

AMENDED Exhibit 908

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

SCT: Dynamic Location Widget

2/2/2017, 5:54 PM UTC
type: document

SCT: Dynamic Location Widget

Feature Overview

Geofilters perform better when they're more relevant, and location is one of the simplest ways to add relevance. Several DSO examples [here](#) demonstrate this clearly - when a location was added to sponsored geofilters, conversion went from 5-8% to 20-30%! We'd like to encourage more advertisers to add location to their geofilters, but the current manual approach (creating a separate filter for each location) does not scale.

This spec explores adding a "Smart Location" widget to our filter creation tools. This widget would allow you to add a location text box to your filter, that later fills in with the end user's location when the filter is displayed. It is a scalable way of adding location to any geofilter, which will significantly increase its relevance.

Feature Goals

- Offer a scalable way of adding location to geofilters
- Improve user experience, by introducing more relevant filters
- Bring better value to advertisers (more uses → more views → higher cpm)
- Last but not least, support delightful filters like this one at scale:



Owners

- Engineering: [REDACTED]
- Biz PM: [REDACTED]
- QA: [REDACTED]

User Spec

Filter Types

V1: Both **sponsored and organic filters** of the following types are supported.

- National
- Global
- Chain / Multi-fence
- Top shared spaces - colleges, high schools, airports

V2 (not in scope of this spec):

- Chain / Multi-fence with custom text from Location Manager
- Additional shared spaces

Filter Serving



General

- As a user, when I swipe on a geofilter with a smart location, I will see my custom location on the filter
- The filter is like any other filter, as **is not interactive** for the end user
- If my location is not found, default text will be shown (see section below)
- The location text loads at the same time as the filter image - there should not be a subsequent step of fetching location

Location Granularity

Depending on the filter type, there may be a granularity option for location.

Non-Shared Space: When adding a smart location, creator can choose from one of these granularity settings.

- Neighborhood
- City
- State
- Zip

Shared Space: If the filter is a supported shared space, there is no granularity option. The Smart Location will simply match to the name of the individual shared space - e.g. it will show "LAX" for LAX airport, "Hunterdon H.S." for that high school.

default Text

Creator will also specify a default text, which is the string to show if we can't get a location. Reasons:

- User has not given us access to their location
- GPS accuracy is too low to reliably get location (need to define this threshold)
- When the user's location is close to the boundary (say Venice vs. Santa Monica) of two or more locations:
 - Option 1: Fallback to default text. This is simplest and is the current behavior in the backend.
 - Option 2: Pick the one with "higher confidence" — note that it's always possible to guess the wrong one so some users/snaps might be affected no matter what threshold we choose. This requires some backend code change.
 - Option 3 (required client change): Send both/all texts back and have user pick (tap-to-switch)?
- We can't find a location for that specified granularity - e.g. granularity set to neighborhood, but user is in a rural area with no neighborhood designation.
- We don't yet support this country (V1 will be US only)

TEXT EXPIRATION

The text shown in dynamic location widget is determined based on the user's location at the time of the request. It may become stale but we will not address this in V1. It's possible that the user may move out of the area corresponding to the text (which says, e.g., "Venice, CA" but the user has moved to Santa Monica, CA) when the geofilter (e.g., a national one) is still available for the clients to use. In that case, for V1, the user would still see Venice, CA in the filter; in future releases we could potentially invalidate the text based on the user's current location.

Text Attributes

Backend and core app should be able to support these attributes for the location text.

