

## What is Swarm AI?

**Swarm AI™ technology** provides a powerful combination of real-time human insights and AI algorithms, enabling significantly more accurate results than traditional methods.

**Modeled after swarms** in nature, which converge on optimal solutions with extreme efficiency, Swarm AI turns networked human groups into AI-optimized systems, enabling accurate insights to be quickly generated from consumer groups or business teams.

**Applying the power** of Swarm AI is easy using the Swarm platform. It can be accessed from anywhere in the world using standard web browsers and can generate actionable results in minutes.

**For more information**, visit the following links:

*Swarm AI technology*  
<https://unanimous.ai/what-is-si/>

*Swarm software*  
<https://unanimous.ai/swarm-for-teams/>

*Swarm Insight service*  
<https://unanimous.ai/swarm-insight/>

## Case Study - Ad Testing (30 Sec TV Spots)

Project: Predicting Performance of Super Bowl Ads

Customer: Major Advertising Agency

## Overview

A major advertising agency used the Swarm platform from Unanimous AI to evaluate of a slate of TV ads that were scheduled to air during Super Bowl LIII in January of 2019. The objective was to accurately forecast the effectiveness of these ads prior to broadcast and to predict their reception by mainstream consumers.

To generate these optimized evaluations, the agency invited approximately 50 brand strategists into the Swarm platform from locations around the world. Each participant used a standard web browser and had no prior experience using the software. In under an hour, the participants worked together, moderated by AI-algorithms, and produced optimized evaluations.

## Methodology

Upon entering the Swarm platform, users were asked to watch a quick two-minute video that explained how to participate. A human moderator then gave instructions within the chat window, explaining the task for the day - evaluating Super Bowl ads. Then using the media window within the Swarm platform, the moderator showed eight 30-second ads. These ads had not been seen before by the participants, watching them together for the first-time within the Swarm platform.

- **Attention:** In a cluttered environment, will the ad capture viewers' imagination so they recall the spot, brand, and positioning?
- **Positioning:** How well will this ad get its message across about the brand and/or product?
- **Amplification:** How will viewers interpret the message? Will viewers come away with a favorable impression of the brand?
- **Buzz:** How likely will people share or talk about this ad in person or online after the game?

In addition, participants also gave the ad an **Overall Grade** (A, B, C, D, F).

Finally, participants were asked to forecast which of the four top rated ads would be considered the "Best" of the slate. This assessment was conducted as an ordered ranking in which the participants worked in reverse, first identifying which was "least likely" to be considered the best. That selection was eliminated and the question was repeated with the remaining three ads. When the top two ads were identified, the swarm of participants picked its top choice in a head-to-head evaluation. Using this three-question sequence the swarm put the four ads into order from worst to best.

All assessments – the ratings, grades, and ordering of the four highest graded ads – were made by the group of participants "thinking together" as a single, unified, AI-optimized system using **Swarm®**.

## Swarm

### Question Layout and AI Analysis

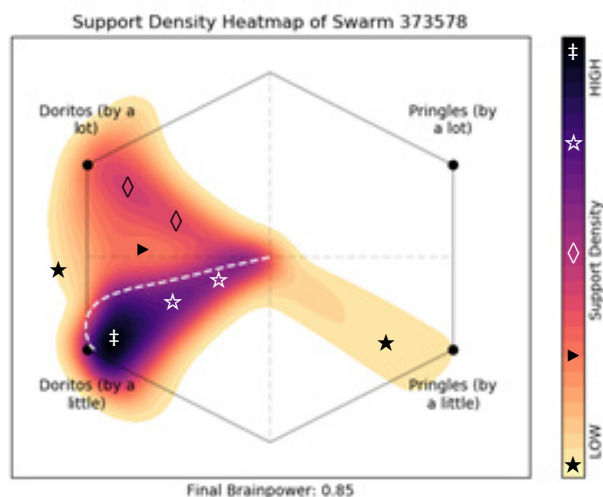
Swarm is a collaborative intelligence platform for generating AI-optimized insights from networked human groups. The system processes the real-time behaviors of participants as they act, react, and interact during the swarming process. This means that simple questions can generate very precise answers, so long as the questions evoke complex human behaviors in real-time.

In the example below, participants were asked to compare two ads and determine which would be considered “best” by the public. As shown below, this simple question elicited complex behaviors, enabling the system to generate an AI-optimized result.

The image on the left, is a snapshot of the group responding in real-time to the question provided. Each of the magnets is controlled by one of the networked participants, their position and orientation varying over time as the group converges upon an answer. The image on the right is how the Swarm AI engine views the response of the group, processing their actions, reactions, and interactions.



Simple Question, as seen by Participants



Behavioral Analysis as viewed by AI Engine

By processing these complex and authentic behaviors in real-time, the Swarm AI system is able to calculate the group’s optimal response to each question. These values can be compared across questions and across groups, providing a comprehensive set of comparative results.

## Results: Ad Evaluation Profiles

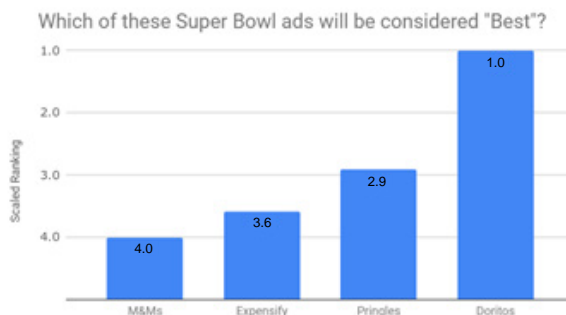
Using the AI-optimized sentiments generated from each Swarm response, **Evaluation Profiles** were generated for each of the eight ads across the four evaluation criteria and overall grade.

