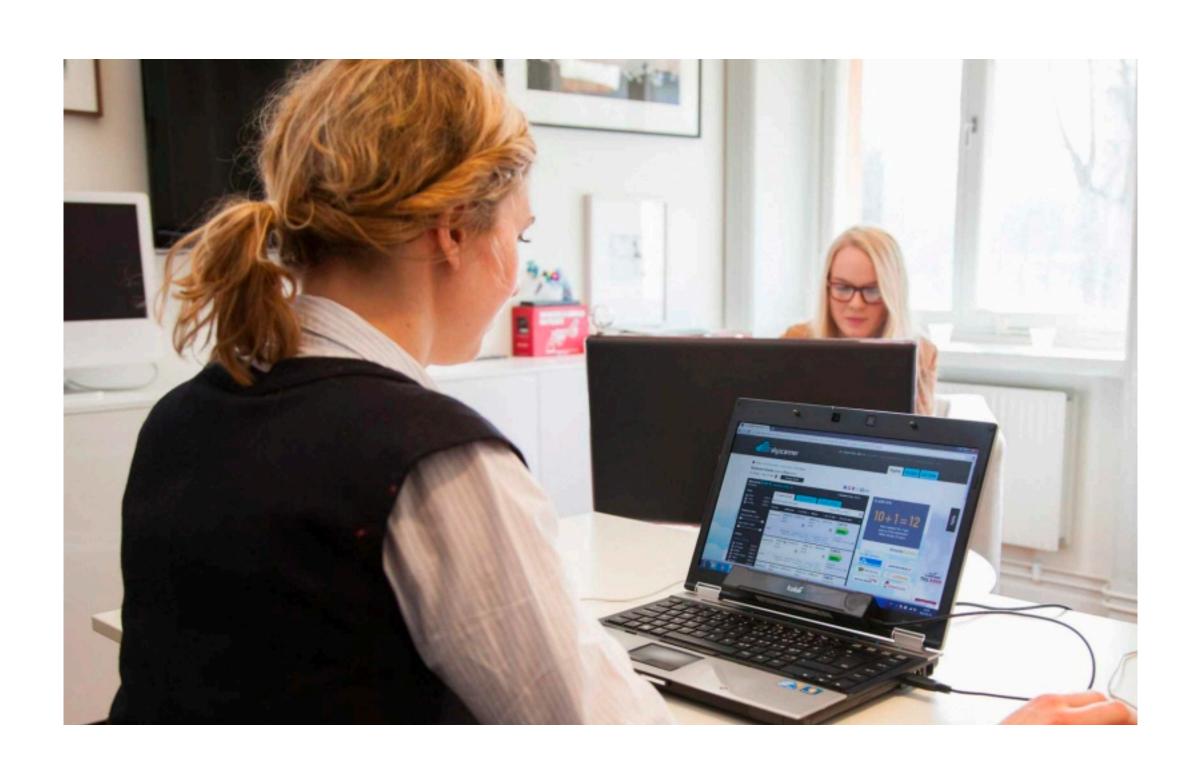
Eye Tracking in BRI

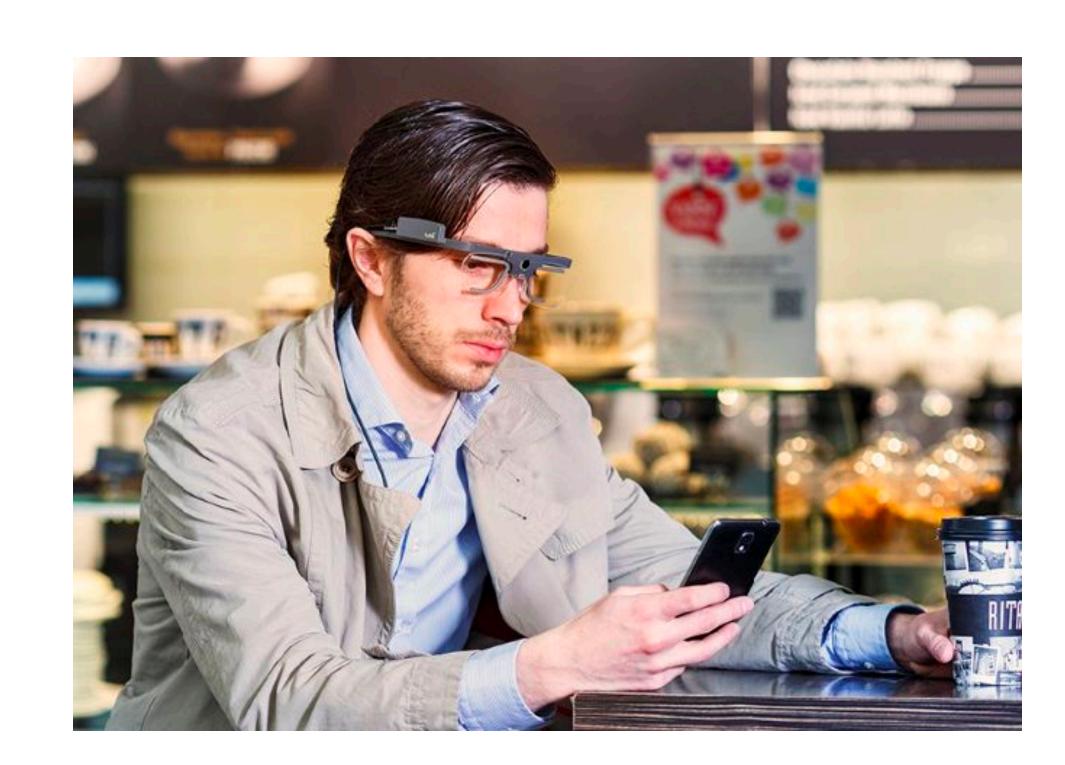
Experiment, October 2017

Overview

Eye tracking is a technology consisting of hardware + software analysis that can compliment traditional methods of user research such as 1-1 interview, surveys, and roundtables.



