

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

PETITIONER'S REPLY

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Amid many unsupported accusations, Patent Owner proposes that Felt's realtime advertising program only provides location-updated ads for arrangements with vans (vehicles). Patent Owner's reading leaves unexplained how Felt's mobile devices (phones) react as the user travels. Properly understood for its realtime location and time-based advertising program, Felt's disclosure is cumulative. Felt expressly likens its architectures throughout, and even provides walkthroughs of realtime ads with broad application.

Patent Owner's narrowing of Felt is unsupported, and its other arguments improperly demand literal word correspondence in the prior art. Although these word games cannot detract from the prior art teachings, Patent Owner tacitly admits that Creemer and Scofield disclose the "first" and "second" locations and indications. Patent Owner makes undemonstrated assumptions and raises only inconsequential issues concerning Adharapurapu (Alcatel). Patent Owner's arguments against motivations-to-combine are woefully deficient and misguided on the law. A glaring absence of support for Patent Owner's positions underscores that a preponderance of evidence demonstrates unpatentability of claims 1-23.

I. GROUNDS 1, 2, & 4: FELT (VERIZON) / FELT AND CREEMER OR SCOFIELD

Patent Owner attacks Felt's disclosure of claim 1 concerning the "campaign," the rules, "course of travel," and first/second indications and locations. But these concerns are resolved by the art itself, and often were already denied by this Panel.

A. Independent Claim 1

Patent Owner complains that claim features are unavailable from the prior art, but improperly demands word-for-word correspondence. Patent Owner leaves unexplained why the presented art does not meet the claim feature language, and ultimately omits what it believes those features include.

1. “content distribution campaign”

For example, Patent Owner asserts that Felt’s marketing program based on time/location and user profiles is not a “content distribution campaign.” Patent Owner argues that Felt’s advertisements are too ‘case-by-case’ and that sending ads isn’t a ‘campaign.’ RESPONSE (Paper 10), p. 15. Patent Owner never explains what its ‘campaign’ is, but also fails to explain why Felt’s marketing program with categorization/association of marketing content to a broad class of consumer-audience members would not qualify. *Id.* Patent Owner further suggests that storing ads somehow negates campaigns, but fails to explain why its claims exclude storage. Sur-reply is inappropriate on such omissions where Patent Owner originates the issue. Yet, Patent Owner overlooks that Felt’s server 107,109 sends marketing content, and that device-side storage is only one possible implementation. Felt, ¶¶[0036](ad server 107 sends content), [0051](“marketing content may be stored”)(emphasis added), FIGs. 2-5. Although not confined to device-side storage,

Felt's device-side storage implementation which cultivates relevant ads for end-user consumers, addresses the 'campaign' of claim 1.

2. Rules

Patent Owner also argues that Felt's time rule for certain temporarily-stored ads doesn't "send content during predetermined time intervals." RESP., 15-16. This argument concerns Felt's one instance of storing ads during network loss (Felt, ¶[0054]); yet, claim 1 doesn't mention 'sending content during' the time period, and merely specifies a rule "corresponding to" a period in time, which includes future time within Felt's network unavailability example. Felt also discloses other examples of time-period rules like during store hours, mealtimes, and 'evening,' each untethered from particular storage needs like network loss. Felt, ¶¶[0025], [0042]; PET., 7. Although Patent Owner's specific concern is defeated by facts, Felt's other time periods also meet this rule.

Patent Owner argues that Felt's individual rules aren't used together. RESP., 17-19. Patent Owner reads Felt in vacuum-isolated sections. But, Felt's disclosure is cumulative to its overall realtime targeted-ad program. *See* Felt, Title ("REAL TIME DISPLAY OR DISTRIBUTION OF ADVERTISEMENTS"), ¶¶[0015] ("marketing content...updated based on geography and/or time.", [0020] ("realtime location of individuals, and the temporal nature of the marketing content."), [0060] ("marketing content...updated...as the user travels.") (emphasis

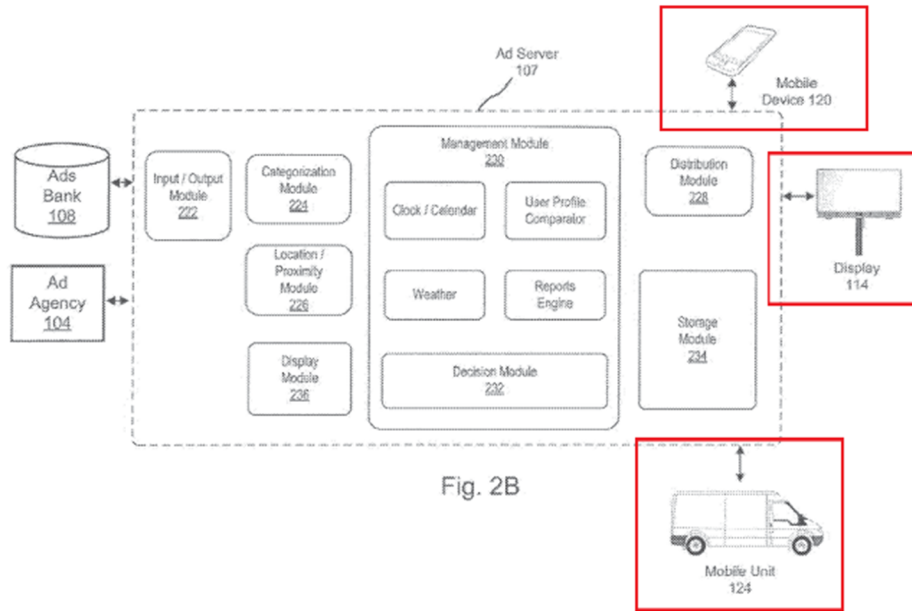
added). Felt applies the user's profile while walking towards a business location (¶¶[0050], [0053], [0047]). Receiving ads while walking during business hours facilitates Felt's ongoing ad program (¶¶[0028], [0042]), and its rules collectively target the user moving in time/location and personalized by profile to provide user-specific realtime ads in Felt's walking scenario. *See* Felt, ¶¶[0001]-[0002] (realtime), [0040]-[0041], [0047]-[0049] (profile-based content determination), [0064]-[0068]. Patent Owner's attempt to silo Felt's teachings is illogical, and ignores Felt's ongoing time/location/profile program for realtime user-targeted advertising.