The values used in the Evaluation Profiles are arrived at by analyzing the behaviors of the participants individually and as a single swarm during the deliberations on each question. While often close to the swarm's selected rating, these values provide a more accurate representation of the swarm's optimal answer.

Company/Brand	Swarm Rating - Stated					
	Attention	Positioning	Amplification	Buzz	Grade	Score (out of 25)
Doritos	4	4	4	5	B	21
Pringles	4	4	3	3	B	18
Expensify	4	3	3	3	B	17
M&Ms	3	4	3	2	B	16
Olay	4	3	3	2	C	15
Bon + Viv	3	3	3	2	C	14
Michelob Ultra	2	3	2	1	C	11
Sketchers	2	2	2	1	D	9

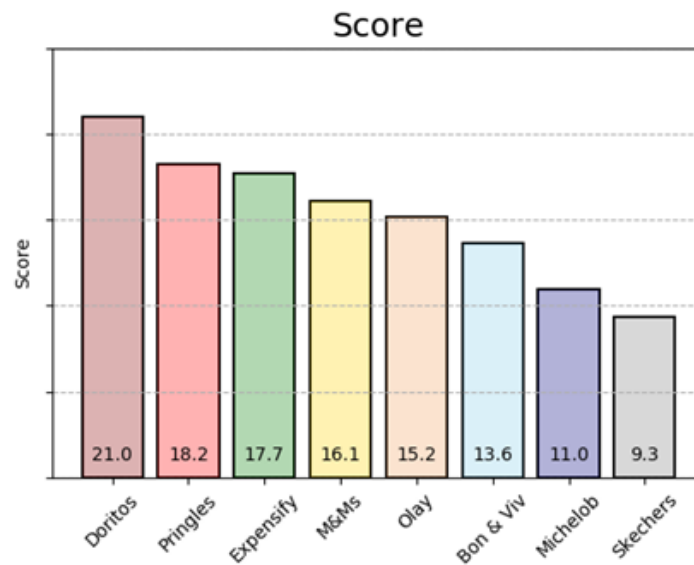
Company/Brand	Swarm Rating - Behavioral Analysis					
	Attention	Positioning	Amplification	Buzz	Grade	Score (out of 25)
Doritos	4.11	3.81	3.98	4.83	B+	21.00
Pringles	3.90	3.91	3.44	3.09	B	18.24
Expensify	3.82	3.14	3.47	3.31	B	17.66
M&Ms	3.13	3.73	3.38	2.07	B-	16.10
Olay	3.88	3.27	2.58	2.36	C	15.17
Bon + Viv	2.77	3.09	2.82	1.94	C	13.63
Michelob Ultra	2.22	2.67	2.11	1.07	C	10.98
Sketchers	1.89	2.41	1.78	1.12	D	9.34

The swarm gave B grades to the ads from **Doritos, Pringles, Expensify, and M&Ms**. The swarm evaluated these ads competitively to determine order of preference and the magnitude of differentiation between each. Advanced analysis indicates that the Doritos ad was considered to be significantly better than the next "best" ad from Pringles.

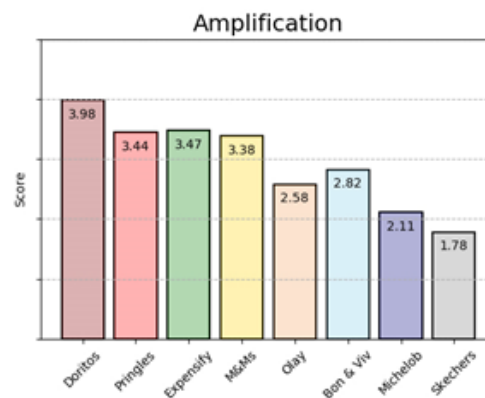
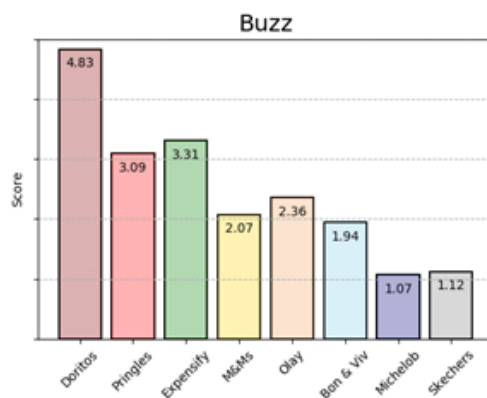
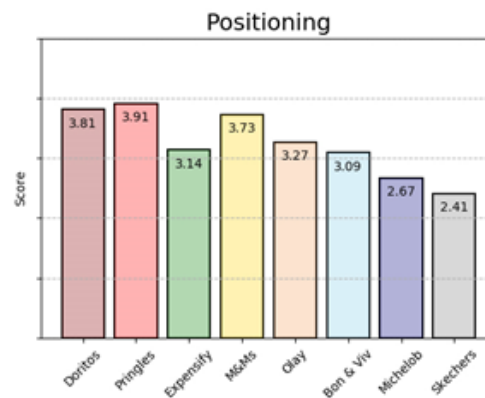
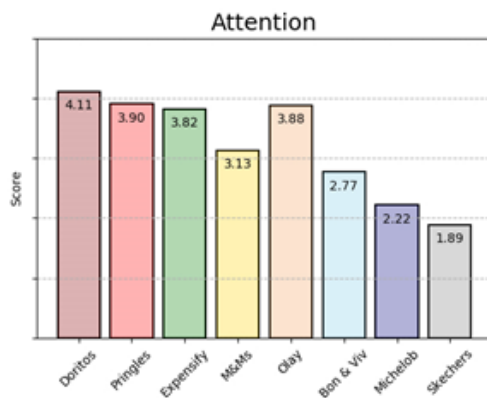


