., ¶297. Moreover, Verizon's updating of content during the course of travel presents limited time for consumer interaction including viewing, saving, sharing, etc. *E.g.*, Verizon, ¶¶[0034], [0042] (real-time), [0043], [0046], [0051], [0053]; DEC., ¶297 (course of travel). These timeframes are specified during the course of travel because the travel causes ad changes based on their speed/proximity, and by Verizon's specific disclosure to show content as the user is "walking down the street." Verizon, ¶[0047]; *see also, id.*, ¶¶[0042], [0043], [0065]; DEC., ¶297. Verizon provides a first media aspect to include media content and a second aspect of media content under its routine content provisioning and updating, and the content is time limited, for example, by applicable operating hours of the related business. *E.g.*, Verizon,

¶¶[0034], [0042], [0043] (minor modifications), [0047], [0051], [0065] (operation hours); DEC., ¶298. Accordingly, Verizon discloses the recited limited timeframes.

I. INDEPENDENT CLAIM 13

Verizon alone discloses all limitations as recited within independent claim 13. Many of such limitations are observable and identified within the prior art on the same basis as above concerning independent claim 1 and its dependent claims, and all arguments and evidence concerning Verizon with Creemer or Scofield regarding claims 1-12 are incorporated by reference herein to indicate their location within Verizon. Particular aspects of claim 13 which can benefit from further identification of their disclosure within Verizon are addressed below.

1. Claim 13, Preamble

2. Element 13(a)

Verizon discloses a method comprising specifying a content distribution campaign via its communication platform, including specification of requirements concerning geolocation and associated media content. *E.g.*, Verizon, Abstract (“method for displaying marketing content at predetermined locations ... distributed to a mobile device.”), ¶¶[0002] (presenting advertisements based on the location), [0015] (content), [0028] (advertiser content, geographical locations of businesses or displays), [0036] (proximity), [0038] (content), [0042] (geolocations and associated content), [0054] (“businesses associated with marketing content”), [0065], FIGs. 1-

9; DEC., ¶300. For example, Verizon discloses specifying content for distribution where media content is communicated in response to a user/consumer traveling from place to place. Verizon, ¶¶[0042], [0043], [0053], [0054]; DEC., ¶301. Verizon discloses its media content itself to include advertisements, coupons, and related communications. *E.g., id.*, ¶¶[0042], [0043], [0050].

3. *Elements 13(b)*

In comparison to claim 1, claim 13 recites specifying the geolocation as a sub-feature of specifying rules rather than the campaign itself. The difference does not appear to have meaningful distinction in the claims, and is not directly explained within the specification.

Verizon's specifying of geolocation also meets the recitation as a sub-feature of rules. Verizon discloses a communication platform defined by rules/requirements, including geolocations. Verizon, ¶¶[0028] (advertiser content, geographical locations of businesses or displays), [0036] (proximity), [0042] (geolocations and associated content), [0054] ("businesses associated with marketing content"), [0065], FIGs. 1-9; DEC., ¶303. For example, Verizon discloses specifying content for delivery that changes as the user/consumer travels between geolocations. Verizon, ¶¶[0042], [0043], [0053], [0054]; DEC., ¶303.

Verizon discloses a content distribution campaign rule including specifying an action by the consumer as recited, at least by disclosing communications based

on how/whether the consumer “acted upon” content. For example, Verizon’s rules for content distribution concern consumer actions to click links, add to wishlists, and other “historical actions” Verizon, ¶¶[0040], [0043] (updating), [0046], [0047], [0050] (links, wishlist, historical actions, weighting), [0053] (act upon); [0057] (wishlist), [0066]. Verizon weights consumer actions in determining content distribution according to the rules. *Id.*, ¶[0050]; DEC., ¶304.

4. *Elements 13(c)-(d)*

Verizon discloses receiving an indication and responsively tracking the consumer as recited. For example, Verizon discloses user action on received media content. *E.g.*, Verizon, ¶¶[0040], [0046], [0050], [0053] (act upon); [0057] (wishlist), [0066]. Verizon discloses responsive tracking to consider the consumer’s acts upon content. Verizon, ¶¶[0050] (acted upon, retain information, historical actions), [0053]. Verizon notes that consumers ‘acting upon’ content includes e-shopping, mapping locations of businesses, and physically traveling to businesses. *Id.*, ¶[0053]. In practice, Verizon provides media content as the consumer enters the radius of the geolocation, e.g., airport, and consumer actions are tracked, including to determine when the consumer travels to a business location. Verizon, ¶¶[0042], [0053]; DEC., ¶¶305-306. Accordingly, once the initial content is provided by occupying the geofence radius, Verizon responsively tracks the consumer activity to determine performance of the action, as recited, including as it weighs on Verizon’s

ad tailoring. *Id.*, [0042], [0053]; DEC., ¶306. Further activity within Verizon's process includes updating and tracking as the user travels, and thus consumers not traveling to the business location may be deemed not to 'act upon' the content. *E.g.*, Verizon, ¶¶[0042]-[0043]; DEC., ¶¶305-306.

5. *Element 13(e)*

Verizon discloses establishing eligibility based on satisfying rules including by content delivery and relevance weighting. *E.g.*, Verizon, ¶¶[0040], [0050], [0053]; DEC., ¶307. Verizon discloses its operations in terms of the rules/requirements and describes their execution by example, including culminating in delivery of the appropriate content. *E.g.*, *id.*, ¶¶[0042], [0043]; DEC., ¶307.

J. *CLAIM 14*

As discussed above concerning claim 1, Verizon discloses specifying user action including target destinations and/or paths thereto including travel through airports and specific cities, districts, and businesses. Verizon, ¶¶[0042] (Newark airport, Manhattan, [0043] (minor updating), [0053] (travelling to business location), [0054] (airport). Moreover, Verizon tracks the consumer acting upon content by traveling to a particular business location, and by mapping particular directions to that business. *Id.*, ¶[0053]; *see also id.*, ¶[0043] (minor modifications); DEC., ¶308. (explaining Verizon's path and destinations, and in light of Verizon's minor modifications). Accordingly, Verizon discloses the consumers' particular path to a

target destination as a rule specified under its campaign for content distribution. DEC., ¶308.

However, as discussed above concerning Element 1(b) of claim 1, to the extent that Verizon does not expressly or elaborately discuss its end points as target destinations, or rules for speed/direction, proximity, and/or manner of travel as a particular path towards the target destination as recited, each of Creemer and Scofield disclose such aspects. *See supra*, VI(A)(3) (Creemer and/or Scofield concerning Element 1(b)); *see also* Creemer, ¶¶[0062]-[0064], FIG. 8; *see also e.g.*, Scofield, Cols 3:42-47 (navigational paths and/or user trails for directing advertising content). POSITA would have appreciated that incorporating the recited specification of target destination as the second location, as taught by Creemer or Scofield, would improve precision, consider user circumstances, refine information and visibility, and/or otherwise improve accuracy, reduce noise, and/or promote efficiency in targeted communications concerning paths and end points of travel. DEC., ¶¶309-310.

K. CLAIM 15

Verizon discloses receiving such second indication as continued travel and as the user interacts with or ‘acts upon’ content. For example, Verizon discloses that clicking hyperlinks/URLs, obtaining information, adding goods to virtual cart, and/or traveling towards businesses can be indications worthy of greater relevance

weight in tailoring content and indicating greater likelihood for consumer actions. Verizon, ¶¶[0019], [0044], [0050] (acted upon, wishlist, historical actions), [0053]; DEC., ¶311.

L. CLAIM 16

The arguments and evidence concerning claim 14, including references to claim 1, are incorporated here by reference, and amply disclose and/or render obvious the recited particular path, towards target destination, within the period of time. *See e.g.*, Verizon, ¶¶[0042] (Newark airport, Manhattan, [0053] (travelling to business location), [0054] (airport); *see also* Creemer, ¶¶[0062]-[0064], FIG. 8; *see also e.g.*, Scofield, Cols. 3:42-47 (navigational paths and/or user trails for directing advertising content); DEC., ¶312. Verizon's rules require qualifying travel to occur during the appropriate periods of time, for example, during business hours, (*e.g.*, Verizon, ¶¶[0028] (11am-7pm), [0034], [0036], [0042], [0043], [0046], [0051], [0053], [0058]), and also specifying "predetermined times or intervals" (*id.*, ¶[0054], *see also id.*, ¶[0047]); DEC., ¶¶313-314.