- Bounding box - the box that location text must fit inside. Font size will have to scale to fit.
- Max / ~~min~~ font size - when scaling font to fit bounding box, should stay within this range (truncate with ... if strings are too long)
 - TBD (): Do we need max font size if client can compute the best-fit font size?
- Font
- Text Color
- Capitalization - ALL CAPS, Default spelling
- Horizontal Alignment - Left, Center, Right
- Text Shadow - blur radius, color, x / y offset
- Text Alpha
- ~~P2: Vertical Alignment - Top, Middle, Bottom~~
 - ~~TBD Eva: Do we need this to launch?~~

Client Requirements

P0:

- Resizing text to fit within bounding box
 - Params: bounding box, min font size
- Load in font from server (may not need additional work)
- Text color
 - already works on ios
- Horizontal alignment - left, center, right
 - already works on ios

P1:

- Fix 10px vertical padding diff between Android and iOS (see examples [here](#))
- Text Shadow - radius, color, offset
 - Android - shadow color, Dy Dx, Radius
- Text Alpha - 0 to 1.0
- ~~Vertical alignment - Top, Middle, Bottom~~

Old Client Backward Compatibility

For existing clients which does not have the new capability described above, what should we do?

Option 1: Do not return the filter for those clients. As of 3/16/2017 this is the current behavior.

Option 2: Return the filter but do not provide context (i.e., PNG only)

Option 3: Return the filter with the context, but applies only a subset of features, i.e., no text shadow, no text alpha, no font resizing, no vertical alignment.

Creation Interface

Decided 2/21 - we will support an entry point from BBG in V1. ODG / external to come in V2+

In BBG, there is an "Edit Creative" button below the geofilter preview. Clicking on this button opens up the filter in Creative Studio, where you can add a dynamic element. Saving the filter in Creative Studio updates it in BBG.

BBG
Geofences -
Unlockables -
Pricing -
Inventory -
starbucks

Filter query results (showing 20 of ~259 total)
Last queried Sunday, February 12th, 9:38:39 pm

Name	Visibility	Scheduled	Category	Start Date	End Date
LIVE (employees) Sponsored Demo Lens 1757 - Starbucks National Coffee Day	Employee Whitelist	Always	Sponsored		
IO15465 - Starbucks - Valentine's Day - Chain Filter - Happy Valentine's Day - 2/14	Public	Once	Sponsored	02/14/17 00:00	02/14/17 23:59
IO13625 - Starbucks - Holiday - Chain Filter - Red Cup - 10NOV16-12NOV16	Public	Once	Sponsored	11/10/16 00:00	11/12/16 23:59
LIVE (local) IO15465 - Starbucks - Valentine's Day - Chain Filter - Share the Love - 2/7 - 2/13	Public	Once	Sponsored	02/07/17 00:00	02/13/17 23:59
Starbucks_Chain-Geofilter-8/1-8/2	Public	Once	Sponsored	08/01/16 00:00	08/02/16 00:00
LIVE (employees) Starbucks US National Lens - CREATIVE MEDIA COPY	Employee Whitelist	Always	Sponsored		
IO17034 - Starbucks_Frappuccino_SnapToUnlock_S2U5	Off	Once	Sponsored	04/01/17 00:00	04/30/17 00:00
IO17034 - Starbucks_Frappuccino_SnapToUnlock_S2U4	Off	Once	Sponsored	04/01/17 00:00	04/30/17 00:00
IO17034 - Starbucks_Frappuccino_SnapToUnlock_S2U3	Off	Once	Sponsored	04/01/17 00:00	04/30/17 00:00
IO17034 - Starbucks_Frappuccino_SnapToUnlock_S2U2	Off	Once	Sponsored	04/01/17 00:00	04/30/17 00:00
IO17034 - Starbucks_Frappuccino_SnapToUnlock_S2U1	Off	Once	Sponsored	04/01/17 00:00	04/30/17 00:00
LIVE Hartsdale, NY, United States	Public	Always	Organic		
Sponsored Demo Lens - 4384 Starbucks Holiday Lens (Carolers) US	Off	Always	Sponsored		
IO14646 - Starbucks - Halloween - Chain Filter - Skeleton Hand - 28OCT16-30OCT16	Public	Once	Sponsored	10/28/16 00:00	10/30/16 23:59
IO15630 - Starbucks - Chain Geofilter - Splash of Cheer - 12/28-1/1	Public	Once	Sponsored	12/28/16 00:00	01/01/17 23:59
DO NOT USE	Off	Once	Sponsored	05/12/16 00:00	05/15/16 23:59
IO13359 - Starbucks - Corporate - Welcome Back PSL - 6SEPT16-6OCT16	Public	Once	Sponsored	09/06/16 00:00	09/06/16 23:59