Brand	Scaled Ranking
Doritos	1.0
Pringles	2.9
Expensify	3.6
M&Ms	4.0

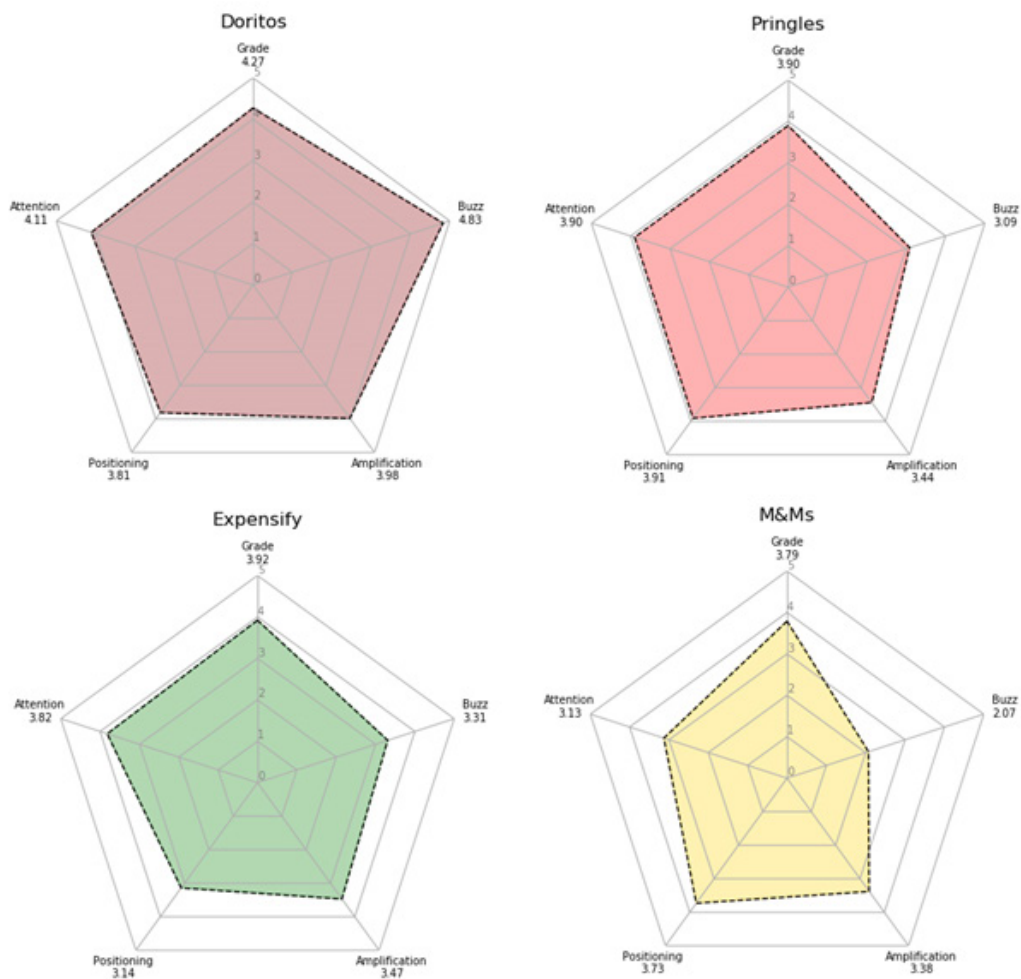
## Overall

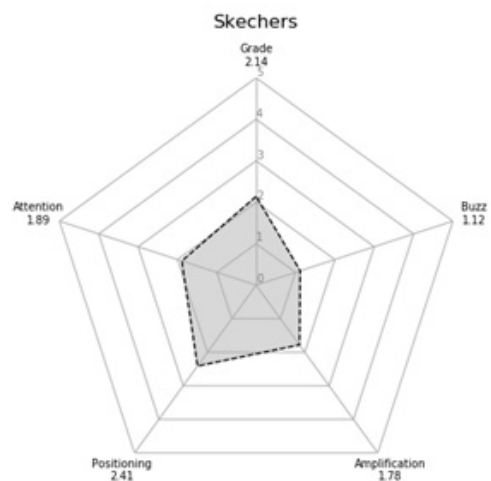
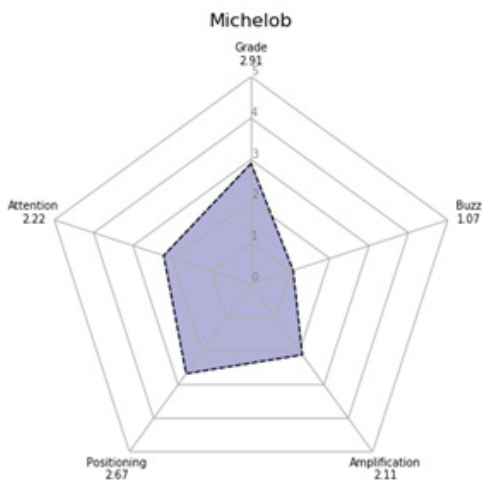
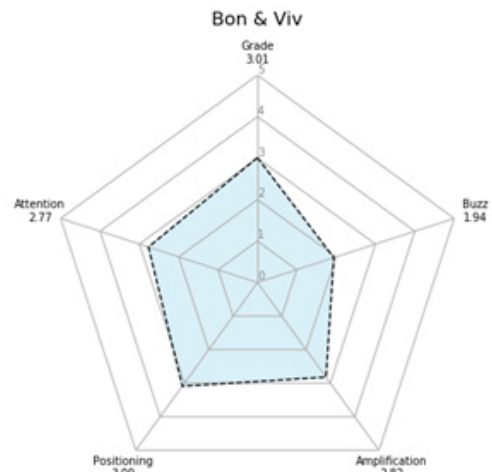