External unit or webcam



Head mounted (Google Glass)



Enhance every design decision with A.I.

EyeQuant uses machine learning to help UX,

CRO & marketing teams make faster and
better design decisions

Predictive, no user involvement

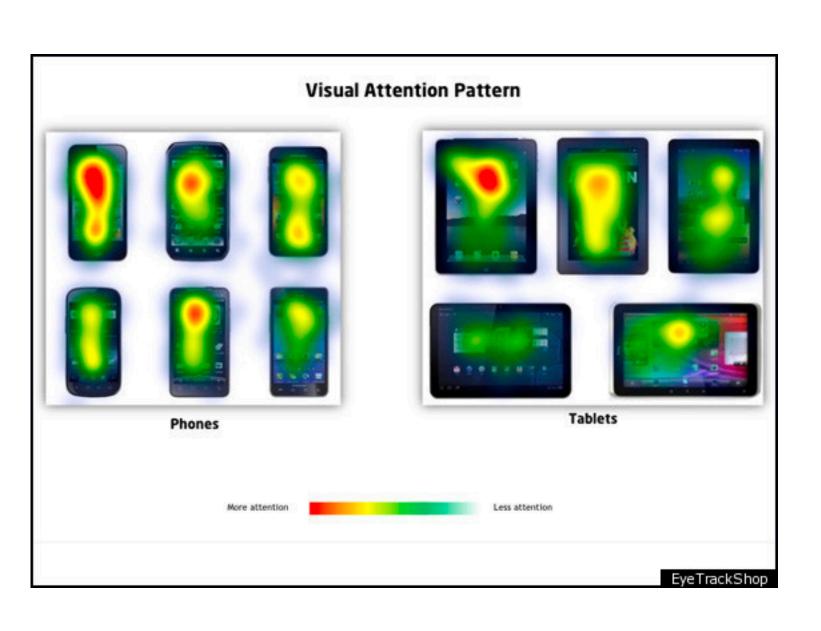
Use at Amazon

Generally used as an additional measure of triangulation when probing participant behavior.

"I see you were looking at the camera here but you said your were looking for customer reviews. Can you tell me what you were thinking?"







Retail

Search

Digital

! While eye tracking can tell us what people look at and what they see, it can't tell us what people perceive. Where's the milk?



Purpose

Purpose

Evaluate eye tracking as a research method to aid UX improvements to Triton/Nautilus.

- Passive vs Active consumption of information during investigations is not quantifiable
- Current lack of granular metrics/dashboard
- Watching an investigator resolve a task is beneficial but difficult to track

Learn and be curious



Leaders are never done learning and always seek to improve themselves. They are curious about new possibilities and act to explore them.

Methodology

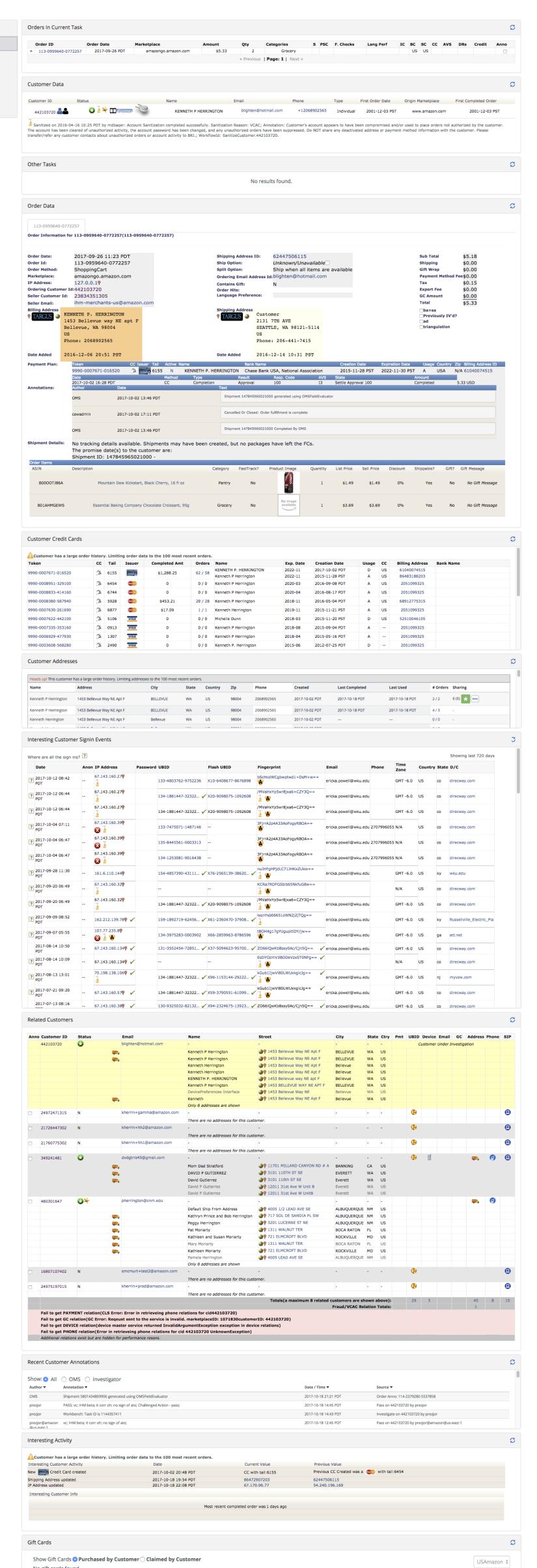
Previously completed task audited as Pass Order

! Faux BRI interface given the complexity/unknowns of live system, dynamic webpage

No dynamic elements such as popovers, expander/collapse widgets

"The other main drawback for using AOIs is the dynamic elements not being considered or captured, which is still a wicked issue."