M. CLAIMS 17-19

Verizon discloses providing a first aspect, as recited, at least by its location-based content. *E.g.*, Verizon, ¶¶[0034], [0036], [0042] (location-based content), [0043], [0051]; DEC., ¶315. Verizon provides examples, including AD1 received near the airport, and other advertisements can also constitute a first aspect of media

content. *Id.*, ¶[0043]. Verizon further discloses its location-based communications to constitute second aspects, such as subsequent ads of different types for wholly different businesses (¶[0042]) and also as small updates to original ads such as referring to different locations of the same business (¶[0043]) or a different frame of an advertisement (¶[0038]). DEC., ¶¶315-316.

Verizon discloses providing the second aspect upon a fulfillment, as recited, at least by its teachings to tailor communications based on how/whether the consumer “acted upon” content. For example, Verizon’s rules for content distribution concern consumer actions to click links, add to wishlists, and other “historical actions” Verizon, ¶¶[0040], [0043] (updating), [0046], [0047], [0050] (links, retain information, historical actions, weighting), [0053] (act upon); [0057], [0066]. Verizon implements such rules including by weighting of consumer actions in determining content distribution. *Id.*, ¶¶[0040], [0050] (weighted in determining market content for distribution); DEC., ¶316. Thus, subsequent user action resulting in updated content or relevance as taught by Verizon, yields a second aspect of media content.

Verizon discloses modifying the first aspect by updating a first advertisement with “minor modifications” to a second or third advertisement with tailored content. Verizon, ¶¶[0042], [0043] (“AD 2 and/or AD 3 may be substantially similar to AD 1 but have minor modifications.”). For example, Verizon may update a discount

offer/code and different location for the same business. *Id.* In practice, where Verizon provides a first ad indicating a store, and the user is tracking walking towards the store in response, providing a discount may further increase the likelihood of the user entering the store. Accordingly, Verizon discloses its second aspect as a modification to the first advertisement. DEC., ¶317.

N. INDEPENDENT CLAIM 20

1. Claim 20, Preamble

2. Element 20(a)

Verizon discloses the recited method including defining at least a physical asset (e.g., billboard, display) for a registered asset, and the digital content shown on such displays constitutes the displays as virtual assets. *E.g.*, Verizon, ¶¶[0028] (e.g., businesses, addresses, parks, institutions, locations, ice cream shop), [0035], [0036], [0039], [0042] (e.g., airport, Manhattan, theater district, Times Square), [0058], [0065], [0071]; DEC., ¶318.

3. Element 20(b)

Verizon discloses defining media content to include first and second messages, such as subsequent ads of different types (e.g., wholly different businesses concerning the same asset (e.g., ¶[0042] airport, hotels, restaurants)); small updates to original ads referring to different locations of the same business (¶[0043] (minor modifications)); updating different promotions for the same business, or different

locations of a franchise (§[0043]); or a different frame of an advertisement (§[0038]). DEC., ¶319.

4. *Element 20(c)*

Verizon defines a consumer audience segment as recited, at least by its application of user settings and/or profiles. For example, Verizon discloses consideration of user settings and/or profile characteristics such as name, address, gender, financials, demographics, options. Verizon, §§[0047] (user profile comparator), [0048]-[0050], FIG. 4 (450); DEC., ¶320. Verizon's content tailoring also defines consumer segments through its general location-based services, which consider user location/proximity/actions in determining the audience segment for targeted ads. *E.g.*, Verizon, §§[0042], [0043], [0053]; DEC., ¶320.

5. *Element 20(d)*

Verizon discloses defining rules as recited, at least by its general location-based content delivery which considers consumer location/proximity and consumer actions for providing targeted ads. *E.g.*, Verizon, §§[0028], [0036], [0040], [0042], [0043], [0050], [0053], [0054], [0058]; DEC., ¶321. For example, Verizon discloses location/proximity based content tailoring. Verizon, §§[0036] (consumer location relative to asset billboard/display), [0042], [0043], [0054]. Verizon also discloses consumer activity rules when the consumer "acts upon" content. For example, in addition to its rules for general location-based ads, Verizon discloses rules

concerning consumers clicking content hyperlinks, saving, sharing, inquiring about content, and when consumers physically travel to businesses offering ads. Verizon, ¶¶[0050] (acted upon, wishlist, historical actions, weighting), [0053] (physically traveling). Verizon's content is provided during the course of travel in proximity to the place of interest, such as a business, and its consumer interaction likewise includes actions during the course of travel. *E.g., id.*, ¶¶[0042], [0043], [0047] (download while walking down street), [0058]. Verizon's content rules, thus, include actions such as clicking the ads received based on location, or traveling to the ad's business during consumer travel in relation to the asset. DEC., ¶¶322-323.

6. *Element 20(e)-(h)*

Verizon's general location-based rules disclose the recited receiving/associating rules and messages as recited. For example, in Verizon's walk through example, Verizon would generate a first AD 1 when the first rule of location were satisfied by traveling to Manhattan, and AD 2 when the user acts to travel closer to Times Square as the asset within Manhattan. Verizon discloses receiving the recited determinations in at least that its unit/server 107/124 receives such internal determinations executed by its logic modules, and otherwise as the interface modules, network, and/or mobile devices receive such determinations as outbound communications from the unit/server. Verizon, FIGs. 1-2B; DEC., ¶324. Verizon's disclosure for updating in the form of "minor modifications" to earlier

advertisements distinctly achieves such steps as recited. Verizon, ¶[0043]; DEC., ¶325. (minor modification of Ads). Verizon discloses that real-time updates in content to a different incentive-promotion or to a different location of a business indicates distinct messages regarding the same registered asset, and delivery of the messages constitutes the recited associating steps. *Id.*, ¶[0043]; DEC., ¶325. Verizon associates such messages both by sending content, and distinctly by retaining the information as historical user actions. Verizon, ¶¶[0050], [0053]; DEC., ¶325.

O. CLAIM 21

Verizon discloses defining rules to include the consumer's relative presence at first and second locations, the path there between, and time period as recited, at least by its pathway and time-delimited examples. *E.g.*, Verizon, ¶¶[0036] (speed/direction of travel), [0042], [0045], [0053] (physical travelling), [0058]-[0060]. Verizon discloses its content rules correspond to relevant hours of store operation (Verizon, ¶¶[0028] (11am-7pm), [0042] (breakfast/lunch, evening), [0058]), and also specifying "predetermined times or intervals" (*id.*, ¶[0054], *see also id.*, ¶[0047]); DEC., ¶326.

Verizon discloses distinct rules concerning general location-based content delivery (e.g., Verizon, ¶[0042]), and specific updating of the same communication with a second message having "minor modifications" (Verizon, ¶[0043]). Either

instance of Verizon general or update rules apply to rules in claim 20 and rules in claim 21. Additionally, Verizon's minor modifications update discloses definition of the at least one additional rule where the consumer's presence at Newark Airport provides a first message such as an airport lobby coffee bar advertisement; upon walking from the lobby towards a particular terminal, the consumer receives an update to another location of the same coffee bar near the terminal, based on the path between locations, during hours of operation, and/or in consideration of speed/direction of travel. Verizon, ¶¶[0036], [0043]; DEC., ¶¶327-328 (explaining Verizon's minor modifications updating including path relative to first and second locations).

Verizon discloses that the consumer's path affects the content delivery including by speed and/or direction of travel (Verizon, ¶¶[0036], [0045]), proximity to interests during travel (Verizon, ¶¶[0028], [0036], [0036], [0042] (near), [0044] (nearby), [0054] (proximity to various businesses associated with marketing content), [0065], [0071]-[0072]), and manner of travel (Verizon, ¶¶[0058] (street/highway, walking/driving), [0047] (walking). DEC., ¶329.