3. "course of travel"/indications

Patent Owner argues that Felt lacks "course of travel," but again disregards Felt's continuous realtime program. RESP., 18-19. Although admitting that Felt's speed/direction/proximity/manner disclose "course of travel," Patent Owner argues that Felt's determination isn't 'based on analysis' of the first and second locations. *Id.*, 19. However, a POSITA would appreciate that Felt's GPS commonly includes comparing "discrete location point differences to determine the course such as speed and direction" which Felt expressly teaches, and from which the manner of travel is determined. EX1002, [268]; *id.*, [35]-[39], [241]-[246], [264]-[268]. Patent Owner offers no explanation on how Felt would determine speed/direction from a single point, and common GPS point comparison is unremarkable and known within Felt

according to Dr. Goldberg. RESP., 19. Patent Owner fails to counterbalance evidence that Felt's includes analysis of first and second locations, and nevertheless, fails to factually rebut Creemer or Scofield achieving "determining" in Element 1(f). *Infra*, §§I(A)(5)&II(B)-(C).

Patent Owner falsely characterizes the Petition as combining embodiments, and ignores Felt's continuous realtime program during ongoing user movements. RESP., 19-20, 24. While considering both vehicles and personal mobile devices, Felt's examples about realtime location/time-based ads are not restricted to individual architectures. Felt's walkthrough example of sending AD1 at time/location 1, AD2 at time/location 2, AD3 at time/location 3, discusses mobile unit 124 as a van; but applies equally to mobile devices (phones). Felt, ¶[0042]. For example, FIG. 3 referenced by paragraph 42 concerns mobile unit (vehicles) 124, which Felt equates with mobile devices 120 in FIG. 2B annotated below, each receiving ads from server 107. *See id.*, ¶¶[0036] (equating units 124 and devices 120); EX1002, [305]-[306]. The mobile units 124 in FIG. 2B are the very same as in paragraph 42.



Felt's paragraph 42 extends to architecture of FIG. 2B, and Felt's van example merely aids dramatic description with long distances between Newark Airport and Time Square.

Felt's mobile phones 120 traveling the same course from Newark Airport to Time Square experience similar realtime ad progression as vans in paragraph 42, e.g., approaching businesses at the airport, downtown, or Times Square. *E.g.*, Felt, ¶¶[0034] (updated content), [0036] (speed/direction). As the user's course of travel is determined (speed/direction/manner of travel), subsequent ads are provided. This is true even if mobile device 120 travels without a vehicle (e.g., walking) or within vehicles not equipped as mobile unit 124 (e.g., biking/unequipped car). Although profiles may target different ads for mobile devices, Felt applies time/profile/travel rules in determining user eligibility via mobile device 120 despite ad variation.

Patent Owner also overlooks Felt's teachings that mobile units 124 act similarly to server 107 in FIG. 2A. A user near mobile unit 124 can receive ads via mobile device 120, and both mobile unit 124 and ad server 107 can provide ads to mobile device 120. Felt, ¶¶[0034] (modules in both server 107 (FIG. 2B), and mobile unit 124 (FIG. 2A)); [0040] (conflict resolution). Thus, Felt's various architectures can be deployed together, illustrating that paragraph 42's realtime ads are exemplary of time/location progression, applying equally to Felt's mobile devices 120 without modification.

Patent Owner's criticizes Dr. Goldberg's testimony as conclusory, and confusing notes that Felt's radius surrounds 'non-consumers.' RESP., 21-22. Patent Owner's accusations are themselves unsupported, or disconnected from its conclusions. The Petition explains, and Dr. Goldberg agrees, that mobile devices within radius of a business or display, cause proximity determination which by Felt's GPS signals (among other technologies) discloses receiving the first indication. PET., 10; EX1002, [257]-[260]. And, in Felt's realtime program, *continued* travel produces additional advertising by speed/direction/manner. Felt, ¶¶[0036] (speed/direction), [0042]-[0043], [0053]. Without acquiescence to Patent Owner's vehicle/"consumer" distinction, Felt's mobile device 120 enters "a radius around a location of interest,...[e.g.] particular business" or display 114, and specifically "marketing displays located at a particular business." Felt, ¶[0036]; PET., 10;

EX1002, [257]-[260]. Felt's other options around zip codes/users don't reduce its teaching of radius around businesses. RESP., 23; Felt, ¶¶[0036], [0072] (particular businesses).

Patent Owner argues that Felt doesn't use literal claim terms concerning the first indication, and that Dr. Goldberg used Felt's 'proximity' terms. RESP., 24. Felt (¶[0036]) literally describes a radius to a business in defining 'proximity.' Still, Patent Owner explains no distinction between terms. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) ("Things are not made for the sake of words, but words for things."). Patent Owner's issues concerning AD1-AD3 and mobile units are rebutted herein, and arguments on Response page 24 about mobile unit/"consumers" are repetitive. *Supra; infra* §§I(A)(4)-(5).

Patent Owner summarily argues that claim 1 isn't obvious over Felt, addressing only the declaration. RESP., 24-25. As the Petition presents, and Dr. Goldberg's supports, Felt's GPS includes indication of user position within radius of a business. PET., 10-11; EX1002, [26], [262] ("[Felt] must receive some type of 'indication', such as instructions, a GPS ping on an internal map, or the like...[o]therwise, the system would not be able to actively update the advertising."), [264]-[268]. Patent Owner's "consumer"/"non-consumer" distinction is negated herein (*supra; infra* I(A)(4)-(5)).