+ Add new

Name
IO15465 - Starbucks - Valentine's Day - Chain Filter - Happy Valentine's Day - 2/14

Geofilter ID
6712208565100544
Metrics
Visibility
Public

Search tags (not for targeting)
Add a tag

Existing image URL
https://geofilter.storage.googleapis.com/png/c9871568-132a-4b

Preview

Position
Scale
Scale To Fill
Align
Top

Show below drawing layer
Geofilter toast

Schedule
Once

Timezone
US/Pacific

Start time
Feb 14, 2017 12:00 AM

End time
Feb 14, 2017 11:59 PM

Globally available
Filter will show

Targeted geofences
Select a geofence

IP Targeting
Add a country

Targeted users
Add a username

Targeted groups
Select a group

Targeted tags
starbucks_corp_100516_75meters
starbucks_corp_licensed_125_meters

Hide More Targeting Options

Targeted data sources
Select data sources

In the interface to create a filter, expose UI to add a Smart Location element.



Geofilter Creative Studio

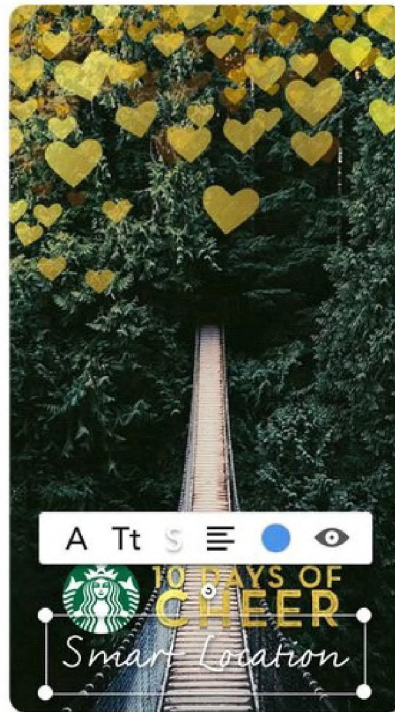
Snap

Add Smart Element

▼ Smart Location

Add Smart Location

Displays the location of the end user
on the geofilter.