To the extent that Verizon does not expressly or elaborately discuss its rules for speed/direction, proximity, and/or manner of travel to be distinctly specified as a path as recited, in the same area of technology, Creemer discloses targeted-content delivery including rules corresponding to a consumer's path of travel. Creemer,

¶¶[0062]-[0064], FIG. 8. For example, Creemer discloses applying first and second user positions and times to determine rate of travel “along the user’s path,” and also averages “for the overall journey.” *Id.*, ¶¶[0062], [0063] (user’s direction “along the user’s path.”), [0064] (“user’s rate and direction of travel”). Creemer further discloses consideration of mode of transportation (e.g., walking or in a vehicle) in content distribution (Creemer, ¶[0066], FIG. 8) and “estimated future position” in content provisioning which can be based on the path information already available. *Id.*, ¶[0068]; *see also id.*, ¶[0071]. Creemer illustrates Verizon’s speed/direction, proximity, and/or manner of travel to disclose the consumer’s path. Nevertheless, POSITA would have implemented Creemer’s more discrete consideration of the consumer’s path into Verizon to promote precision, consider user circumstances, refine information, and/or otherwise to improve accuracy, reduce noise, and/or promote efficiency in targeted communications. *See* Creemer, Abstract, ¶¶[0010]-[0015]; DEC., ¶¶330-332.

Alternatively, in the same area of technology, Scofield discloses the recited rule for the consumer’s path by its traffic patterns, navigational paths, and/or user trails for content. *E.g.*, Scofield, Cols 3:42-47 (navigational paths and/or user trails for directing advertising content), 4:43-55, 5:23-32 (order in which locations visited), 5:33-54 (paths), 5:64-67 (“how (e.g., by what geographic path, trail, or avenue) a mobile device user is traveling between locations.”), 6:19-36

(path/time/location), 6:48-56, 8:42-45, 9:15-45, 11:40-12:24 (deviations), 14:42-50, 16:39-63 (different paths, weighting), 17:34-41, 18:40-47, 19:1-28, 20:16-48, 21:21-25. For example, Scofield applies the user's path (also referred to trail) to determine desirable advertisements. Cols. 4:43-55, 5:17-32. Scofield expansively considers such paths including the user's movements generally. *Id.*, Cols. 5:33-6:36. Scofield discloses its consumer paths to provide targeting of advertising and to increase visibility for businesses, and POSITA would have appreciated such courses of travel to increase accuracy, reduce noise, and/or otherwise promote efficiency in targeted communications. Scofield, Col. 4:56-5:16; DEC., ¶¶333-334.

P. CLAIM 22

Verizon discloses providing the media content as recited, for example, upon updating. *E.g.*, Verizon, ¶¶[0042], [0043], [0047]; DEC., ¶355. For example, Verizon discloses such content providing by example walkthrough (¶[0042]), and also in disclosure of other details such as the ability to download additional content (Verizon, ¶¶[0047], [0053]). DEC., ¶335.

Q. CLAIM 23

Verizon discloses providing the first and second messages as recited, at least by updating with minor advertisement modifications. For example, Verizon's general location-based content tailoring provides an advertisement for the lobby coffee bar when user is near the airport entrance, but without the additional

movement to travel towards the particular terminal, the additional rule is unsatisfied and no second message is provided. Verizon, ¶[0042], [0043]. However, once the consumer passes through TSA and physically approaches the terminal, the additional rule is satisfied and the updated location of the terminal coffee bar is provided in the updated advertisement. *Id.*, ¶[0043]; DEC., ¶336.

VII. GROUNDS 3 & 5: VERIZON / VERIZON AND CREEMER OR SCOFIELD, EACH FURTHER IN VIEW OF GEER

A. CLAIMS 13-19

As discussed above, Verizon alone, and with Creemer or Scofield discloses or achieves the recited “tracking the consumer in response to receiving the first indication,” as recited in claim 13. *Supra* §VI(I)(4). However, to the extent that these references do not expressly or elaborately disclose a direct response to the first indication as recited, in the area of location-based communications, Geer discloses responsive activation of high-resolution tracking (“HIRES”). For example, Geer teaches to activate HIRES when a user crosses a geofence boundary for increased precision near the location of interest, while reducing phone battery consumption farther away from that location. *E.g.*, Geer, ¶[0064] (“FNMS 310 detects 1010 that fan 200 is within OZ 833 [...] transmits 1020 an instruction to FNA 510 to use HIRES tracking. FNA 510 demands 1030 the geolocation system 570 of PSD 320 to use HIRES tracking. The geolocation system 570 initiates 1040 HIRES tracking if it is not in that mode already.”); *see also id.*, ¶¶[0005], [0057], [0058] (battery

life), [0065], FIG. 8. POSITA would have incorporated such location-responsive user tracking in Verizon to adjust resolution appropriately, to reduce data loads, and/or to save power consumption. DEC., ¶¶337-338.

VIII. GROUND 6: ALCATEL AND VERIZON

As discussed in detail below, Alcatel teaches the architecture of the Challenged Claims through its systems and methods for delivering advertisements based on user mobility, including distinguishing subscribers as part of their profile. However, Verizon provides more extensive use of profile data in applying content rules. POSITA would have combined these teachings to improve Alcatel's targeted communications.

A. INDEPENDENT CLAIM 1

1. Claim 1, Preamble

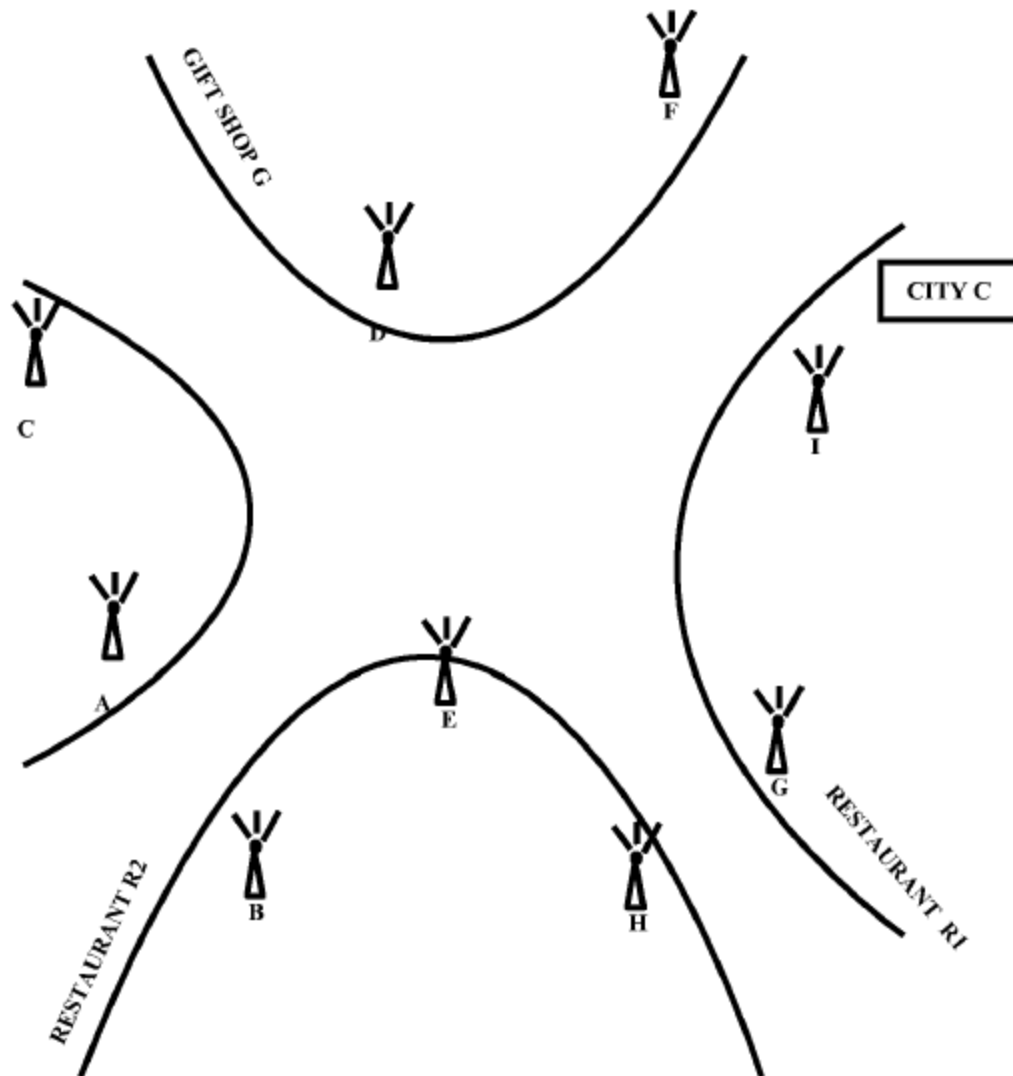
2. Element 1(a)

Alcatel discloses a method comprising specifying a content distribution campaign as recited in claim 1 by its establishment of its communication platform including specifications and rules concerning geolocation and related content. *E.g.*, Alcatel, Abstract; ¶¶[0007], [0017]; DEC., ¶339 (geolocation). For example, Alcatel discloses that rules are defined for content delivery based on requirements from the advertiser/publishers. *Id.*, ¶¶[0017], [0019]-[0022]. Alcatel expressly bases these content rules on the geolocation of mobile communications base stations, like

cellular towers. *Id.*, ¶[0017] (base station near road of interest), [0022] (“Based on mobility history [] and content repository [] the rules processor 204 checks [] if there is any content to be sent.”). Moreover, Alcatel’s base stations concern relevant geolocations of interest, such as restaurants locations in Alcatel’s examples. Alcatel, ¶¶[0015], [0016], [0021]; DEC., ¶339. Alcatel discloses the media content can include advertisements, weather, traffic, or any other information “beneficial to the user,” with examples such as movies schedules, road closures, shop/restaurant ads, seasonal events, concerning the geolocation.