Patent Owner argues that Dr. Goldberg is too experienced and discounts his testimony. RESP., 25. But, Dr. Goldberg applies ordinary skill, and the allegations lack explanation and ignore detailed analysis. *E.g.*, EX1002, [26], [262]-[268].

4. “assessing”

Patent Owner argues that Felt’s ‘assessing profile data’ is not “in response to the first indication.” RESP., 25-28. However, Felt’s mobility examples are not segmented by vehicles vs. consumers as Patent Owner suggests. Paragraph 40 discloses the decision module considers “user profiles and/or settings before distributing content to various mobile devices 120,” and that ad server 107 can distribute “directly to...mobile devices 120...using similar modules to those explained above, and as shown in FIG. 2B,” further likening mobile devices (phones) 120 within the mobile units 124 examples. Thus, Patent Owner undermines it’s “consumer”/“non-consumer” distinction by ignoring that Felt’s mobile unit 124 discussion expressly extends to mobile devices 120.

Further, Felt teaches that decision module 712 compares “*data 800 to user settings and profiles of users.*” Felt, ¶[0067](emphasis added). Data 800 includes categories/criteria, and Felt expressly tethers module 712 with “decision module 212 within mobile unit 124 (FIG. 2A) or a *corresponding decision module 232 within ad server 107 (FIG. 2B).*”). *Id.*, ¶[0064] (emphasis added).

In annotated FIG. 9 below, Felt distributes content to mobile devices (block 940), analyzes location/proximity (950), and considers categories/criteria (960). Felt, ¶¶[0069]-[0078]. Felt states that “blocks 950 and 960 may occur *before* [] *distribution* of marketing material.” *Id.*, ¶[0069](emphasis added). Thus, Felt “assessing” is ‘in response to’ location, and concerns both examples Patent Owner deems as “consumer”/“non-consumer.” *Id.*

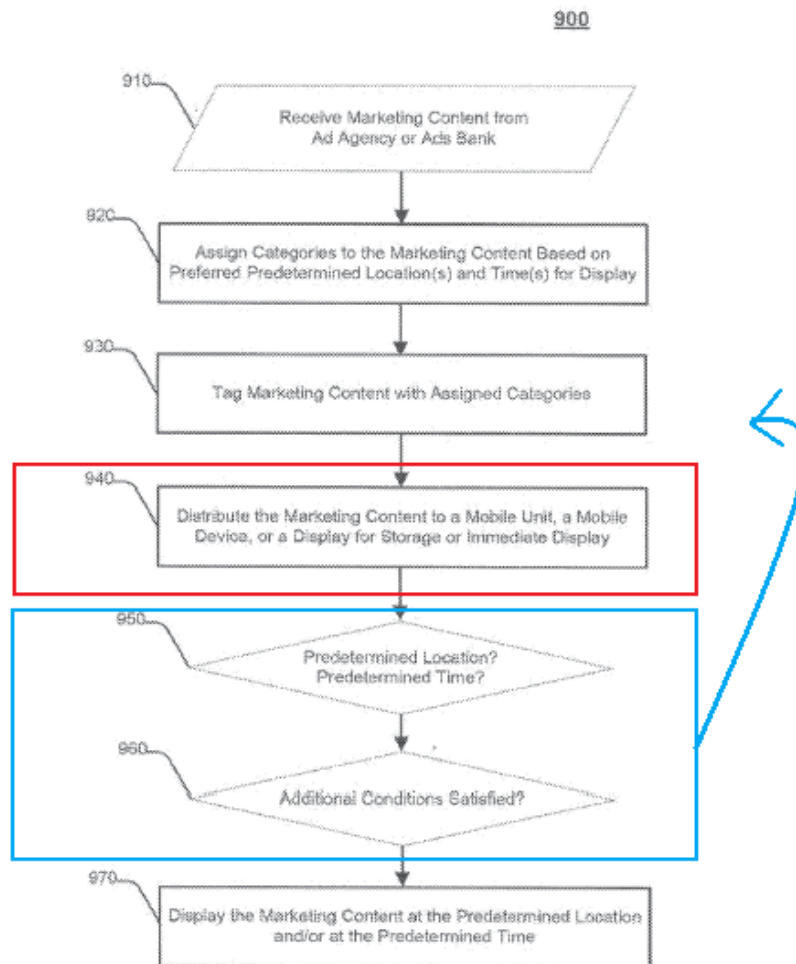
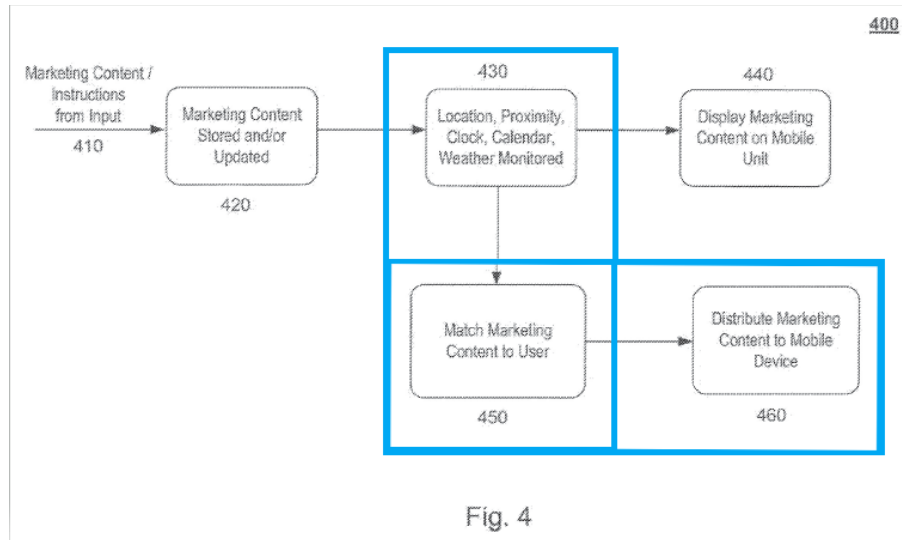


Fig. 9

Accordingly, Patent Owner's consumer/non-consumer logic doesn't hold water, and contradicts Felt's likening different architectures. Denying irrelevant ads avoids inundating/spamming and illustrates Felt's profile rule. Felt, ¶[0067]; RESP., 27-28.