## Ratings by Criteria



## Ad Evaluation Profiles



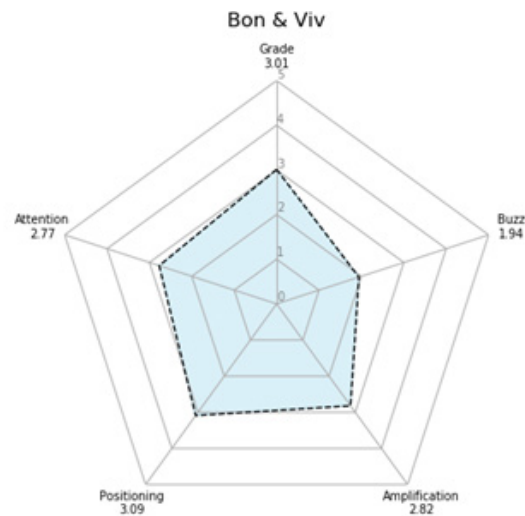




## APPENDIX A

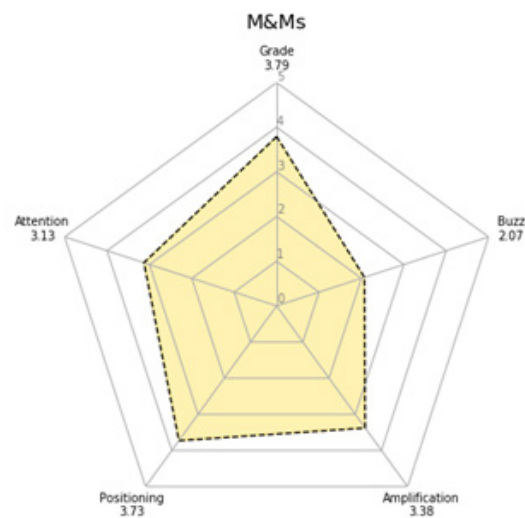
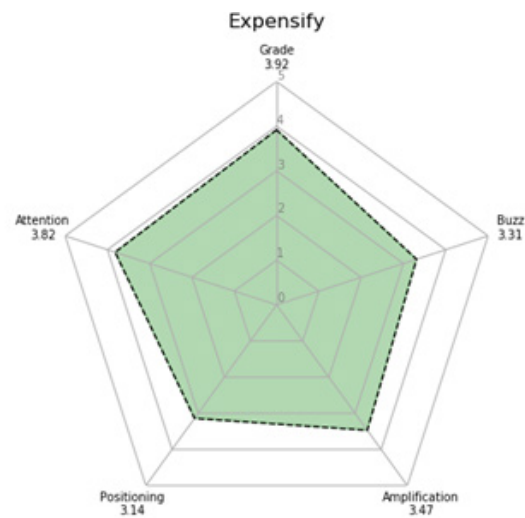
### Additional Data Visualizations

## Individual Ad Profiles

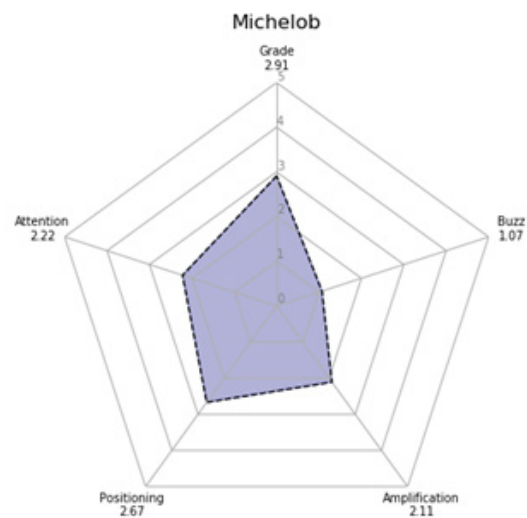




## Individual Ad Profiles



## Individual Ad Profiles



## Individual Ad Profiles

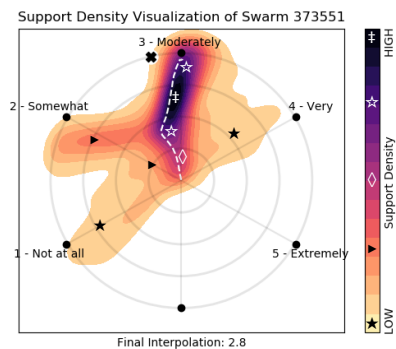


## Support Density Visualizations

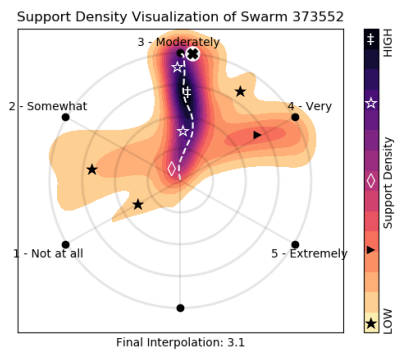
The Support Density charts provided on the following pages display the amount of support each possible answer received during the deliberation process. Greater support is denoted by darker colors. The white dotted line indicates the path taken by the puck.