Background Image ☐



Add Smart Element

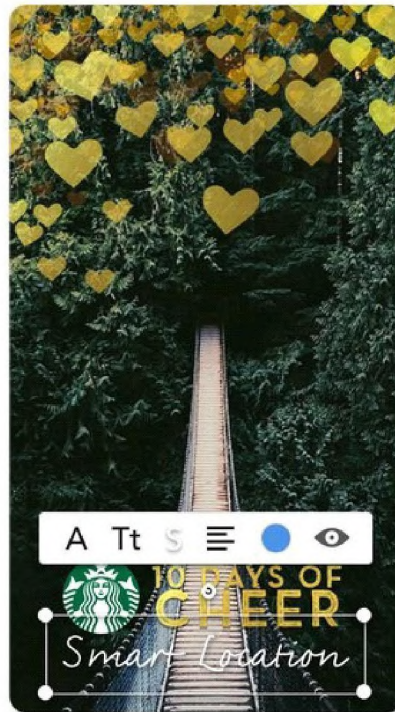
▼ Smart Location

Granularity

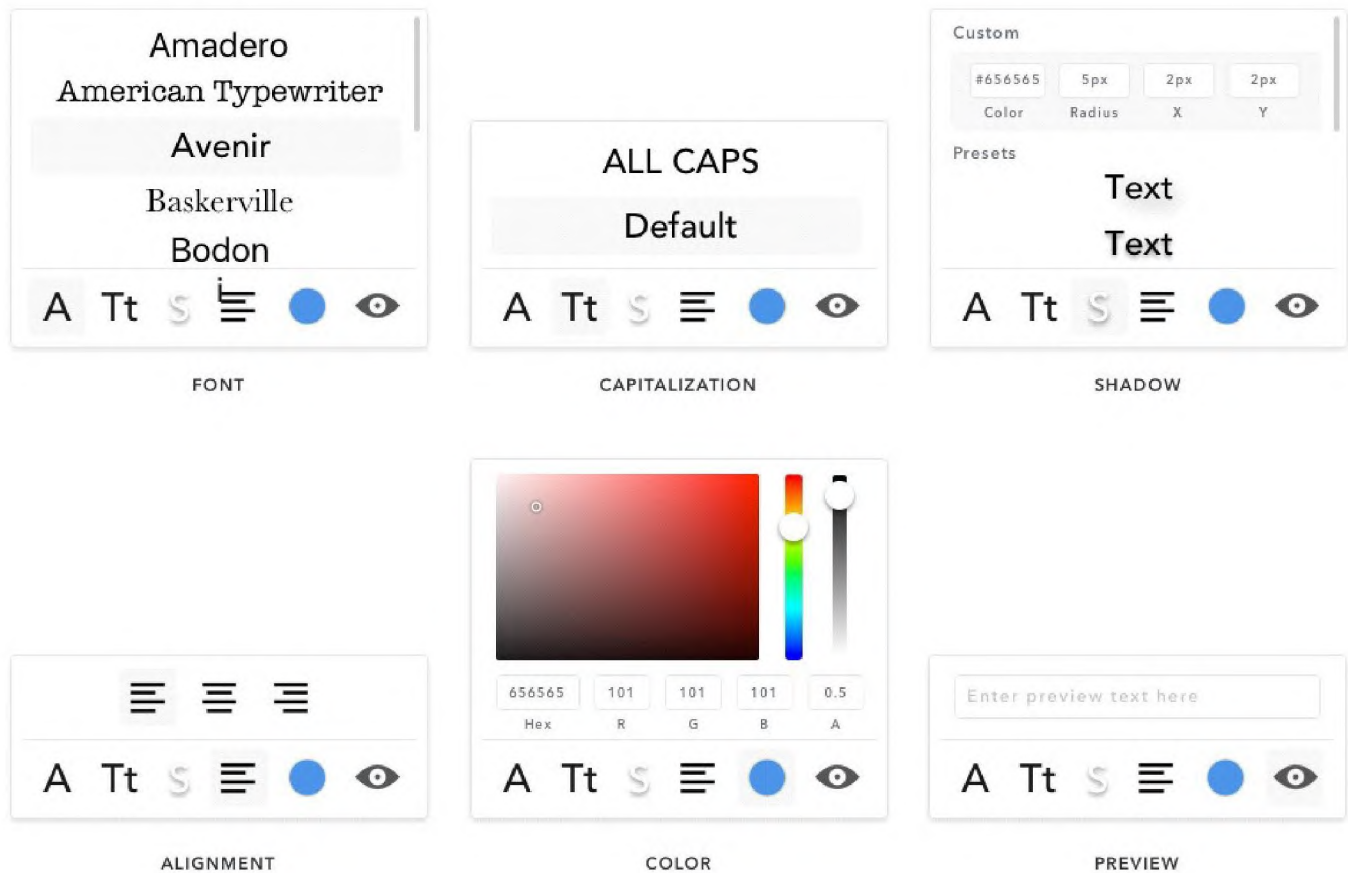
City

Default Text

Enter text to display when
location unavailable



Background Image ☐



Side Panel Features

The side panel has a section for Smart Location, and the zero state shows button to "Add Smart Location". Once added, the panel exposes these options:

- **Default text** - default text to show when location isn't available (see Serving > Default Text for use cases)
- **Location granularity**
 - National / Global filters:
 - neighborhood
 - city
 - state
 - City, State Initial
 - State Initial
 - Shared space filters: list "Shared Space - <shared space name>". Not editable
- **Delete** - Removes Smart Location from filter

Textbox Features

The textbox widget has the following features:

- **Move, rotate, and resize** text bounding box
- **Font** - list of 50 fonts
- **Capitalization** - ALL CAPS, Camel Case, First word capitalized, all lowercase
- **Shadow** - Color, radius, x / y offsets, with some presets
- **Text alignment** - left, center, right
- **Color** - Color picker with hex entry

Textbox Logic

- Send down an x, y based on non-rotated box. Clients are setting the x,y then applying a rotation to it
- Box can not be taller than it is wide
- Vertical alignment is center
- For different granularities, the text should say:
 - City: "Seattle"
 - City, State: "Seattle, WA"

- State: "New York"
- State Initial: "NY"
- Zip Code: "90291"
- Neighborhood: "Santa Monica"
- High School: "Los Angeles High School"
- College: "California State University"
- Airport: "LAX"

Data Sources

For V1, we'll need the following data sources, US only.