Felt reconfirms its examples are cumulative, and that its time/location-based advertising applies generally across architectures. Felt applies user profiles with decision modules 212, 232, 712 across architectures. And contrary to allegations, Felt expressly considers proximity between business location and mobile device 120. RESP., 27; Felt, ¶[0072] (“[p]roximity...distance between...individual's known location [and] a business location.”). Patent Owner speciously represents testimony (RESP., 27), and falsely argues that vehicles 124 don't use profiles. But, vehicles 124 distribute to mobile devices 120 applying user profiles—just like examples where ad server 107 communicates with mobile devices 120 separately. Felt, ¶[0050]; RESP., 27-28. *E.g.*, annotated FIG. 4, Felt's user profile comparator (450) follows location/proximity (430).



Accordingly, Patent Owner unjustifiably confines Felt's examples, contradicting explicit description and Felt's realtime location/time/profile ad program.

5. "second" indication/location & "determining" course of travel

Patent Owner argues that Felt lacks a second indication of a second location. RESP., 28-30. However, Felt discloses this second indication both by its (i) realtime process and (ii) examples. Felt's holistic approach for realtime ads demonstrates the ongoing nature of user movement and responsive location-informed ads. *See* Felt, Title, ¶¶[0015] ("updated based on geography and/or time."), [0020] ("realtime location of individuals, and the temporal nature."), [0060] ("as the user travels."). Thus, Felt's program necessarily includes continuous time/location-based updates, not a single ad.

A stagnated single ad doesn't fit Felt's realtime arrangements. Like the first ad for the first indication/location, continuing user movement yields a second indication and ad for the next location, under Felt's operations. *Supra*, §§I(A)(2)-(4). Dr. Goldberg explains that, among Felt's tracking technologies like GPS, comparison of discrete (first and second) locations is commonplace, and discloses receiving location-indication from GPS satellites and otherwise by the system, e.g., ad server 207. EX1002, [32] (satellites), [34] (GPS location output for receiving), [36]-[39] (comparison), [264]-[268] (GPS location comparison). Common GPS comparison is too routine for description; yet, Felt illustrates how its time/location ad series operates during travel.

Felt describes serial ads where “a mobile unit traveling through...Newark Airport around 7:00 AM may display advertisements relating to hotels...heads to Manhattan around 12:00 PM...may display marketing content for a local Japanese restaurant...[later] travels near the theater...may display marketing content for a Broadway musical...” Felt, ¶[0042]. Felt's serial ads consider time/location unhampered by architecture, and occur similarly for users walking or riding in unequipped vehicles (not unit 124) with mobile phone 120. Patent Owner raises nothing within Felt, nor elsewhere, discounting Felt's generic time/location examples applying to mobile devices, and Felt's ad server can send the marketing

content *directly to mobile devices 120* (§[0040]), illustrating the serial ads apply to various architectures. Felt, §[0044] (server 107 sending content).

Felt similarly discloses ‘determining course of travel’ by its examples and realtime ads program. RESP., 30-32. Patent Owner provides no evidence or logic to distinguish “first” and “second” location/indications from common GPS locations/signals. *Id.*, 31.

Nevertheless, this Panel found that Creemer and Scofield address the first and second indications/locations. Creemer identifies “two different positions” and “direction-based information,” and Scofield discloses analyzing periodic positions for “geographic path, trail, or avenue,” and each would “improve [Felt’s] accuracy.” DEC., 39-40. Thus, concerns over Felt’s indication/location and similar “second” features are resolved, and are otherwise quelled by Creamer/Scofield.

B. Independent Claim 13

Patent Owner insists that Felt misses features, but omits reasoning why Felt’s wording doesn’t suffice. Patent Owner argues that wording distinctions between claims 1 and 13 undermines how Felt’s realtime program applies, but this is false pretense and fails to identify any undisclosed feature. RESP., 33-34.

1. “specifying at least one action”

Patent Owner insists that consumer interactivity isn’t the “one action” because Felt’s interactivity doesn’t precede campaign eligibility and can’t include travel.

RESP., 34, 42-43. Patent Owner hasn't established 'eligibility' as prerequisite to all communications. Dependent claim 17 denies such prerequisite because "first content" is provided "in response to the first indication," apart from eligibility. Timing doesn't discredit Felt's interactivity, and related tracking/weighting teaches campaign eligibility by qualifying for specific ad delivery. *E.g.*, PET., 23 (Felt, ¶[0050] (weighting)).

Additionally, current purchasing/traveling to businesses of historical content alters weighting of eligibility for "particular market content to particular users on the go," because Felt actively updates profiles. Felt, ¶¶[0050] (each time setting/profile is changed), [0053] ("history of marketing content received..."). Thus, Felt distinguishes interactivity-travel from other travel. RESP., 42. Felt's "geolocation" and "period of time" rules are undeniable, and Patent Owner's complaints are purely argumentative. RESP., 34-35.

2. Elements 13(c)-(e), & dependent claims 14-19

Patent Owner perfunctorily addresses various elements. RESP., 35-36. Contrary to assertions, Dr. Goldberg applied ordinary skill (*E.g.*, EX1002, [26]); supported Felt's serial location-based ads as broadly applicable (*id.*, [305]-[307]; *supra*, §§I(A)(2)-(5)), and that Felt's realtime targeted ad program discloses the campaign despite allegedly missing aspects (EX1002, [300]-[301]; *supra* §I(A)(1)).

Patent Owner's arguments regarding claims 14-19 rest on rebutted points regarding claim 13.