Support Density visualizations are provided for each ad and for the three competitive evaluations used to determine the order of the highest graded ads.

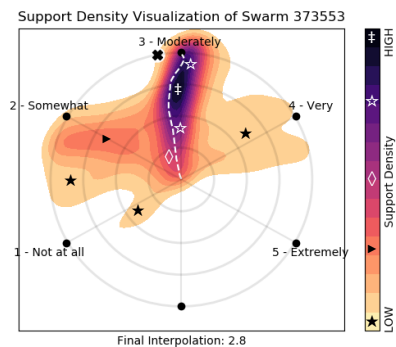
### Bon & Viv Sparkling Seltzer



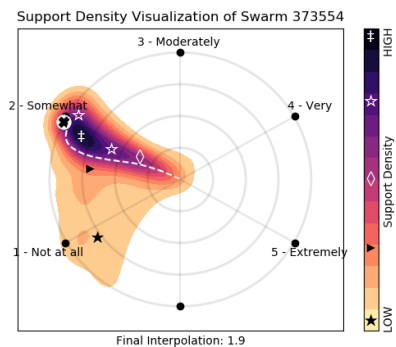
*How well does the ad capture Attention?*



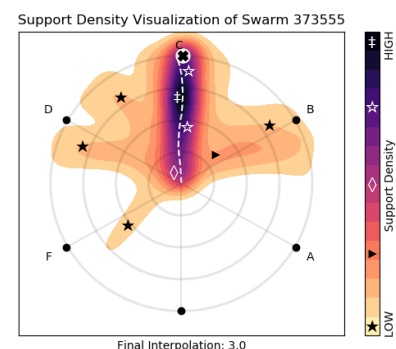
*How well does the ad Position the product?*



*How well does the ad create a favorable impression of the brand?*

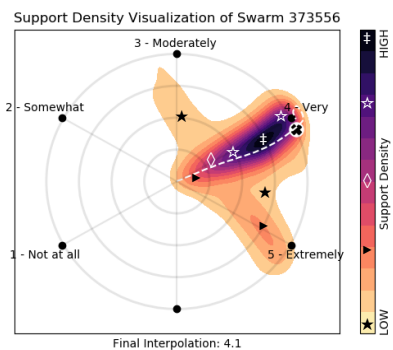


*Likelihood this ad will be shared or talked about after the game?*

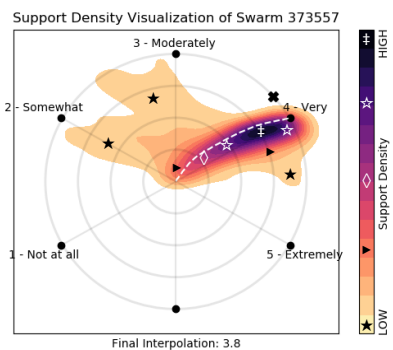


*What overall letter grade do we give this ad?*

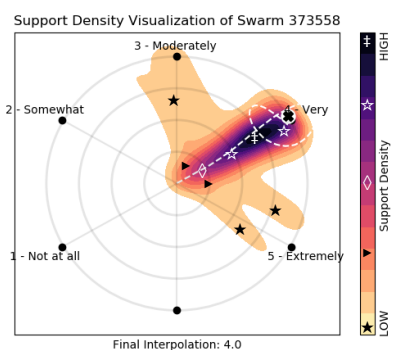
## Doritos



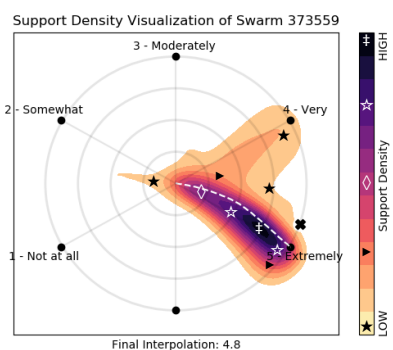
*How well does the ad capture Attention?*



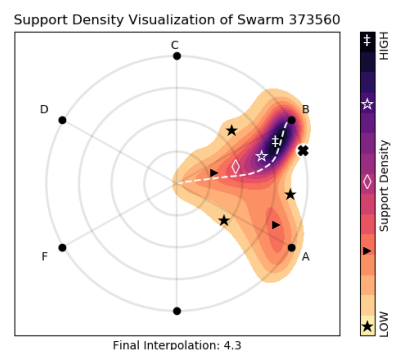
*How well does the ad Position the product?*



*How well does the ad create a favorable impression of the brand?*



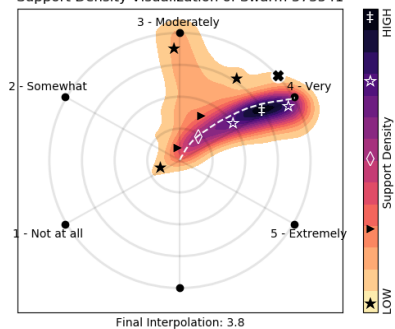
*Likelihood this ad will be shared or talked about after the game?*