How to conduct eyetracking studies, - Kara Pernice/Jakob Nielsen



5 SEA investigators investigating the NA market as secondary to their primary market











Tenure

~ 2 months

~ 1y4m avg.

Study Ethics

All 5 investigators did not have reservations about the process. "Do you have any concerns with this type of process (recording activity)" Most found the technology intriguing.

Visualizations

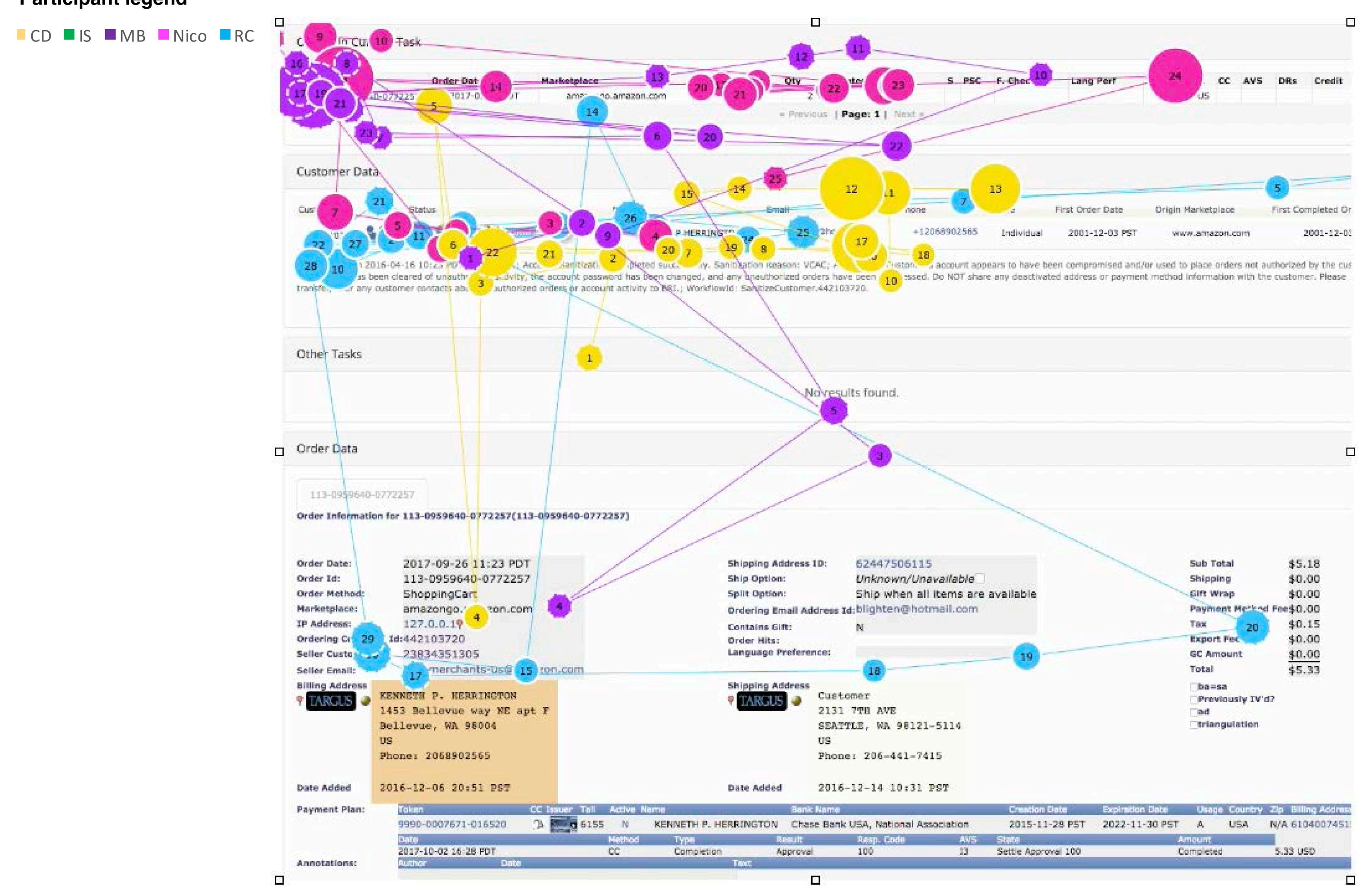
Gaze point

- The Gaze Plot visualization shows the sequence and position of fixations (dots) on a static media, (e.g. an image or a scene).
- The size of the dots indicates the fixation duration and the numbers in the dots represent the order of the fixations.
- Gaze Plots can be used to illustrate the gaze pattern of a single test participant throughout the entire eye tracking session, or of several participants in a short time interval.