C. Independent Claim 20

1. "registered asset"

Patent Owner argues that Felt's physical assets (e.g., businesses/displays), and virtual assets (e.g., digital presentations) aren't "registered." RESP., 37-38. Patent Owner confuses its own terms where physical/virtual assets are defined "for a registered asset." Notwithstanding passively-recited "registered," Felt pre-arranges business ads (Felt, ¶[0028]) such that businesses and content are "registered," and Patent Owner omits explanation on why Felt's displays and businesses associated with the content aren't physical assets. Felt's virtual assets as actual display/presentations are distinguished from media content. PET., 27.

2. First & Second Messages, Associating

Patent Owner argues that Felt lacks first and second messages, and lacks "associating" those messages with consumers. RESP., 38-40. Felt provides a first ad message resulting from user presence within radius of a business. As the user moves towards the business, Felt's realtime program updates ad messaging. *Supra* §I(A)(2)-(5). Felt's ads and businesses range from airport restaurants to Broadway shows; and as speed/direction/proximity/manner are determined, other messages ripen in relevance and realtime ads reflect the course of travel. PET., 29-30.

Felt also considers user actions ‘upon’ content, e.g., physically approaching a business. Felt, ¶[0053]. Felt “continuously monitor[s]” weightings from user acts, and outweighed messages are displaced by second messages correlated with user actions. *Id.*, ¶[0050]. These location-based updates are within Felt’s routine operations, and free of specific architectures. Felt’s serial ad examples disclose different messages (AD1-AD3) including interrelated updates, varying target locations, different promotions, or similar. *Id.*, ¶[0043]. Reacting to a first ad by navigating to a business location, Felt updates weighting and yields another ad with different promotion/information—*quintessential realtime advertising*. Felt, ¶¶[0050], [0053], [0042]-[0043].

3. “consumer audience segment”

Patent Owner argues that Felt’s profiles don’t define this segment, but Felt’s categories/criteria/settings link content with user profiles, thus, defining the consumer audience segment. RESP., 41; Felt, ¶¶[0064]-[0069] (comparing data 800 categories/criteria with profiles).

4. Other

Patent Owner offers empty accusations or disproven arguments for Elements 20(c)-(g) and dependent claims 21-23; those issues are rebutted above. RESP., 42-45. Patent Owner offers no support for particular message differences in claim 20, notwithstanding such differences are patentably indistinct. *Id.*, 44; see *Praxair*

Distribution, Inc. v. Mallinckrodt Hosp. Prods. IPLtd., 890 F.3d 1024, 1031-32 (Fed. Cir. 2018) (printed matter doctrine).

II. GROUNDS 3-5: FELT / FELT AND CREEMER OR SCOFIELD EACH FURTHER IN VIEW OF GEER

Patent Owner asserts that motivation lacks for Geer, and apparently cross-references to issues dispelled above. *See* RESP., pp. 45-53.¹

A. Felt & Geer (Grounds 3 & 5)

Patent Owner argues that Geer is far afield, and only applies to mobile devices and known locations. REPS., 47-48. Context helps to appreciate that Geer’s tracking applied in Felt’s ad program for initiation “in response to” user actions can improve resolution and/or power & data management in mobile communications—particularly in location-based advertising.

Felt tracks consumer-ad interaction, weighting interactivity as ad relevance. For example, Felts weights (i) physically approaching/mapping business location, and (ii) digital-actions like clicking links/websites. Felt, ¶¶[0050], [0053]. Thus, Felt *tracks the consumer* by interactivity indicating influential advertisements. *E.g.*, EX1002, [305] (“responsive tracking to consider the consumers’ acts upon content.”), [306].

¹¹ Presumably, cross-reference at Response page 36 intends §VI.A.2(c).

Felt's tracking is *in response to the first indication* because Felt's ad is provided and interaction occurs *in response to receiving the first indication* that the consumer is *within a radius of the geolocation*, e.g., the business. EX1002, [306]. The tracked interactivity is responsive to *receiving the first indication* because interactivity is tethered to the location-based ad by GPS location. Felt, ¶¶[0027], [0036]. When a mobile device is within exemplary 200' radius of a business, Felt responsively provides an ad and tracks ad-interactivity via (i) physical travel/mapping business location, and/or (ii) digital acts (click/save/search/share). *Id.*, ¶¶[0036], [0050], [0053]. Felt tracks movement/digital interactions in order *to determine whether the consumer has performed the at least one first action*,² i.e., ad re-actions. Felt, ¶¶[0050], [0053] ("acted upon").

Accordingly, Felt "tracks" the consumer "in response to" indication of presence within radius of the business. Alternatively, if Felt doesn't track directly resultant from the "indication," Geer's geolocation-based communications system initiates high-resolution ("HIRES") tracking *in response to* the consumer (user-fan) entering a boundary. PET., 34-35; EX1002, [337]-[338].

² Felt's realtime targeted program is continuous, and tracks the mobile device which receives additional messages as the consumer walks/drives in furtherance of its program. *Supra*, §§I(A)(2)-(5). Yet, Felt's ad interactivity tracking independently meets the language of Element 13(d).

Geer discloses information management system (FNMS) 310 communicating with “personal smart devices” (“PSDs”) 320 including mobile phones/computers in FIG. 3. Geer, ¶¶[0003], [0044]; EX1002, [81]-[83].

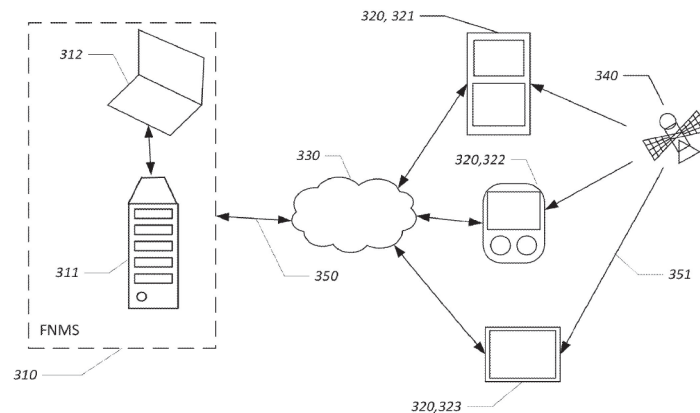


FIG. 3

In Geer’s annotated FIG. 10 below, when a user is within outer zone (OZ) (1010), HIRES tracking is responsively activated (1020-1040). Geer, ¶[0065].