*What overall letter grade do we give this ad?*

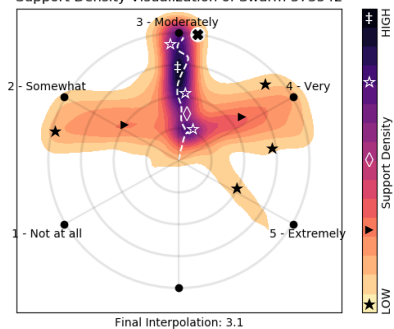
## Expensify

Support Density Visualization of Swarm 373541



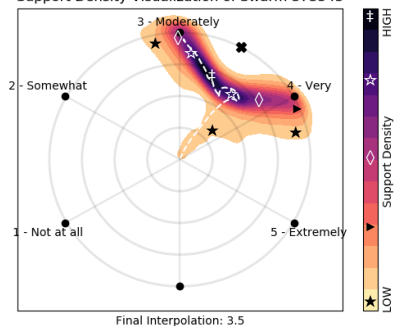
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373542



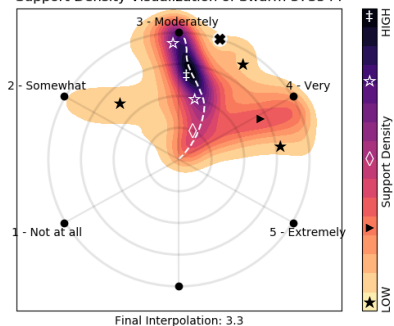
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373543



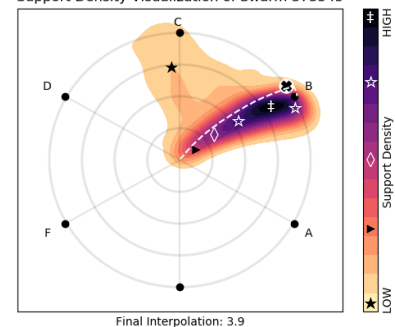
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373544



*Likelihood this ad will be shared or talked about after the game?*

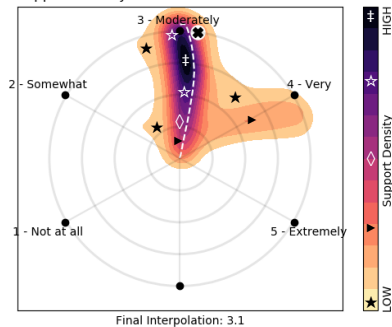
Support Density Visualization of Swarm 373545



*What overall letter grade do we give this ad?*

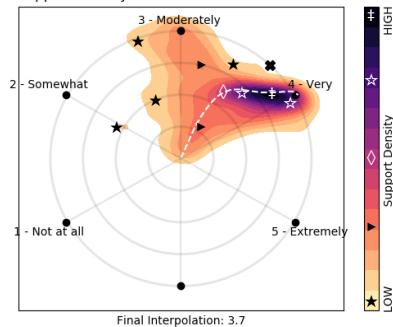
## M&Ms

Support Density Visualization of Swarm 373571



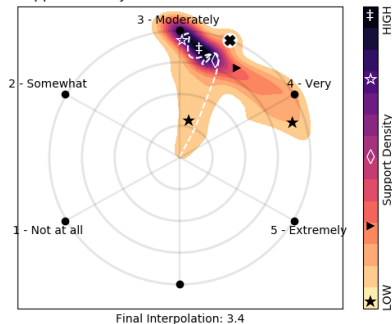
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373572



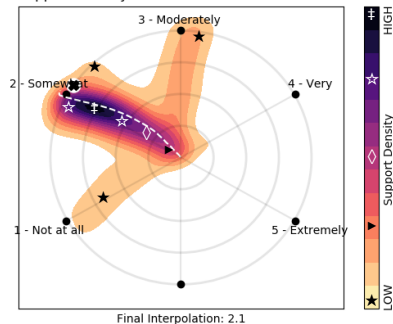
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373573



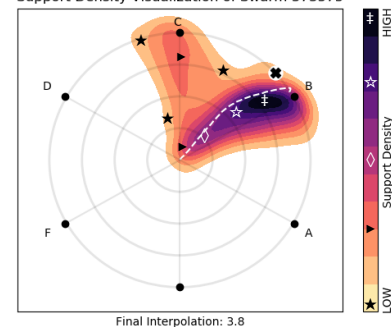
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373574



*Likelihood this ad will be shared or talked about after the game?*

Support Density Visualization of Swarm 373575

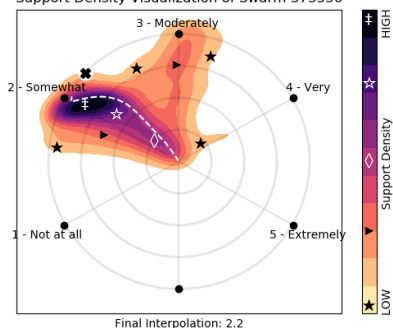


*What overall letter grade do we give this ad?*



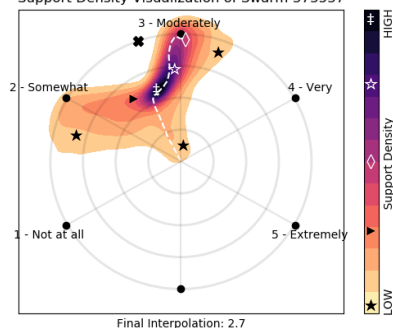
## Michelob Ultra

Support Density Visualization of Swarm 373536



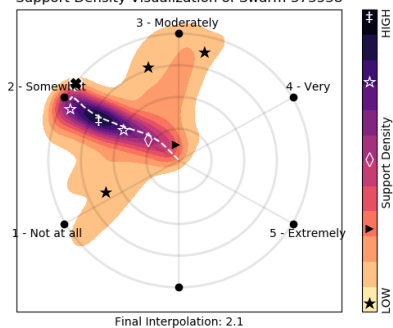
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373537