3. *Element 1(b)*

Alcatel discloses its rules to incorporate period of time and course of travel. Alcatel teaches in one example that its rules are “based on the days specified, time specified[,], and the location of the tracker base stations near the road.” Alcatel, ¶[0017]. In other examples, Alcatel indicates time and course of travel among its criteria including “0900-1800 hrs,” “0800-2130 hrs,” and “0000-2359 hrs,” and courses of travel such as along base stations “A->D->C,” “I->E OR I->G AND NOT (H->G),” “A->B->E->F->I.” *Id.*, ¶¶[0020]-[0022]; DEC., ¶340. As shown in FIG. 1, excerpted below, tracing along Alcatel’s base towers provides a defined course or path of travel as the user proceeds along the road.



Alcatel – FIG. 1

Alcatel considers at least one element of profile data and suggests users treated differently by different characteristics, such as subscribers vs. non-subscribers (*e.g.*, Alcatel, ¶¶[0018]-[0022]). As described in Alcatel’s exemplary walkthrough, subscriptions are checked and non-subscribers are not activated for content delivery. *Id.*, ¶¶[0015] (enabled/disabled); [0022] (“[I]f the mobile device user has

subscribed...”). Alcatel’s subscription being individualized to the consumer constitutes a profile data element as recited. *Id.*; DEC., ¶341.

To the extent that Alcatel lacks elaboration on profile data as recited, Verizon discloses specifying a rule corresponding to user profile data. *E.g.*, Verizon, ¶¶[0040] (user profiles and/or settings, preferences), [0041] (user settings), [0047], [0048] (age, ethnicity, employment status, income, education, languages, URLs, cookies, identity), [0049], [0050], [0053], [0055]-[0056], [0066]-[0067]; DEC., ¶342. POSITA would have incorporated rules concerning at least one element of profile data associated with a consumer, as taught by Verizon, by Alcatel’s suggestion and/or to tailor content to the consumer, to increase accuracy, reduce noise, and/or otherwise to improve communications based on user specific information. DEC., ¶343.

4. *Element 1(c)*

Alcatel discloses receiving a first indication of the consumer at a first location within a radius. Alcatel, ¶¶[0015] (base station area coverage; “areas of any size”), [0018] (registering mobile device with each station; path illustrating the location and direction; GPS coordinates from mobile device 107), [0021]; DEC., ¶¶344 (communicating with base stations includes indication of the position of consumer via mobile device), [0020]-[0021] (*e.g.*, location within coverage of station), FIG. 4a (*see e.g.*, 401-406); DEC., ¶344 (POSITA would appreciate base station coverage

to commonly include radial antenna coverage). For example, the consumer being within Alcatel's radius of base station A receives such indication by the system. *E.g.*, Alcatel, ¶[0020]; DEC., ¶344. Moreover, presence within the base station coverage defines presence within the radius of the location of interest such as a restaurant. Alcatel, ¶[0020] (within a radius of the particular store or restaurant). To the extent Alcatel lacks literal expression of radius, Verizon provides radius to provide appropriate range of interest. *E.g.*, Verizon, ¶[0036] (location/proximity including radius from display 114). POSITA would have incorporated receiving indication as recited, as taught by Verizon, to assist in identifying consumer presence in the area of interest, and/or at Alcatel's suggestion. DEC., ¶345.

5. *Element 1(d)*

Alcatel assesses whether subscription exists responsive to the first indication. *E.g.*, Alcatel, ¶¶[0018]-[0022]. Alcatel expressly checks for user subscription when the mobile device is detected by the tracker base station. *Id.*, ¶[0022]. In incorporating elements of profile data further into Alcatel, attributes such as age, ethnicity, employment status, income, education, etc., as in Verizon, POSITA would have implemented assessing as recited in claim 1 in conformance with Alcatel's architecture and/or to allow updating, divided process, and/or as hierarchical design in tailored content. DEC., ¶346.

6. *Elements 1(e)-(f)*

Alcatel discloses receiving a second location and determining travel based partly on first and second locations, as recited, by its identification of courses of travel such as along base stations “A->D->C,” “I->E OR I->G AND NOT (H->G),” “A->B->E->F->I.” Alcatel, [0020]-[0022]; DEC., ¶347. Continuing Alcatel’s first example above, comparing the indication of stations D to station A, Alcatel determines the course of travel between those stations, accordingly. Alcatel, ¶¶[0017], [0020]-[0022]; DEC., ¶347.

7. *Element 1(g)*

Alcatel discloses establishing consumer eligibility by the rules as recited. Alcatel, ¶¶[0017], [0020]-[0022]; DEC., ¶348. For example, the system of Alcatel establishes that the consumer should receive certain corresponding content in response to execution of its rules based on location. Alcatel ¶[0019]. Alcatel confirms by walkthrough that meeting requirements for subscription and course of travel can establish consumer eligibility and allow available relevant content to be sent to the consumer. *Id.*, ¶[0022]; DEC., ¶348.

B. *CLAIM 2*

Alcatel discloses the course of travel including specifying a destination as recited, including various examples of specific base stations, roads, or other areas of interest. Alcatel, ¶¶[0017], [0019]-[0022]; DEC., ¶349. For example, Alcatel’s

walkthrough includes courses of travel along the base stations mentioned, including specifying the final base station as the destination, such as base station C, E, G, or I. Moreover, each exemplary course includes an example destination such as a gift shop, restaurant, or city event each corresponding with the final base station. *Id.*

To the extent that Alcatel does not expressly or elaborately discuss a specific destination as the second location, Verizon discloses specifying such destination as rules criteria. *E.g.*, Verizon, ¶¶[0028] (e.g., businesses, addresses, parks, institutions, locations, ice cream shop), [0035], [0039], [0042] (e.g., airport, Manhattan, theater district, Times Square), [0058], [0065], [0071]. Although Alcatel discloses such features, alternatively, POSITA would have incorporated specifying a destination as the second location, as taught by Verizon, to increase accuracy, reduce noise, promote efficiency, and/or better recognize a desirable venue in communicating tailored content. DEC., ¶350.

C. CLAIMS 3-5

Alcatel discloses providing the first aspect of content when first and second rules are satisfied, further tracking, and providing a second aspect of content when the third rule is satisfied as recited, by continuing its disclosed operations for tailored content. Alcatel, ¶¶[0018], [0020]-[0022]. From Alcatel's Rule 2 example, when a user is within the relevant proximity, during the appropriate time, content concerning

both restaurants R1 and R2 can be sent to the consumer's mobile device. Alcatel, ¶¶[0020]-[0022]; DEC., ¶351.

Alcatel's content communication continues to execute, including tracking, for example, a consumer's course of traveling from I to E. Ads for either restaurant R1 or R2 remain viable by their proximity, direction, and/or the consumer's subscription. Yet, once the consumer reaches station G, the additional resolution in the consumer's course of travel makes more reliable communications about restaurant R1 over R2. DEC., ¶352. Alcatel's station G corresponding as (or with) a specific second location of interest satisfies the third rule concerning the second location, and thus recognizes that R1 is no longer appropriate under higher resolution of travel direction. DEC., ¶352. Alcatel's further mentions traveling from G to H in one example, where this negates relevance of content for restaurant R1, but can still communicate content concerning R2, even with both R1 and R2 were first communicated while traveling westward in FIG. 3. *Id.*, DEC., ¶¶351-353.