Gaze point

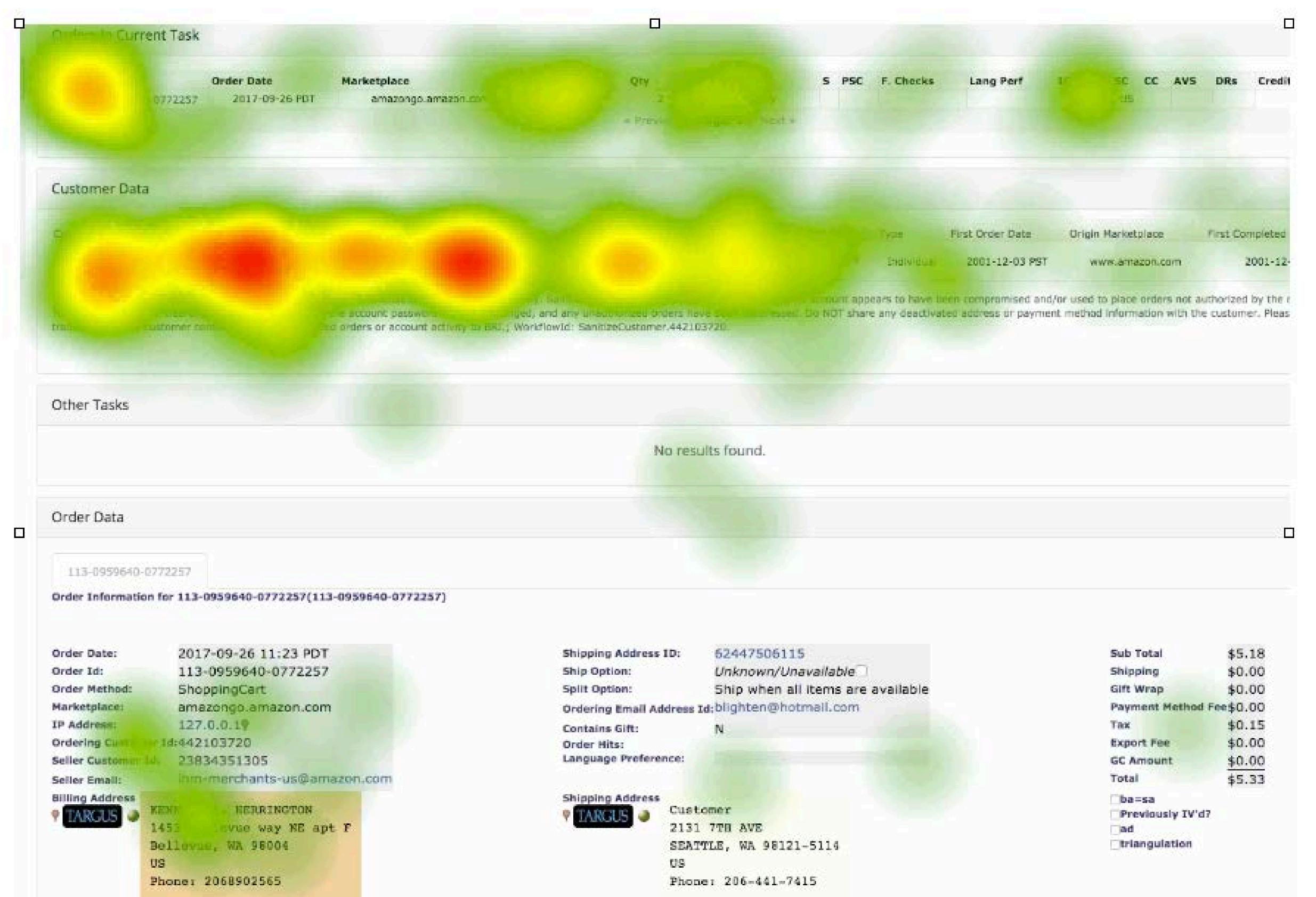
- The Gaze Plot visualization shows the sequence and position of fixations (dots) on a static media, (e.g. an image or a scene).
- The size of the dots indicates the fixation duration and the numbers in the dots represent the order of the fixations.