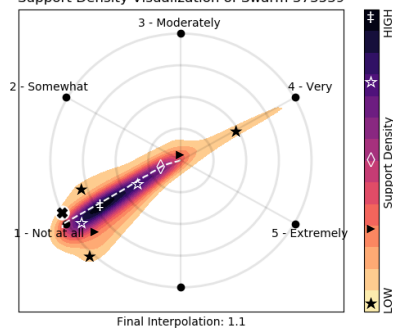
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373538



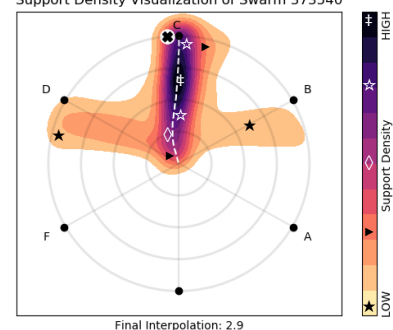
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373539



*Likelihood this ad will be shared or talked about after the game?*

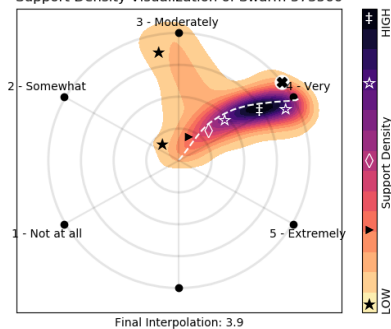
Support Density Visualization of Swarm 373540



*What overall letter grade do we give this ad?*

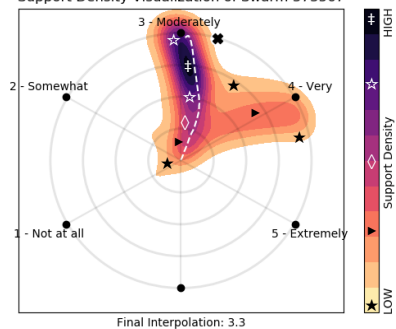
Olay

Support Density Visualization of Swarm 373566



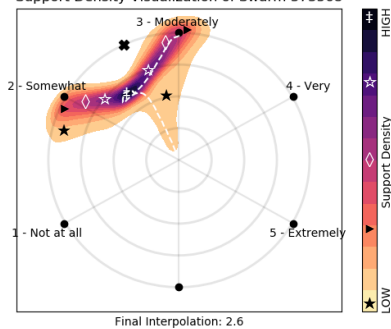
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373567



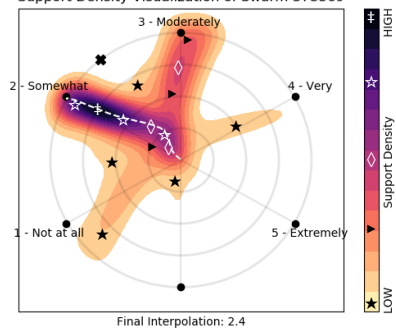
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373568



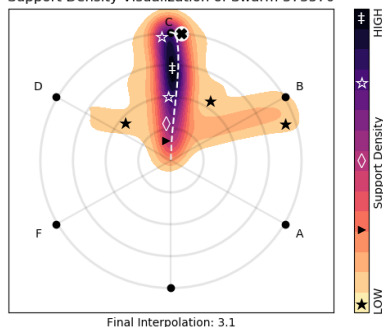
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373569



*Likelihood this ad will be shared or talked about after the game?*

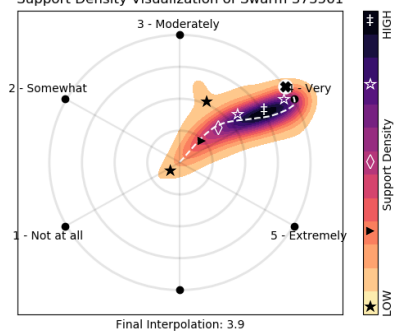
Support Density Visualization of Swarm 373570



*What overall letter grade do we give this ad?*

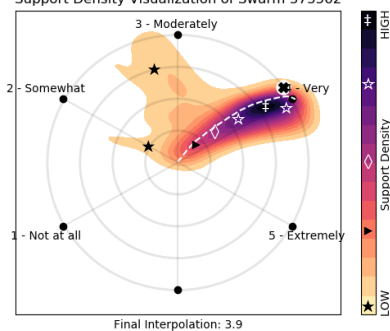
## Pringles

Support Density Visualization of Swarm 373561



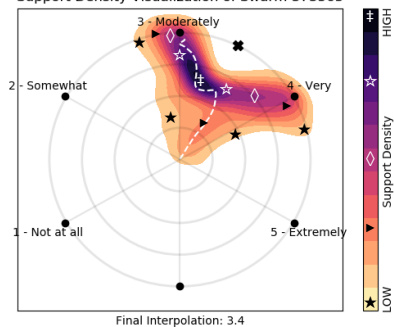
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373562