To the extent that Alcatel lacks express or elaborate discussion on such aspects, Verizon discloses such routine updating of initial content based on second location. *E.g.*, Verizon, ¶¶[0034], [0042] (real-time updating), [0043] (minor modification of Ads), [0051]; DEC., ¶354. Verizon discloses location-based updating, such as ads for wholly different businesses (Verizon, ¶¶[0042]); updates to original Ads referring to different locations of the same business [0043]; or a

different frame of an advertisement [0038]. Such updating, and particularly under the third rule concerning a second location, would have afforded increased accuracy, reduced noise, and/or increased efficiency of communications of tailored content with updated information. DEC., ¶354.

D. CLAIM 6

Alcatel suggests consumer interaction at least by enabling/disabling subscription. Alcatel, ¶¶[0015], [0022]. However, to the extent that Alcatel lacks express or elaborate discussion of such features, Verizon discloses indication of user interaction with the content as recited. For example, Verizon discloses user action on received ad content by clicking links, inquiring, saving, sharing, or approaching related businesses. *E.g.*, Verizon, ¶¶[0038], [0040], [0046], [0050] (hyperlink), [0053] (act upon, traveling to business location); [0057] (wishlist), [0066]. Verizon discloses downloading content while the user walks down the street by saving/storing to the mobile device as acting on the content, and includes at least receiving the indication including the request signal from the mobile device at the same time. *Id.*, ¶¶[0047], [0053]; DEC., ¶355. POSITA would have incorporated such indication of user interaction with content to increase accuracy, reduce noise, and/or improve efficiency of communications in tailored content based on user reaction and otherwise at Alcatel's suggestion for user interaction. DEC., ¶355.

E. CLAIMS 7 & 10

Alcatel repeatedly discloses limited timeframes for its location-based content. Alcatel, ¶¶[0017] (6AM-3PM), [0020]-[0022]. However, to the extent that Alcatel lacks express or elaborate discussion on such features, Verizon discloses presenting content in predetermined intervals, affording limited timeframe for user interaction. Verizon, ¶¶[0038], [0047] (predetermined amount of time; download while walking down the street), [0054] (interval); DEC., ¶356. Moreover, both Alcatel and Verizon's updating of content during the course of travel presents limited time for user interaction including viewing, saving, sharing, etc. *E.g.*, Verizon, ¶¶[0034], [0038] (frames), [0042] (real-time), [0043], [0046], [0051], [0053]; DEC., ¶¶188 (ongoing), 193-194, 356. POSITA would have incorporated such limited timeframes as recited, to improve timing accuracy, reduce nuisance, and/or to enhance efficiency in communications of tailored content as new communications arise. DEC., ¶356.

Alcatel discloses the recited providing of a second aspect of media content as discussed above concerning claim 5, incorporated here. *Supra*, VIII(C). To the extent that Alcatel lacks express or elaborate discussion on such aspects, Verizon expressly discusses such routine updating of initial content based on second location. *E.g.*, Verizon, ¶¶[0034], [0042], [0043] (minor modifications), [0051]; DEC., ¶357. Such updating, and particularly under the third rule concerning a second location,

would have afforded increased accuracy, reduced noise, and/or increased efficiency of communication of tailored content including updated content. DEC., ¶357.

F. CLAIM 8

As mentioned above, Alcatel tracks the consumer's location and suggests tracking at least by subscribership and travel. *Supra*, VIII(A)(5)-(6)(elements 1(d)-(f)); Alcatel, ¶¶[0015], [0020], [0022]. POSITA would have incorporated Verizon's indication of user interaction with the content, including responsive tracking the consumer during the course of travel as recited. *E.g.*, Verizon, ¶¶[0040], [0046], [0047] (predetermined amount of time; download while walking down the street), [0050] (URL clicks and weighting), [0053] (act upon); [0057] (wishlist), [0066]. Verizon discloses responsive tracking of the consumer during travel, and particularly tracking of user activity when the user interacts with (i.e., "acts upon") content. For example, Verizon discloses content containing hyperlinks/URLs causes recording when clicked by the consumer. Verizon, ¶¶[0050] (acted upon, wishlist, historical actions), [0053]. DEC., ¶358.

In application, as the consumer travels along, content URLs can be presented and clicked causing generation of "historical action" for use in content tailoring. DEC., ¶359. Verizon also notes that a consumer "acting upon" content includes clicking website links, e-shopping, mapping locations of businesses, and physically traveling to businesses. Verizon, ¶[0053]. Accordingly, Verizon discloses

responsive tracking of consumer activity when the consumer interacts with content, as recited. Further activity within Verizon's process includes updating and tracking as the user travels. *E.g.*, Verizon, ¶¶[0042]-[0043]; DEC., ¶359. POSITA would have incorporated Verizon's responsive consumer tracking during the course of travel in furtherance of increased accuracy, reduced noise, or improved efficiency of communication of tailored content and otherwise at Alcatel's suggestion for user interaction. DEC., ¶360.

G. CLAIM 9

As discussed above concerning claim 8, Verizon's consumer tracking includes location data (e.g., Verizon, ¶[0040]) and tracking of device usage data at least such as clicking URLs, e-shopping, mapping locations of businesses, and physically traveling to businesses via the consumer's mobile device (*id.*, ¶[0053]). Moreover, POSITA would have appreciated both Alcatel and Verizon to conduct location tracking at least by location, telemetry data, and unique identifiers of the mobile devices such as IMEI, and also by sensor data at least by Verizon's use of short-range communications such as Bluetooth. Verizon, ¶[0027]; DEC., ¶361.

H. CLAIMS 11 & 12

Although claims 11 and 12 differ as claim 12 depends from intermediate claim 3, the application of the prior art is similar, and thus, these claims are addressed together.

Alcatel repeatedly discloses limited timeframes for its content for consumer reception. Alcatel, ¶¶[0017] (6AM-3PM), [0020]-[0022]. However, to the extent that Alcatel lacks express or elaborate discussion on such features, Verizon discloses presenting content in predetermined intervals, affording limited timeframe for user interaction. Verizon, ¶¶[0047] (predetermined amount of time; download while walking down the street), [0054] (interval); DEC., ¶363. Moreover, both Alcatel and Verizon's updating of content during the course of travel presents limited time for consumer interaction including viewing, saving, sharing, etc. *E.g.*, Verizon, ¶¶[0034], [0042] (real-time), [0043], [0046], [0051], [0053]; DEC., ¶363. (explaining Alcatel's updating and ongoing execution). These timeframes occur during the course of travel, evidenced at least by their limited time for viewing in conjunction with proximity requirements, and by Verizon's specific disclosure to show content as the user is "walking down the street." Verizon, ¶[0047], [0065]; DEC., ¶364. Verizon discloses these aspects to include media content and a second aspect of media content under its routine content provisioning and updating, where all related content is time limited, for example, by business operation hours. *E.g.*, Verizon, ¶¶[0034], [0042], [0043] (minor modifications), [0047], [0051], [0065] (operation hours); DEC., ¶364. POSITA would have incorporated such limited timeframes as recited, to improve timing accuracy, reduce nuisance, and/or to enhance efficiency in communications of tailored content. DEC., ¶365.

Alcatel discloses the recited providing of second aspect of media content as discussed above concerning claims 5 and 10 incorporated here (*supra* §§VIII(C) & (E)). To the extent that Alcatel lacks express or elaborate discussion on such aspects, Verizon expressly discusses such routine provision and updating of initial content. *E.g.*, Verizon, ¶¶[0034], [0042], [0043] (minor modifications), [0051], [0065] (operation hours); DEC., ¶366. Such updating would have afforded increased accuracy, reduced noise, and/or increase efficiency communications in tailored content for updated information. DEC., ¶366.

I. INDEPENDENT CLAIM 13

Alcatel and Verizon together disclose all limitations as recited within independent claim 13. Many of such limitations are observable and identified within the prior art on the same basis as above concerning independent claim 1 and its dependent claims, and all arguments, evidence, and analysis concerning Alcatel and Verizon regarding claims 1-12 are incorporated by reference herein. Particular aspects of claim 13 which can benefit from further identification of their disclosure within the combination of Alcatel and Verizon are addressed below.