Participant legend

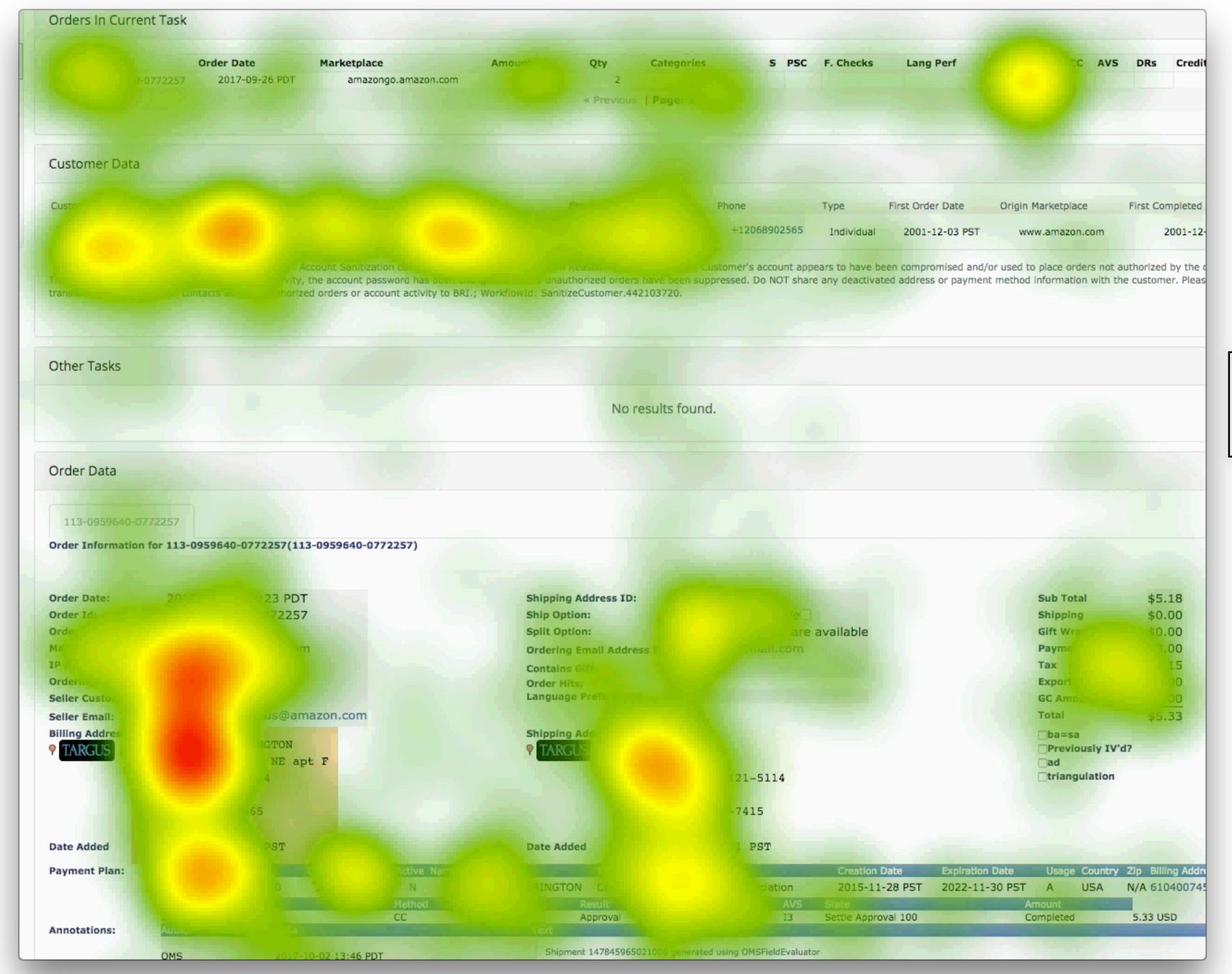


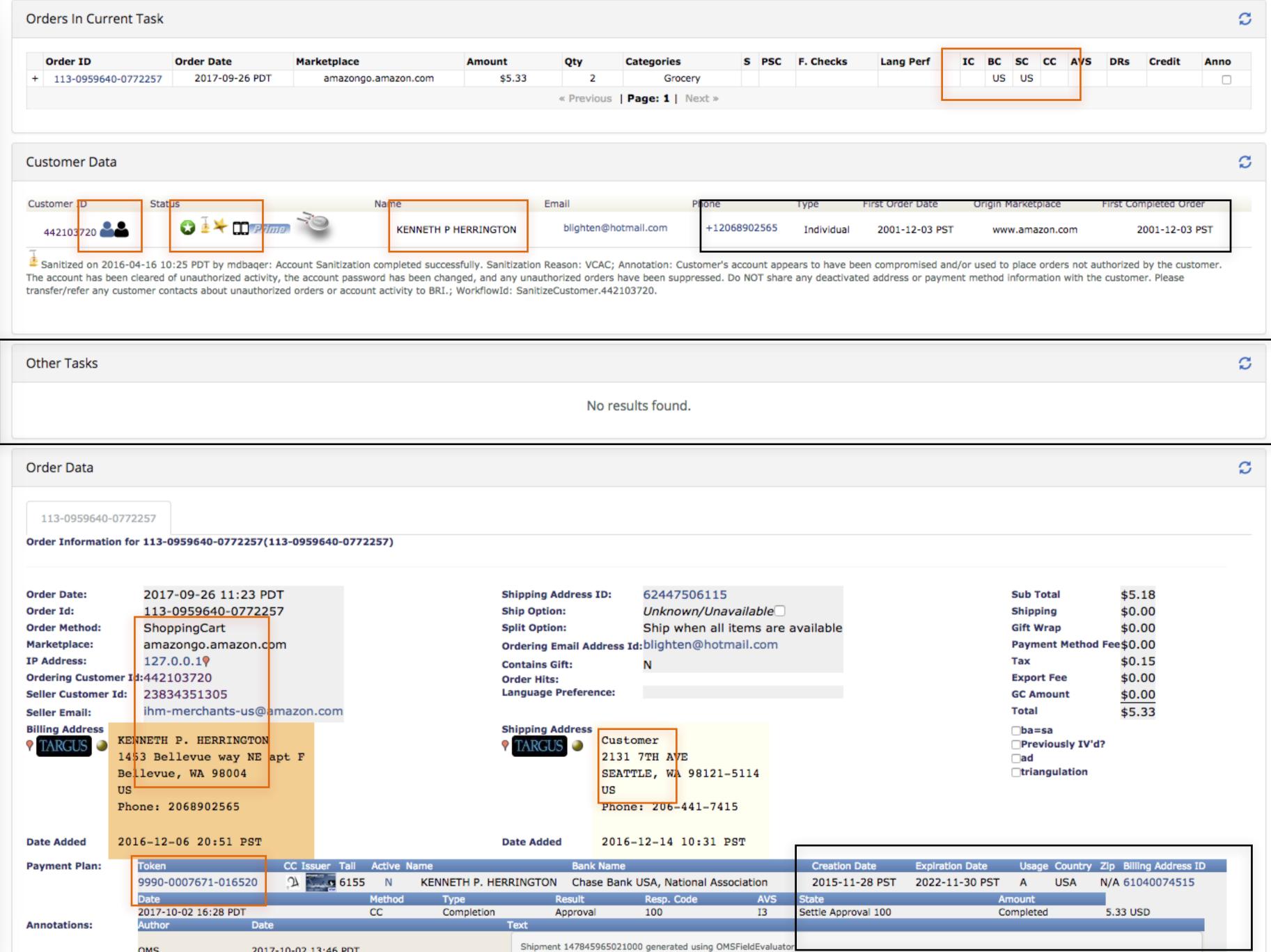
Heatmap

A heat map uses different colors to show the number of fixations participants made in certain areas of the image or for how long they fixated within that area. Red usually indicates the highest number of fixations or the longest time, and green the least, with varying levels in between.