Table of types and fence schemas in BBG

Sheet3

	A	B	C	
1	Type	Status	BBG Tag	Schema
2	Neighborhoods	Sub Neighborhoods need to removed or downgraded	DLW_MAPONICS_STANDARD_NEIGHBORHOOD	[Dynamic Locatio
3	Cities	Ready	DLW_Cities	[Dynamic Locatio
4	State - Initial	Ready	US_States	<State Abrv> - <
5	State - Full string	Ready	US_States	<State Abrv> - <
6	Zip code	Ready	US_zipcodes	<5-digit zip>_<o
7	High schools	Ready	US_High_School	<Highschool> - <
8	Colleges	Ready	USA_MAPONICS_COLLEGES	<College Name>
9	Airports	Ready	US_AIRPORTS	<Airport Code> -

Administrative Boundaries

- Neighborhoods
 - Maponics: [maponics_neighborhood tag](#) in BBG. Covers neighborhoods in US with 50k+ population and a 1k+ people per square mile.
- Cities
 - Various options - need to source / QA*
 - Maponics (census boundaries)
 - OSM - [OSM tag](#)
- States
 - Hand Drawn: we have all 50 states in BBG, [search "holiday filter"](#)

Top Shared Spaces

- High Schools
 - Maponics: [maponics_high_school tag](#)
- Colleges
 - Maponics: [maponics_college tag](#)
- Airports
 - Maponics: [spongeo_airport tag](#)

Resources

- All shared spaces at [go/sharedspaces](#)
- [Fences Index](#) (Austin)
- [Maponics Neighborhood Names \(CSV\)](#)
- [OSM City Names \(CSV\)](#)

Metrics

- Location string coverage: What % of swipes show a location? What % show default text? Also normalize by UU.
- Usage: For swipes that show a location vs default text, do conversion rates differ?
- Default text scenarios: What % of default text scenarios are due to...
 - Not having a fence in that area
 - User location not available
 - Fence overlap / unable to dedupe fences
 - Client text resizing issue