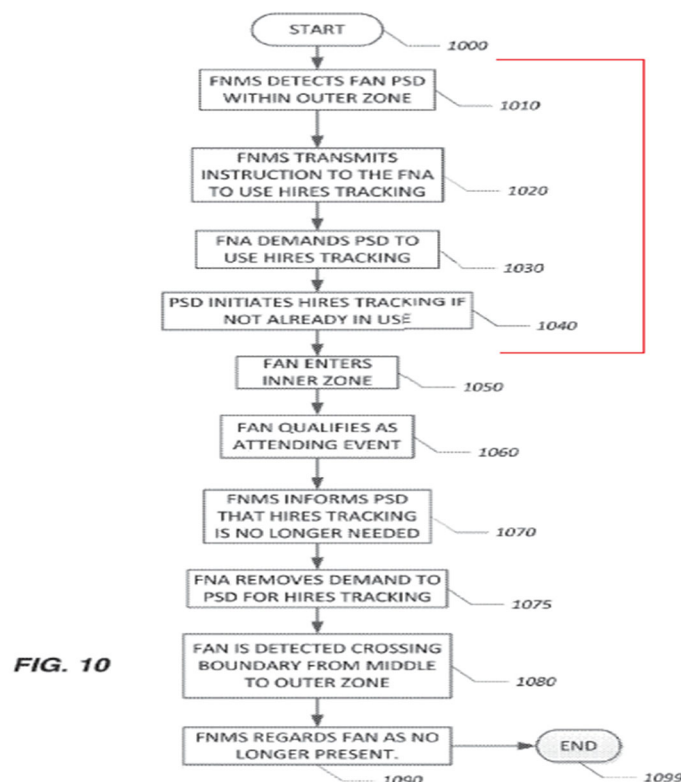


FIG. 10

Entering the outer zone (OZ), Geer's system receives GPS indication of user presence within OZ, and Geer responds by activating HIRES tracking to increase precision. Geer illustrates OZ as a baseball park area and precise inner zone (IZ) includes smaller locations inside. Geer, [0058]; FIG. 8. Geer's 'responsive tracking' by HIRES helps precisely determine whether users enter the IZ destination (Geer, ¶[0064], FIG. 10 at 1050/60)—*strikingly similar to Felt's consideration of "physically traveling to" businesses* (Felt, ¶[0053]). Geer, ¶¶[0005] ("high resolution"), [0006] ("whether a fan qualifies as attending an event, and the fan's position...with geolocation of their PSD, e.g., through GPS."). Geer even ties responsive HIRES tracking to **location-based advertising**, e.g., coupons. Geer, Abstract, [0006] (coupons), [0065] (HIRES geolocation for coupons), [0074], [0089]; *see also id.*, [0047], [0081], FIG. 16 (advertisements).

Geer, like Felt, concerns actively-updated location-based communications, and even advertising. Accordingly, Geer's location-ad communications are (i) from the same field of endeavor as the claimed invention, and (ii) reasonably pertinent to the problem faced by the inventor in location-based communications like advertising. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Patent Owner mischaracterizes Geer as purely social networking, doesn't address analogous art issues, and ignores Felt's social media/networking (Felt, ¶¶[0047]-[0048], [0056] (hashtags), [0061] (share)). RESP., 47.

Patent Owner argues that Felt doesn't suffer battery problems. RESP., 47-48. However, neither Felt nor the '108 patent must independently provide motivation. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) (reversing rigid TSM test). Patent Owner argues that no evidence shows Felt's imprecision or that Geer improves results; but, Dr. Goldberg's testimony and Geer's disclosure both expressly demonstrate motivation for improved resolution and/or power consumption with rationale underpinning. *Id.*; EX1002, ¶¶[337]-[338]; PET., 34-35. Patent Owner also overlooks testimony crediting reduced data. *Id.*

Patent Owner argues that Geer discloses "general predetermined location[s]," and questions why Felt would reduce power "when that geofence area is not the destination." RESP., 48. Felt already discloses a radius (Felt, ¶¶[0027], [0036]), and Patent Owner overlooks that Felt/Geer's geolocations include destinations such as businesses/ballparks (Felt, ¶[0053]; Geer, ¶[0058]). Felt's proximity/radius for targeted advertising and Geer's modification for more directly-triggered tracking fittingly adds improved resolution and/or reduced data/power consumption within Felt's architecture. EX1002, [299]-[301].

Patents Owner's general allegations that Felt lacks features are false and rebutted above. RESP., 28. Patent Owner's further argument that "[if] references fail to teach [all elements], there can be no motivation," misstates the law where

motivation inquiries are distinct from existence of unrelated elements.³ RESP., 48-49; *see KSR*, at 399 (motivations analyzed distinctly).

B. Felt & Creemer (Grounds 4-5)

Patent Owner generally complains that motivations for combining Felt and Creemer are hidden, conclusory, or echo the declaration. RESP., 49-50. This Panel rejected Patent Owner’s similar complaints by identifying motivation, crediting testimony, and denying Patent Owner’s mischaracterization of Creemer. ID, 37-40. Nevertheless, Patent Owner makes no supporting demonstration.

Patent Owner incorrectly states that Creemer only applies to claim 1. RESP., 50. Rather, Ground 4 challenges claims 1-23 with Felt and Creemer, and Ground 5 alternatively adds Geer regarding claims 13-19. PET., 1, 8-9, 20, 31-32.