Heatmap

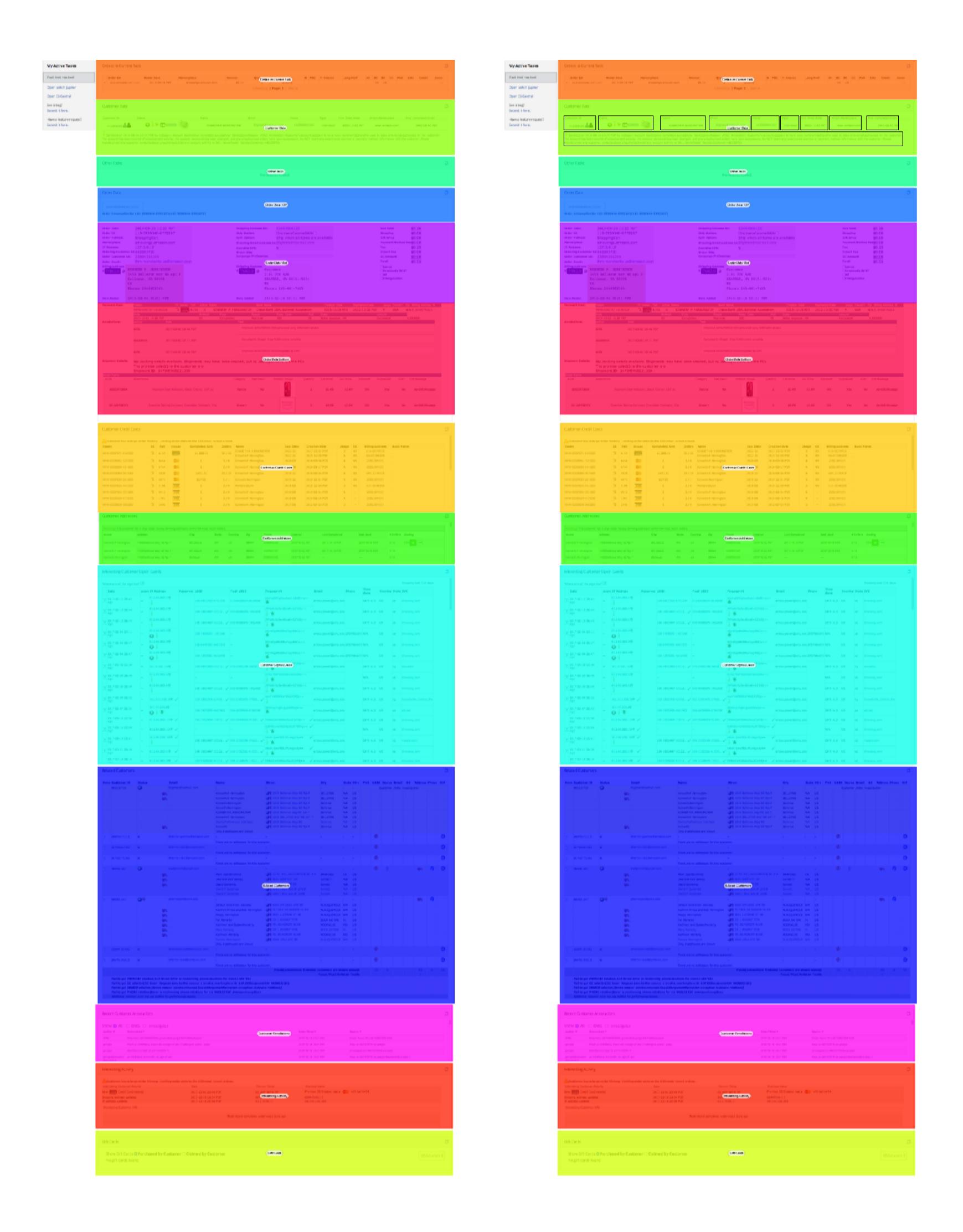




2017-10-02 13:46 PDT

Analysis

Areas of Interest (AOI)