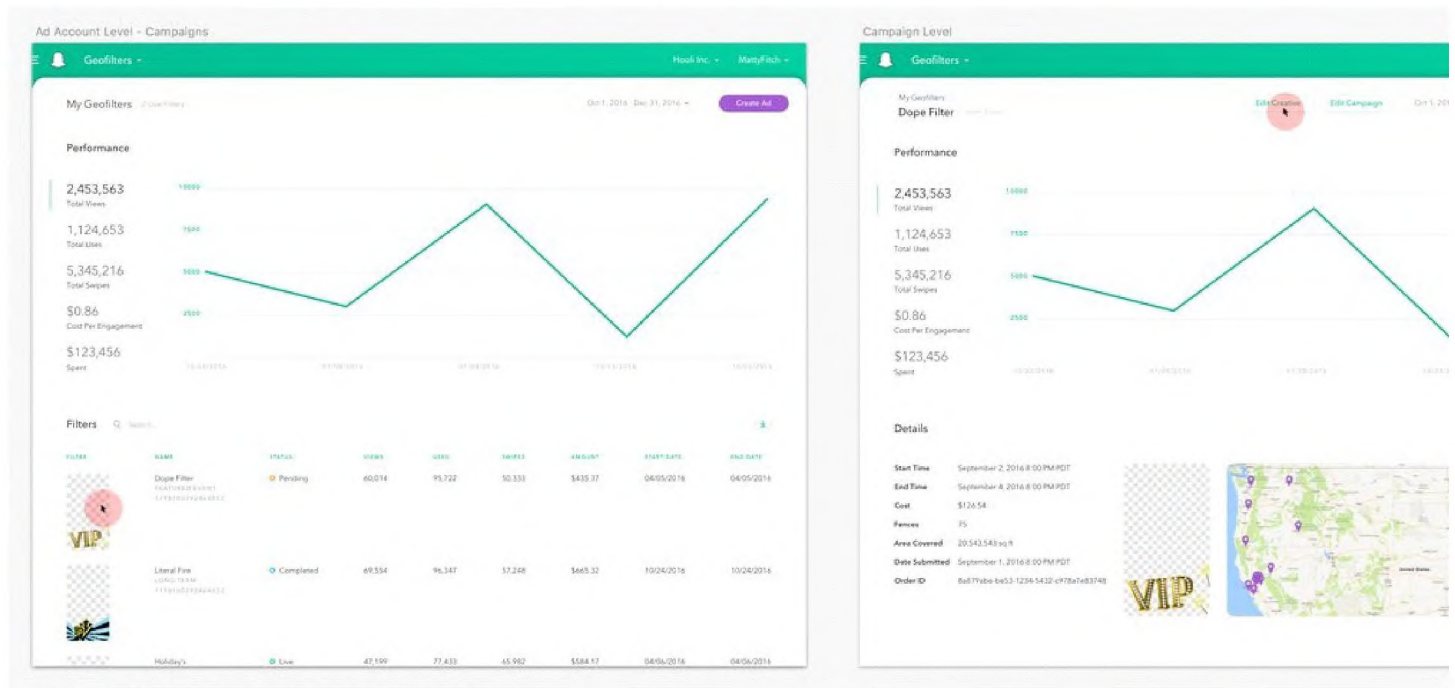
Additional Resources

- Eng Design Spec for V0 [\[WIP\] Dynamic Location Widget V1 Eng Spec](#)

V2

V2: ODG "My Geofilters" View

For DSO national / chain / shared space buys, advertiser can log in to ODG and edit the creative.



- Timeline for filter buys / role migration to ODG:
 - Today: only ODGs you've tied to an ad account will appear here
 - April: Chains migrating to ODG, fully self managed
 - May: All DSO campaigns show up in ODG (for campaign management / metrics; not self serve)
- For DSO, SnapCentral needs to support a Snapchat user mode that's invisible to advertiser - then Creative Strategy / AdOps / Sales can login and assist in campaign management.

V2: ODG Business Order Flow

In the Create Geofilter flow, support adding a "Smart Location". This will work for all buys, but is most valuable for multi-fence.

Outputs

- **Text string, with usual text attributes: font, positioning, color, etc**
 - **Neighborhood names**
 - **City names**
 - **Region / state names**
 - **Shared space names**
 - P1: high schools, colleges
 - P2: airports, gyms, movie theaters
 - Other strings derived from inputs above
- Image (overlaid on filter)
- Bitmoji (overlaid on filter)
- Different filter creatives

Privacy Review**Review Questions (eng)**

These questions must be filled out by an **engineer or engineering director two weeks before code freeze** for the target release. All answers should cover any existing and/or planned use of User Data for this feature. Checkout [Engineering's User Information Usage Cheatsheet](#).

Redacted--AC

Once this section is completed and the spec is ready for review....

- Email [REDACTED] or, for monetization specs, [REDACTED] with...
Subject: (Name of this spec) Body: (Target Release and Link to Quip).
- Fill in review request details below:

Sheet1

	Review Requester	Date	Notes
1	[REDACTED]	3/20/2017	Requested review

Review Results (law/sec)

Only **Security and Legal** should fill in this section. If Approved, any future changes will require a new review.

Sheet2

	Review Type	Reviewer	Date	Status	Notes
1	Privacy - Engineering	[REDACTED]	3/20/2017	Approved	For fences that are already surfaced via community filters. We will not be using OD
2	Privacy - Legal	[REDACTED]	3/22/2017	Approved	

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