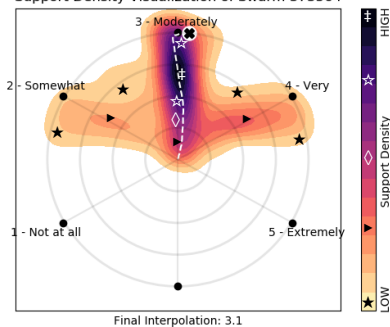
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373563



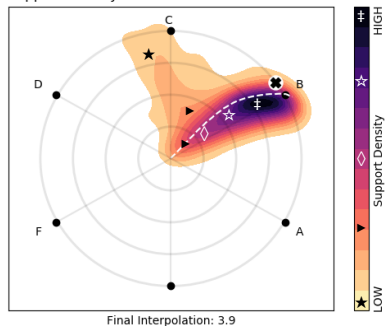
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373564



*Likelihood this ad will be shared or talked about after the game?*

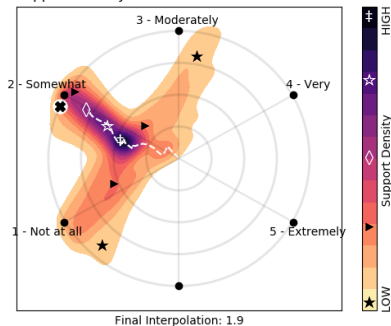
Support Density Visualization of Swarm 373565



*What overall letter grade do we give this ad?*

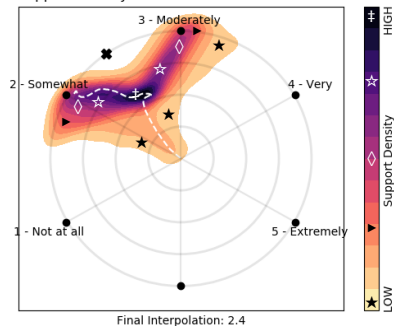
## Skechers

Support Density Visualization of Swarm 373546



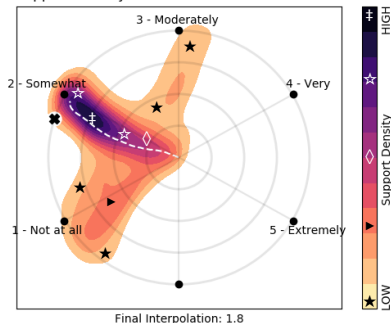
*How well does the ad capture Attention?*

Support Density Visualization of Swarm 373547



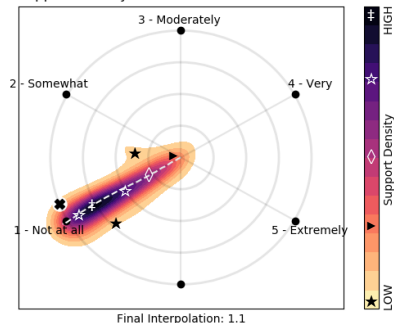
*How well does the ad Position the product?*

Support Density Visualization of Swarm 373548



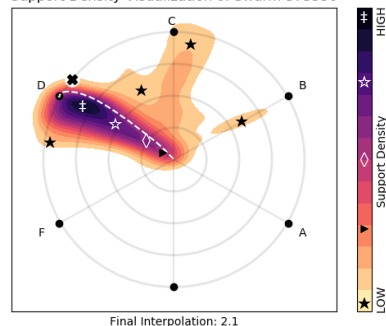
*How well does the ad create a favorable impression of the brand?*

Support Density Visualization of Swarm 373549



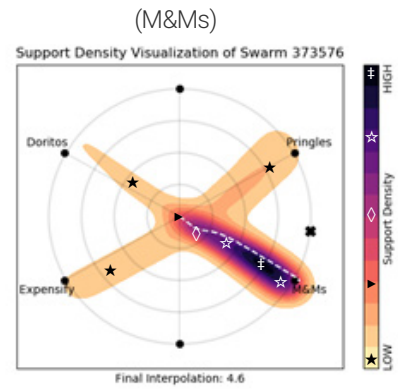
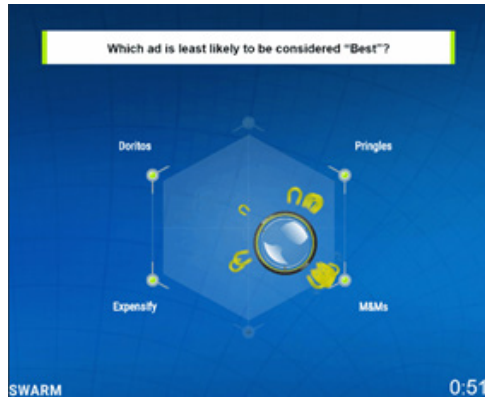
*Likelihood this ad will be shared or talked about after the game?*

Support Density Visualization of Swarm 373550

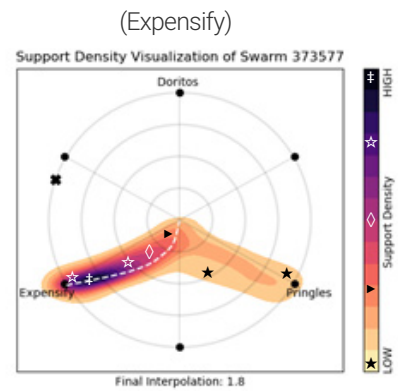


*What overall letter grade do we give this ad?*

Which ad is least likely to be considered "Best"?



Which ad is least likely to be considered "Best"?



Which ad will be considered "Best"?