1. First Fixation

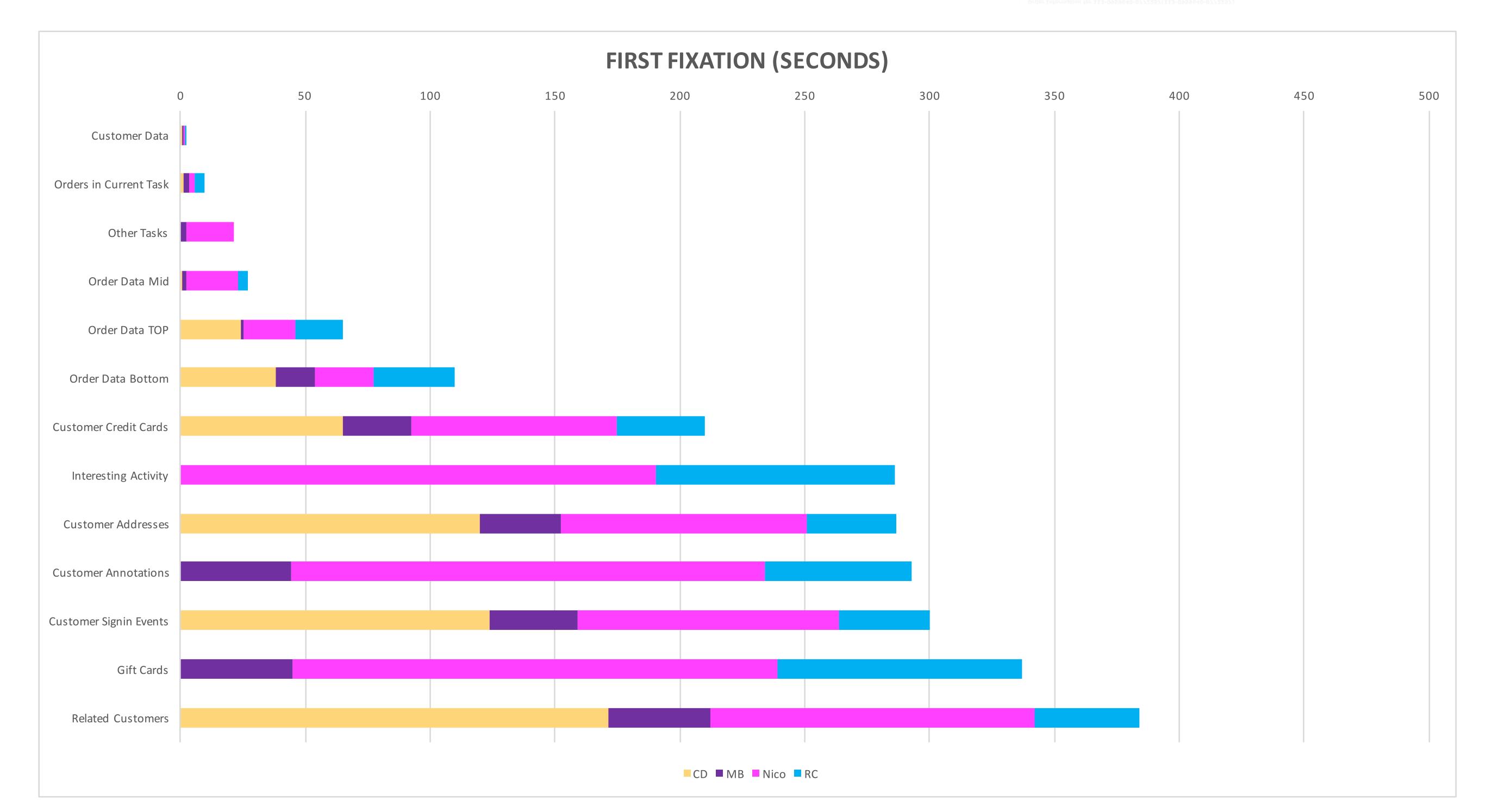
This metric measures how long it takes before a test participant fixates on an active AOI



First Fixation: Quick Findings

- First fixations show that investigators generally follow a combination of widgets loaded + existing top to bottom stack order. Tenured investigators will skip still loading widgets and proceed to the next resolved widget in the stack.
- Don't show 'Other Tasks' widget unless data exists.
- Consider 'Customer Data' as top most widget
- Remove 'Order Data' tab/heading when only 1 order in the task.
 Investigators are still viewing, more than once, the top of Order Data.