Patent Owner argues that POSITA wouldn’t “review Creemer” regarding speed/direction because Felt already considers speed. RESP., 50. Patent Owner also argues that Creemer’s mode of transportation and future position are irrelevant to Felt, and mischaracterizes Creemer’s abstract as unavailable. RESP., 50-51. However, Felt considers transportation mode (walking/riding, ¶[0058]) and future position (physically traveling to location, ¶[0053]). And, Dr. Goldberg credits that “Creemer illustrates [Felt’s] speed/direction...POSITA would have been motivated

³ Patent Owner repeats this logic several times, and Foursquare opposes each instance similarly but withholds repeated statements. RESP., 51, 52.

to implement Creemer's more complete consideration of the consumer's path of travel [for] precision, consideration of user circumstances, refinement of information, and/or otherwise to improve [accuracy, noise, and/or efficiency]." EX1002, [252]; PET., 32. Patent Owner offers no showing otherwise.

C. Felt & Scofield (Grounds 4-5)

Patent Owner protests that combining Felt with Scofield lacks motivation, is unexplained, and impractical, but again offers no specifics or support. RESP., 51-52. The Petition explains, supported by testimony, that Scofield elaborates on "course of travel" via traffic patterns/paths/trails in determining desirable content. PET., 9. POSITA would have incorporated Scofield's course of travel to enhance targeted advertising and/or visibility for businesses, and would have modified Felt by Scofield's express course of travel to improve accuracy, noise, and/or efficiency in targeted communications. *Id.*; EX1002, ¶¶[253]-[256].

Patent Owner falsely alleges that the Petition doesn't challenge claims 13-27 with Creemer or Scofield. RESP., 52-53. Yet, the Petition applies claim 1 arguments/evidence to Felt with Creemer/Scofield to claim 13, and specifies Felt with Creemer/Scofield regarding claim 20. PET., 20, 31-33. Patent Owner fails to identify particular elements unaddressed by these grounds.

III. GROUNDS 6-7: ADHARAPURAPU / FELT & WITH GEER

Patent Owner jumbles confusing or irrelevant arguments concerning Grounds 6-7. For example, Patent Owner recounts what Felt allegedly lacks regarding Elements 1(e)-(f), but doesn't connect its concerns to Grounds 6-7 concerning Adharapurapu. RESP., 54. Clarification concerning Element 13(d) and Felt's tracking consumers responsive to the first indication is addressed above in Sections I(B)&II(A).

A. Adharapurapu & Felt, generally

Concerning Element 20(g), Patent Owner mistakes the Panel's discussion about other grounds, and falsely summarizes the Petition. RESP., 54. The Institution Decision didn't raise any question about Element 20(g), but rather discussed the "second message" which Adharapurapu discloses and to which Felt adds. ID, 33-34. As mentioned above, Felt "associates" (second) messages with the consumer by attributing/weighting ads. *Supra*, §I(C)(2); PET., 51; Felt, ¶¶[0050]-[0053].

Patent Owner asserts that only Felt concerns Element 20(g), but this limitation cannot be isolated. RESP., 54. In claim 20, the "second message" and second rule of Elements 20(b),(d)(ii),(g),(h), collectively include **defining the content** of the second message and the consumer action rule, and **receiving** determination that the second rule is satisfied and **"associating"** the second message with the consumer.

These basic messaging rules are routinely achieved by merely setting/executing on a message rule.

For example, Element 20(d)(ii) defines the second rule as “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.” The Petition establishes that Adharapurapu discloses this rule by messaging based on consumer travel routes. PET., 60-61. Adharapurapu’s examples include consumers acting on courses of travel, and receiving associated-messaging regarding the course. Adharapurapu, ¶¶[0016], [0017], [0019]-[0022]. Consumers taking course of travel to exemplary Road X or along $A \rightarrow D \rightarrow C$, receive a first message about Road X being closed or for a giftshop. *Id.*, ¶¶[0019], [0020]. Upon consumer action for further course of travel along $I \rightarrow E$, the consumers receive a second message about restaurant R1. *Id.*, ¶[0020]. Of course, these are merely examples of Adharapurapu’s targeted messaging, based on consumer action during the course of travel in association with the asset, e.g., road/restaurant. *Id.*, ¶[0021].

“[A]ction performed by the consumer” is merely defined as “during” course of travel. Yet, if Adharapurapu focuses on travel/movement actions, Felt adds consumer inter-action/re-actions. For example, Felt treats actions like clicking links/saving/sharing/inquiring on ads and physically traveling to the business location when ads popup during travel as consumers “act[ing] upon” the message.

Felt, [0053]; [0050]; PET., 61. Both Adharapurapu and Felt disclose *receiving* determination of achievement of the second (consumer action) rule by processing communications, and both *associate* the message with the consumer by determination for transmission/display to the user. PET., 62. However, Felt additionally “associates” the message with the consumer by weighting/valuing via user profiles. Felt, ¶¶[0050] (profile, weighted), [0053]; EX1002, [411]. Felt’s additional consideration of consumer re-action furthers communication tailoring, improves accuracy, noise, and/or efficiency in realtime/user-specific manners. PET., 61; EX1002, [406].

Adharapurapu combined with Felt’s consumer re-action tracking includes “receiving a second determination that the second rule has been satisfied” by tracker module 101, interface 205, network 103, and/or mobile devices receiving determinations once formed and by interrelated communications to execute outbound communications. PET., 62; EX1002, [408]; RESP., 54. Incorporating Felt’s consumer re-actions likewise discloses ‘receiving the second determination’ for weighting consumer activity through related determination/resultant communications by Felt’s modules. Felt ¶¶[0040] (module 208 receives determination causing distribution from module 212, ad server receives determination causing distribution from module 208), [0047] (decision/distribution modules 212,228 receive determination from profile comparator for matching, and

received by management module 210, distribution module 206, and mobile device 120); FIGs. 2A&B. Thus, Adharapurapu modified with Felt's consumer re-action tracking achieves Element 20(g), where their architecture for the second consumer-action-rule and message comports with each other.