1. Claim 13, Preamble

2. Element 13(a)

Alcatel discloses a method comprising specifying a content distribution campaign, as recited, by establishing a communication platform including rules

based on geolocation and related media content. *E.g.*, Alcatel, Abstract, ¶¶[0007], [0017]; DEC., ¶368. (geolocation). For example, Alcatel discloses that rules are defined for media content delivery based on requirements from the advertiser/publishers. Alcatel, ¶¶[0017], [0019]-[0022]. Alcatel expressly bases these content rules on the geolocation of the base station. *Id.*, [0017] (base station near road of interest), [0022] (“Based on mobility history [] and content repository [] the rules processor 204 checks [] if there is any content to be sent.”). Moreover, Alcatel’s base stations concern relevant interest geolocations, such as restaurants of interest in Alcatel’s examples. Alcatel, ¶¶[0015], [0016], [0021]; DEC., ¶368. Alcatel discloses the content for consideration can include media content, such as advertisements, weather, traffic, or any other information “beneficial to the user,” with examples such as movies schedules, road closures, shop/restaurant ads, seasonal events, concerning the geolocation. DEC., ¶369.

3. Elements 13(b)-(c)

In comparison to claim 1, claim 13 recites specifying the geolocation as a sub-feature of specifying rules rather than the campaign itself. The difference does not appear to have meaningful distinction in the claims, and is not directly explained within the specification.

Alcatel’s specifying of geolocation also meets the recitation as a sub-feature of rules. Alcatel discloses its communication platform to be defined by rules,

including geolocation. *E.g.*, Alcatel, Abstract, ¶¶[0007], [0017]; DEC., ¶¶370-371 (geolocation). For example, Alcatel discloses that rules for content delivery (derived from the advertiser/publishers) are based on the geolocation of mobile service base stations. *Id.*, ¶¶[0017] (base station near road of interest), [0022] (“Based on mobility history [] and content repository [] the rules processor 204 checks [] if there is any content to be sent.”). Moreover, Alcatel’s base stations themselves concern relevant interest geolocations, such as restaurants of interest in Alcatel’s examples. Alcatel, ¶¶[0015], [0016], [0021]; DEC., ¶371. Accordingly, Alcatel’s knowledge of the base station geolocations, and their relation to points of travel and locations of interest discloses its specifying of the geolocation by rule.

Alcatel further discloses a content distribution campaign rule including specifying an action by the consumer as recited, at least as subscribing and/or travel. Alcatel, ¶¶[0015], [0022] (“checks (402) if the mobile device user has subscribed,” and “checks [] to determine the direction of movement”); DEC., ¶372. However, to the extent that Alcatel does not expressly or elaborately discuss its subscription or travel as specifying a rule of consumer action, Verizon discloses such aspects at least by its disclosing communications based on how/whether the consumer “acted upon” content. For example, Verizon’s rules for content distribution concern consumer actions to click links, add to wishlists, and other “historical actions” Verizon, ¶¶[0040], [0043] (updating), [0046], [0047], [0050] (links, wishlist, historical

actions, weighting), [0053] (act upon); [0057] (wishlist), [0066]. Verizon implements such rules including by weighting values of consumer actions in determining content distribution. *Id.*, ¶[0050]; DEC., ¶372. POSITA would have implemented the recited specifying at least one action, as taught by Verizon, in furtherance of improving accuracy, reducing noise, improving efficient communications, and/or at Alcatel's suggestion for user action in tailored communications. DEC., ¶373.

4. *Elements 13(d)-(e)*

Alcatel discloses the recited first indication as discussed above concerning claim 1, and suggests the recited responsive user tracking at least by its subscription/opting in (Alcatel, ¶¶[0015], [0022]); but to the extent that Alcatel lacks express or elaborate discussion on such features, Verizon discloses receiving indication and responsive consumer tracking as recited. For example, Verizon discloses user action on received media content. *E.g.*, Verizon, ¶¶[0040], [0046], [0050], [0053] (act upon); [0057] (wishlist), [0066]. Verizon discloses responsive tracking to consider the consumers' acts upon content. Verizon, ¶¶[0050] (acted upon, retain information, historical actions), [0053]. Verizon notes that consumers 'acting upon' content includes e-shopping, mapping locations of businesses, and physically traveling to businesses. Verizon, ¶[0053].

In practice, Verizon provides media content as the consumer enters the radius of the geolocation, e.g., airport, and consumer actions are tracked, including to determine when the consumer physically travels to the business location. *Id.*, [0042], [0053]; DEC., ¶¶374-375. Accordingly, once the initial content is provided by occupying the geofence radius, Verizon responsively tracks the consumer activity to determine performance of the action, as recited, including as it weighs on Verizon's ad tailoring. *Id.*, [0042], [0053]; DEC., ¶375. Further activity within Verizon's process includes updating and tracking as the user travels, and thus consumers not traveling to the business location may be deemed not to 'act upon' the content. *E.g.*, Verizon, ¶¶[0042]-[0043]; DEC., ¶376. POSITA would have incorporated such indication of user interaction with content in furtherance of increased accuracy, reduced noise, or improved efficiency of communication of tailored content and otherwise at Alcatel's suggestion for user interaction in tailoring content. DEC., ¶376.

5. *Element 13(f)*

Alcatel discloses establishing eligibility as recited, both by its overall architecture and through its walkthrough examples. For example, Alcatel discloses that subscription, location, and time requirements are met in order to fulfil content publication to the user. Alcatel, ¶[0022] (walkthrough of content delivery); *see also*, *id.*, ¶¶[0017]-[0021]. Similarly, Verizon's disclosure establishes eligibility based on

satisfying rules including relevance weighting, and thus would suggest incorporating its relied-upon aspects in similar manner in combination with Alcatel. *E.g.*, Verizon, ¶¶[0040], [0050], [0053]; DEC., ¶¶377-378.

J. CLAIM 14

As discussed above, Alcatel discloses specifying consumer action at least as subscriptions/opting-in and by travel. *Supra*, VIII(I)(elements 13(b)-(e)); Alcatel, ¶¶[0017], [0020]-[0022]. Alcatel's disclosure of specific paths for user travel include particular paths towards target destinations, as its routes include final base stations in the relevant area of stores, restaurants, and season events. Alcatel, ¶¶[0020]-[0021] (e.g., A, D, C concerning gift shop G; I, E or I, G concerning restaurant R1; A, B, E, F, I concerning city event C). Additionally or alternatively, to the extent that Alcatel does not expressly or elaborately discuss specific target destinations, Verizon discloses specifying user action including target destinations and/or paths thereto including travel through airports and specific cities, districts, and businesses. Verizon, ¶¶[0042] (Newark airport, Manhattan, [0043] (minor updating), [0053] (travelling to business location), [0054] (airport). Moreover, Verizon tracks the consumer acting upon content by traveling to a particular business location, and by mapping particular directions to that business. *Id.*, ¶[0053]; *see also id.*, ¶[0043] (minor modifications); DEC., ¶¶379-381 (explaining path and destinations, and in light of Verizon's minor modifications). Accordingly, Verizon

discloses the consumer's particular path to a target destination as a rule specified under its campaign for content distribution. POSITA would have appreciated such specifying of paths and/or destinations to facilitate accuracy, reduce noise, or improve efficiency in tailored communications, including by improved resolution. DEC., ¶382.

K. CLAIM 15

Alcatel's architecture for base station locations discloses the recited receiving of a second indication by design. For example, Alcatel's examples ping base stations A-I, and as resolution increases, such as when a particular course or direction becomes known by indication from a subsequent base station, potential fulfilment of continued travel is inferred and applied for content tailoring. Alcatel, ¶¶[0020]-[0022]; DEC., ¶383.

Additionally or alternatively, Verizon discloses receiving such indication as continued travel and as the user interacts with or 'acts upon' content. For example, Verizon discloses that clicking hyperlinks/URLs, obtaining information, adding goods to virtual cart, and/or traveling towards businesses, can indicate likelihood for consumer fulfillment of actions, such as purchasing. Verizon, ¶¶[0019], [0044], [0050] (acted upon, wishlist, historical actions), [0053]; DEC., ¶384. Moreover, such acts can be indications worthy of greater relevance weight in tailoring content. *Id.* POSITA would have implemented such predictive aspects in furtherance of

accuracy, reduced noise, and/or efficiency in tailoring communications in consideration of predictive user actions. DEC., ¶¶384-385.