Patent Owner doesn't identify what aspects of Elements 1(e)&(f), 13(d), 20(g) are missing, but resorts to scattered accusations leaving unexplained why Adharapurapu and Felt's tailored communications are insufficient. RESP., 55. Segwaying from nonspecific arguments, Patent Owner argues that Adharapurapu's tracking from stations D to A only compares "cellular coverage accessed to a history using base stations," not locations. *Id.* Patent Owner's distinction is undemonstrated while Adharapurapu illustrates its tracking in several examples. PET., 40-41.

B. Adharapurapu, Elements 1(e)-(f)

Patent Owner argues that Adharapurapu is old and different from tracking consumer location within a radius because it uses mobility history, not first/second locations. RESP., 55-56. Patent Owner, again plays word games, and omits explanation why Adharapurapu's "mobility history" with immediately-previous locations, doesn't meet the claim terms. *Festo Corp.*, 535 U.S. 722, 731.

Patent Owner cites Exhibits 2002-2003 arguing that coverage overlaps or GSM/UTRAN selection varies cell station selection. RESP., 56-57. Reliance on these exhibits is flawed where neither is self-explanatory, and Exhibit 2003 is

expressly unreliable stating “[t]he present document has not been subject to any approval process by the 3GPP Organizational Partners and shall not be implemented.” EX2003, 1; EX1009, ¶¶[5]-[6].

Initially, Patent Owner fails to demonstrate that Adharapurapu is limited to consider overlapping regions or to GSM/UTRAN, undermining relevance of this issue entirely. EX1009, [13] (“Adharapurapu itself also mentions “CDMA, EDGE, GPRS etc....POSITA would understand Adharapurapu’s general techniques not as beholden to a specific technology.”). Patent Owner’s vast extrapolation from these exhibits is undemonstrated (omitting any expert analysis), and it remains unexplained why cellular/frequency selection must use different stations as it argues. EX1009, [11] (same station). Patent Owner fails to link its citations together, or to its proposed conclusion; for example, assertions that “cells or frequencies...may be included” is merely conditional, and “[a]lgorithm for cell re-selection from GSM to UTRAN” is unestablished as a requirement by record evidence. RESP., 56.

Nevertheless, even assuming *arguendo* that Adharapurapu were limited to GSM/UTRAN and that overlapping stations could experience variance under unusual circumstances, Patent Owner omits demonstration that variance denies Adharapurapu’s disclosure of claim limitations. EX1009, [6]-[12]. As Dr. Goldberg explains, even if conditions would allow variation between two overlapping cellular stations or performance levels for the same path/position, this would occur in the

minority under unusual circumstances, like “[h]eavy rain or very high network traffic.” EX1009, [7]; [11]. Rather, “a mobile device would access the same cellular base station...[in] a vast majority...if not every instance,” following the same course of travel. *Id.*, [8]. Moreover, different performance levels can be provided from the same station. *Id.*, [11]. Indeed, conserving cost or power can incentivize servicers to “favor consistent use of stations.” *Id.*, [8].

Mere possibility of station variance doesn’t change that Adharapurapu meets the claim language often (including Elements 1(e)-(f)). Nevertheless, record evidence establishes that predominantly stations don’t vary, even presuming Adharapurapu were GSM/UTRAN or overlap limited. EX1009, [6]-[9].

Patent Owner argues that Felt’s geofencing opposes Adharapurapu’s cellular technique. RESP., 57. This is unsupported and unreasonable where Felt’s radius assists in identifying consumer’s relevant proximity, and Adharapurapu locates by proximity to its interest location. PET., 38-39.

Patent Owner argues that Adharapurapu’s location “history” also suffers station variance. RESP., 57-58. Presumably arguing that “mobility history” concerns *old* locations, Patent Owner overlooks that Adharapurapu records immediately-previous stations. Adharapurapu, ¶[0018] (“[a] path illustrating the location and direction of movement [using] base stations stored in the mobility history database 203.”). Nevertheless, Patent Owner’s variable station theory is rebutted above.

C. Element 13(d)

Patent Owner argues that Adharapurapu lacks tracking *in response to* the first indication because checking subscription occurs after locating. RESP., 58. Patent Owner presumes that any position awareness constitutes “tracking,” but claim 13 separately recites “receiving the first indication” providing location. Beyond mere location/position awareness, Adharapurapu tracks by conducting checks and notes/stores location for subscribers, and denies the location information if unsubscribed. Adharapurapu, ¶¶[0015](“enable or disable”), [0022](“location information...not noted”). In response to the first indication, Adharapurapu expressly checks subscription. *Id.*, [0022](“checks (402) if the mobile device user has subscribed.”), FIG. 4.

Nevertheless, Felt’s additional consumer interaction tracking *in response to* the first indication is clarified above (and alternatively with Geer), applicable also to Adharapurapu. RESP., 58; *Supra* §II(A). Patent Owner omits additional support for general opposition concerning Elements 1(e)-(f) and 20(g). RESP., 58-59. Patent Owner is mistaken that POSITA wouldn’t consider Adharapurapu, ignores analogous art standards, and reoffers debunked ‘station variation’ arguments. *Supra*, §III(B). Patent Owner’s arguments that motivation lacks for combining Geer with Adharapurapu/Felt are rebutted similarly as above. *Supra*, pp. 18-23, §II(A).

IV. CONCLUSION

Accordingly, Patent Owner's attorney argument, devoid of legitimate support, cannot rebut the meaningful evidence presented by Foursquare. A preponderance of record evidence demonstrates unpatentability of claims 1-23 of the '108 patent.

May 16, 2024

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 this PETITIONER'S REPLY totals 5,580 and within the 5,600 words allowed under 37 C.F.R. §42.24(c)(1).

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing PETITIONER'S
REPLY and accompanying exhibits, were served on May 16, 2024, to the following
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