L. CLAIM 16

The arguments and evidence concerning claim 14 are incorporated here by reference, and amply disclose and/or render obvious the recited particular path and towards target destination. *See e.g.*, Verizon, ¶¶[0042] (Newark airport, Manhattan, [0053] (travelling to business location), [0054] (airport); DEC., ¶386.

Additionally, as discussed above, Alcatel discloses time of action as relevant to its content tailoring. *Id.*, ¶[0017, [0021] (“0900-1800 hrs,” “0800-2130 hrs,” and “0000-2359 hrs”); *e.g.*, *supra* VIII(E), VIIIA(3). Verizon likewise considers period of time of movement in updating of content during the course of travel. *E.g.*, Verizon, ¶¶[0034], [0042], [0043], [0046], [0051], [0053]. POSITA would have appreciated such path, movement, and time as beneficial to improve accuracy, reduce noise, and/or increase efficiency in tailoring communications particular to user actions. DEC., ¶¶387-388.

M. CLAIM 17

Alcatel discloses providing the first aspect of content responsive to the first indication under its content delivery based on entering proximity of an appropriate base station. Alcatel, ¶¶[0017], [0020]-[0022]. From Alcatel’s Rule 2 example, when a user is within the relevant proximity of the base station E having traveled

from I, content concerning both restaurants R1 and R2 can be sent to the consumer's mobile device. Alcatel, ¶¶[0020]-[0022]; DEC., ¶389. Once the consumer reaches station G, the additional resolution in the consumer's course of travel makes more reliable communications about restaurant R1 over R2. DEC., ¶¶389-390, 194 (ongoing execution). Thus, Alcatel's restaurant information constitutes the first aspect provided in response to the first indication of entering the base station coverage area.

N. CLAIM 18

Alcatel discloses such providing of second aspect on action fulfillment as recited. For example, as mentioned above concerning claim 17, having received information about both restaurants R1 and R2, subsequent travel only relevant to R1 would yield only content concerning R1. DEC., ¶¶391, 194 (ongoing execution).

Additionally or alternatively, Verizon discloses such aspects at least by its teachings to tailor communications based on how/whether the consumer "acted upon" content. For example, Verizon's rules for content distribution concern consumer actions to click links, add to wishlists, and other "historical actions" Verizon, ¶¶[0038], [0040], [0043] (updating), [0046], [0047], [0050] (links, wishlist, historical actions, weighting), [0053] (act upon); [0057] (wishlist), [0066]. Verizon implements such rules including by weighting of consumer actions in determining content distribution. *Id.*, ¶¶[0038] (frames), [0040], [0050] (weighted in determining

market content for distribution); DEC., ¶¶392-393. Thus, subsequent user action resulting in updated content or relevance as taught by Verizon, yields a second aspect of media content. POSITA would have implemented the recited specifying at least one action, as taught by Verizon, to improve accuracy, reduce noise, increase efficiency of communications, and/or at Alcatel's suggestion for updates and user action in tailored communications. DEC., ¶394.

O. CLAIM 19

Updating of Alcatel's restaurants, and similarly, updating of Verizon's content on user actions, constitutes a modification of the first aspect of media content at least by changing the first aspect to concern the new information. Nevertheless, Verizon discloses updating a first advertisement with "minor modifications" to a second or third advertisement with tailored content. Verizon, ¶¶[0042], [0043] (AD 2 and/or AD 3 may be substantially similar to AD 1 but have minor modifications.). For example, Verizon may update a discount offer/code and different location for the same business. *Id.* Verizon also discloses advancing multiple frames concerning a particular content. Verizon, ¶[0038]. Accordingly, to the extent Alcatel lacks express or elaborate explanation that updating is a second aspect of the media content, Verizon discloses this feature as modifications to the particular first advertisement to improve accuracy, reduce noise, and/or improve efficiency in

tailored communications considering real or local variations in conditions. DEC., ¶¶395-396.

P. INDEPENDENT CLAIM 20

1. Claim 20, Preamble

2. Element 20(a)

Alcatel discloses methods including defining at least a physical asset as a registered asset as recited. For example, Alcatel's tracker base stations and their associated points of interests, such as restaurants, stores, and events, constitute physical assets registered for tailored content publication. *E.g.*, Alcatel, ¶¶[0016] ("base stations located on the major access to and from the shopping and leisure locations"), [0017], [0019]-[0022]. Alcatel's asset definitions are provided by the publishers, and implemented into rules. *Id.*, ¶[0017]. DEC., ¶397.

3. Element 20(b)

Alcatel defines media content, such as ads and text, as recited, including by defining content in conjunction with rules. Alcatel's publishers define the media content and requirements which are used to define the rules of the rules processor. Alcatel, ¶¶[0017], [0019]. Alcatel teaches that the service provider "configures the contents and requirements sent by the content publishers [...] based on location of different tracker base stations." *Id.*, ¶[0017]. Accordingly, Alcatel's media content is defined in association with particular location based on the asset. DEC., ¶398.

Alcatel's media include first and second messages under its typical updating. Yet, to the extent that Alcatel lacks express or elaborate disclosure of first and second messages associate with the same asset, Verizon discloses such features as minor modifications to provide real-time updating in furtherance of accuracy, reduced noise, and/or efficient in tailored communications. Verizon, ¶¶[0038] (frames), [0042], [0043] (minor modifications); DEC., ¶399.

4. *Element 20(c)*

Alcatel defines a consumer audience segment as recited, at least by its subscription network. For example, Alcatel discloses that its mobile service provider 103 has a network of “[m]obile subscribers [who] may subscribe for content delivery [...and] can also temporarily enable or disable this service.” Alcatel, ¶[0017], *see also, id.*, ¶[0022]. Alcatel's definition of subscribers, and even its subscribers enabled for content delivery, discloses the recited consumer audience segment. DEC., ¶400. To the extent that Alcatel lacks elaboration on consumer audience segment as recited, Verizon discloses defining consumer audience segments according to user profile and settings. *E.g.*, Verizon, ¶¶[0040] (user profiles and/or settings, preferences), [0041] (user settings), [0047], [0048] (age, ethnicity, employment status, income, education, languages, URLs, cookies, identity), [0049], [0050], [0053], [0055]-[0056], [0066]-[0067]; DEC., ¶342. POSITA would have incorporated consumer audience segment, as taught by

Verizon, by Alcatel's suggestion and/or to tailor content to the consumers, to increase accuracy, reduce noise, and/or otherwise to improve communications based on user specific information. DEC., ¶343.

5. *Element 20(d)*

Alcatel discloses definition of content delivery rules as recited, including at least based on the customer's location relative to the asset. For example, having defined the rules "based on location of different tracker base stations," Alcatel's first rule is defined by user proximity to the appropriate base station. Alcatel, ¶[0017]; *see also id.*, ¶[0016] (shopping and leisure locations). Alcatel confirms by examples that consumer proximity to the base station, and thereby relative location to businesses and points of interest, define rules for content delivery to the audience. *Id.*, ¶¶[0020]-[0022]. For example, traveling from stations A to D to C providing gift shop ads requires proximity to these stations. DEC., ¶¶401-402.

Moreover, Alcatel's other examples also meet the recited second rule. Example rule 3 provides that travel illustrative along stations A, B, E, F, I can cause delivery of a different ad concerning a holiday event. Alcatel, ¶[0020]. Accordingly, a consumer traveling to station A meets a first rule of travel requirements, but subsequent travel to B, E, F, I, rather than C, D, satisfies a specific rule for the Christmas event based on the travel action relative to station A as the registered asset. DEC., ¶403. Similar analysis can be undertaken by Alcatel's other

examples, and of course, these are simply examples and do not confine Alcatel's broader teachings.

Additionally or alternatively, to the extent that Alcatel does not expressly or elaborately discuss its rules in specific terms of consumer actions, Verizon discloses consumer activity rules when the consumer interacts with ("acts upon") content. For example, in addition to its rules for general location based ad delivery, Verizon discloses rules concerning consumers clicking content hyperlinks, saving, sharing, inquiring about content, and when consumers physically travel to businesses offering ads. Verizon, ¶¶[0050] (acted upon, wishlist, historical actions, weighting), [0053] (physically traveling). Verizon's content is delivered during travel in proximity to the asset of interest, such as a business, and its consumer interaction likewise includes actions during the course of travel. Verizon's content rules, thus, include actions such as clicking the ads received based on located or traveling to the ad's business during consumer travel in relation to the asset. DEC., ¶¶404-405. POSITA would have incorporated Verizon's "consumer action" content tailoring in furtherance of accuracy, reduced noise, and/or efficiency in tailored communications including real-time and/or user specific considerations like feedback. DEC., ¶406.

6. *Element 20(e)*

Alcatel's distinct rules for travel achieve such receiving and associating regarding the first and second rules as recited. For example, a consumer first

traveling along base stations A, D, C, and then changing to another course such as I to G, achieves associating of the first and second messages with the consumer, as recited, by their responsive delivery to the consumer. Alcatel, ¶¶[0020]-[0022]; DEC., ¶407. Alcatel discloses receiving of such determinations at least by tracker module 101 receiving the internal determinations executed by its logic 201, and otherwise as the interface 205, network 103, and/or mobile devices receive such determinations as outbound communications from the tracker module. DEC., ¶408.

Additionally or alternatively, to the extent that Alcatel does not expressly or elaborately discuss its rules in specific terms of consumer actions, Verizon discloses its rules to include receiving first and second messages each associating with the consumer according to their respective rules as recited. Verizon, ¶¶ [0042] (real-time updating), [0043] (minor modification of ads); DEC., ¶¶409-411 (discussion of distinct and parallel methodologies in Verizon (i) general location based advertising, (ii) “minor modifications”). For example, Verizon’s general location-based rules would generate a first AD 1 when the first rule of location were satisfied by traveling to Manhattan, and AD 2 when the user acts to travel closer to Times Square as the asset within Manhattan. DEC., ¶410.

Verizon’s disclosure for updating in the form of “minor modifications” to earlier advertisements distinctly achieves such steps as recited. Verizon, ¶[0043] (minor modification of ads). Verizon discloses that real-time updates in content to a

different incentive-promotion or to a different location of a business concerning distinct messages regarding the same registered asset, and delivery of the messages constitutes the recited associating steps. DEC., ¶¶410-411. Verizon associates such messages both by sending content, and distinctly by retaining the information as historical user actions. Verizon, ¶[0050]; DEC., ¶411. POSITA would have implemented Verizon's updates, including minor modifications, into Alcatel in furtherance of accuracy, noise reduction, or efficiency in tailored communication including real-time or user specific considerations. DEC., ¶412.

Q. CLAIM 21

Alcatel discloses defining rules to include the consumer's relative presence at first and second locations, the path therebetween, and time period as recited, at least by its pathway and time-delimited examples. Alcatel, ¶¶[0017], [0020]-[0022]; DEC., ¶413. For example, Alcatel discloses its rules to include the consumer's presence at, and path between, first and second locations of base trackers A, D, C. Alcatel, ¶[0020]. Alcatel also discloses a period of time in which the consumer's travel between first and second locations must occur, e.g., "0900-1800 hrs". *Id.*

Additionally or alternatively, to the extent that Alcatel does not expressly disclose the period of time to include the rate of travel, Verizon discloses its rules to include speed (time/distance) of the user's travel to add context to the user's location in communicating tailored content. Verizon, ¶¶[0036], [0046]; DEC., ¶414.

Moreover, to the extent that Alcatel's rules concerning these limitations do not concern "additional" rules as distinct from the first and second rules discussed concerning claim 20, Verizon discloses distinct rules concerning general location-based content delivery (e.g., Verizon, ¶[0042]), and specific updating of the same communication with a second message having "minor modifications" (Verizon, ¶[0043]). Although either instance of Verizon general or update rules apply to rules in claim 20 and rules in claim 21, by example, Verizon's minor modifications update discloses definition of the at least one additional rule where the consumer's presence at Newark Airport provides a first message such as an airport lobby coffee bar advertisement, and walking from the lobby towards a particular terminal would cause an update concerning the terminal location for the same coffee bar, based on the path between locations, during hours of operation, and/or in consideration of speed/direction of travel (Verizon, ¶[0036]). *Id.*, ¶[0043]; DEC., ¶¶415-416.

POSITA would have incorporated such at least one additional rule into Alcatel, as suggested in Verizon, to improve resolution of tailored content, improve accuracy, reduce noise, and/or improve efficiency of communications in consideration of general location and real-time, minor changes in consumer context. DEC., ¶417.

R. CLAIM 22

Alcatel discloses providing the media content to the consumer. Alcatel, ¶¶[0017], [0020]-[0022]; DEC., ¶418. In agreement with additional or alternative applications of Verizon, Verizon discloses providing the media content as recited, for example, upon updating. *E.g.*, Verizon, ¶¶[0042], [0043]. POSITA would have incorporated this teaching in furtherance of its updating advantages discussed above.

S. CLAIM 23

Alcatel as modified with Verizon discloses providing the first and second messages as recited, at least by Verizon's updating with minor advertisement modifications. Verizon's general location-based content tailoring provides an advertisement for the lobby coffee bar when user is near the airport entrance, but without the additional movement to travel towards the particular terminal, the additional rule is unsatisfied and no second message is provided. Verizon, ¶¶[0042], [0043]. However, once the consumer passes through TSA and physical approaches the terminal, the additional rule is satisfied and the updating location of the terminal coffee bar is provided in the updated advertisement. *Id.*, ¶[0043]; DEC., ¶419. Accordingly, Alcatel as modified under Verizon's teachings achieves all aspects as recited in claim 23.

**IX. GROUND 7: ALCATEL AND VERIZON, FURTHER IN VIEW OF
GEER**

A. CLAIMS 13-19

As discussed above, *supra* §VIII(I)(4), Alcatel and Verizon disclose or achieve the recited “tracking the consumer in response to receiving the first indication,” as recited in claim 13. However, to the extent that these references do not expressly or elaborately disclose a direct response to the first indication, in the area of location-based communications, Geer discloses activation of high-resolution tracking (“HIRES”) when a user crosses a geofence boundary for increased precision near the location of interest, while reducing phone battery consumption farther away from that location. *E.g.*, Geer, ¶[0064] (“FNMS 310 detects 1010 that fan 200 is within OZ 833 [...] transmits 1020 an instruction to FNA 510 to use HIRES tracking. FNA 510 demands 1030 the geolocation system 570 of PSD 320 to use HIRES tracking. The geolocation system 570 initiates 1040 HIRES tracking if it is not in that mode already.”); *see also id.*, ¶¶[0005], [0057], [0058] (battery life), [0065], FIG. 8. Verizon’s teaching to treat physically approaching a business or store to be a consumer action for tracking as historical action indicates the additional importance that Verizon places on this act; and this illustrates that Verizon would benefit from additional location resolution at that point in determining whether the user is actually headed to the store. DEC., ¶420. Accordingly, POSITA would have incorporated such location-responsive user tracking in Alcatel/Verizon to adjust resolution appropriately, to reduce data loads, and/or to save power consumption.

Id. According Alcatel and Verizon, further in view of Geer renders claims 13-19 obvious.

X. MANDATORY NOTICES

A. Real Party-in-Interest (37 C.F.R. § 42.8(b)(1))

Petitioner, Foursquare Labs, Inc. is the real party-in-interest.

B. Related Matters (37 C.F.R. § 42.8(b)(2))

On May 9, 2022, BoardActive (Patent Owner) served its lawsuit on Foursquare in the U.S. District Court of Delaware asserting infringement of the '108 Patent. That case is captioned, *BoardActive Corporation v. Foursquare Labs, Inc.*, Case No. 1:22-cv-00597-UNA.

C. Counsel and Service Information (37 C.F.R. § 42.8(b)(3) and (4))

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Petitioner also consents to service by electronic mail at michael.carrillo@btlaw.com and steven.shipe@btlaw.com. Please charge the fee of 37 C.F.R. § 42.15(a), and any additional fees, to Deposit Account No. 02-1010.

XI. CONCLUSION

For at least the reasons discussed above, reasonable likelihood is shown that claims 1-23 are unpatentable.

Date: May 9, 2023

Respectfully submitted,

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

The undersigned certifies, pursuant to 37 C.F.R. §42.24(d), that the word count for the foregoing PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,692,108 totals 13,352 and within the 14,000 words allowed under 37 C.F.R. §42.24(a)(1)(i).

Date: May 9, 2023

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,692,108 and accompanying exhibits, were served on May 9, 2023, by Priority Mail Express, or equivalent, directed to the attorney of record for the patent at the following address:

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