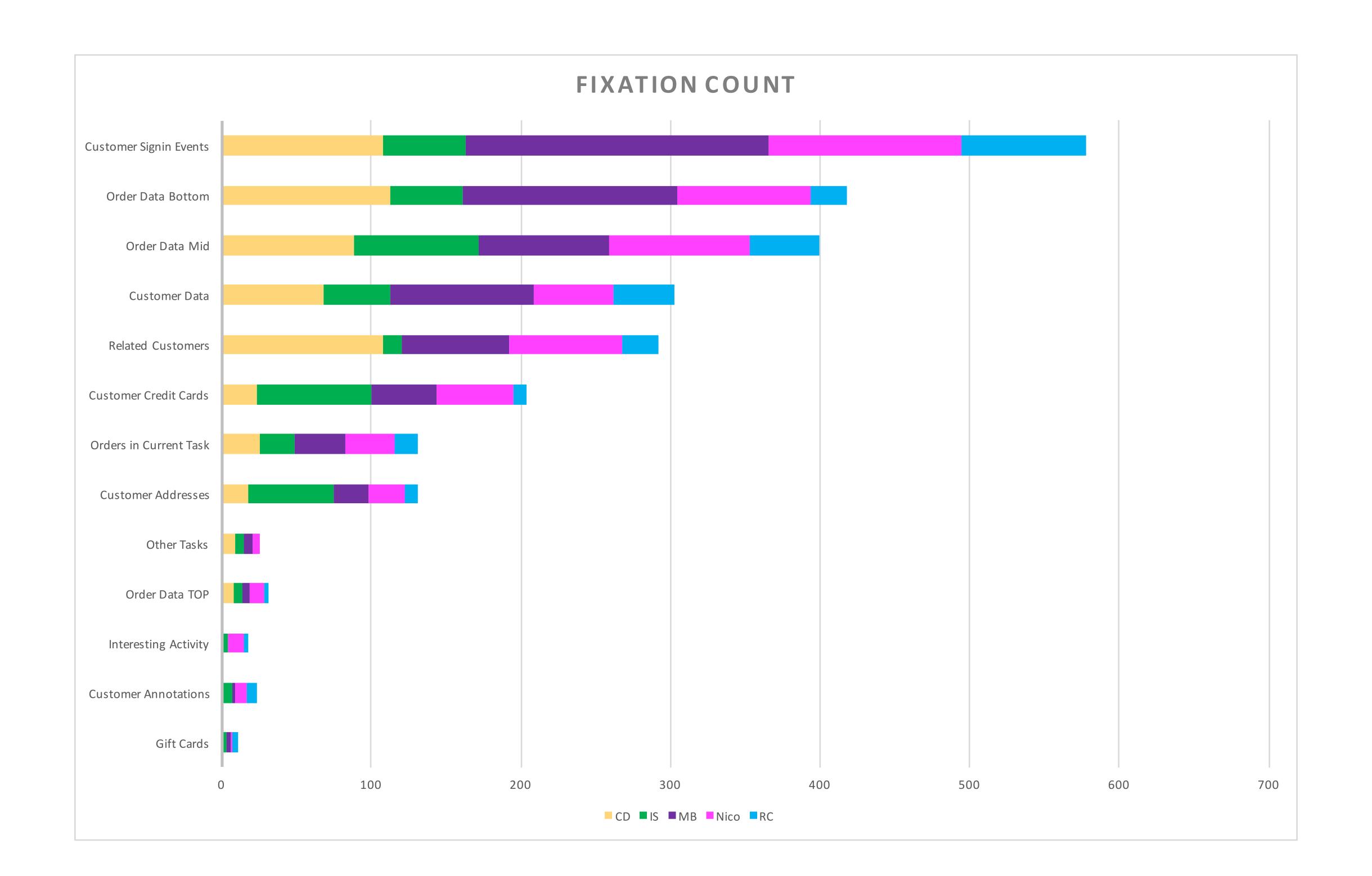
2. Fixation Count

This metric measures the number of times the participant fixates on an AOI



Fixation Count: Quick Findings

- Regardless of tenure, investigators spend the bulk of their time viewing 'Signin Events(GSI)' and 'Order Data'.
 Improving the ability to target and comprehend data in these widgets may yield highest value ROI.
- 'Customer annotations' (required as part of audit) and 'Interesting Activity' (not required) have low viewership overall.
 Could consider displaying these widgets on a load as needed basis
- Don't show 'Other Tasks' widget unless data exists.



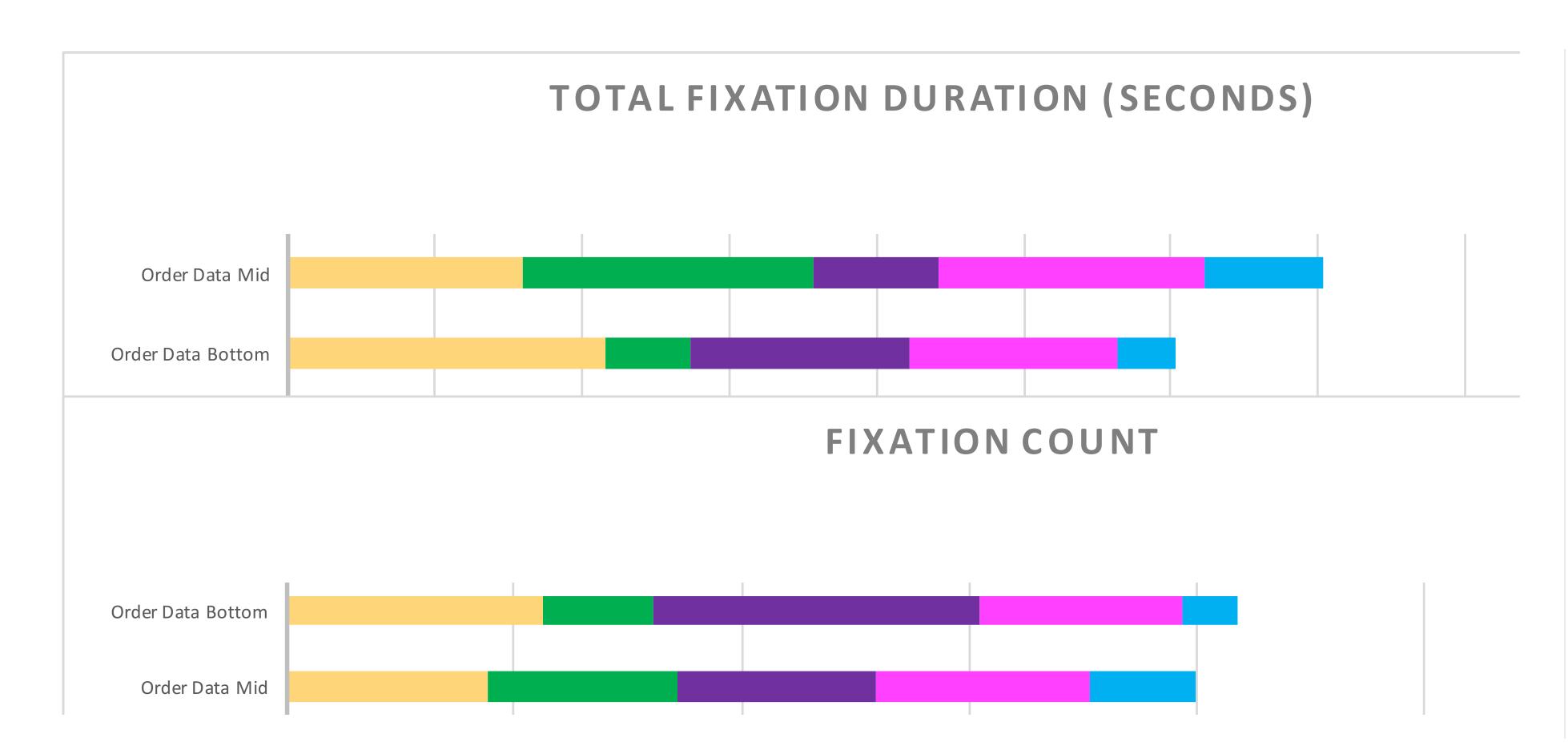
3. Total Fixation Duration

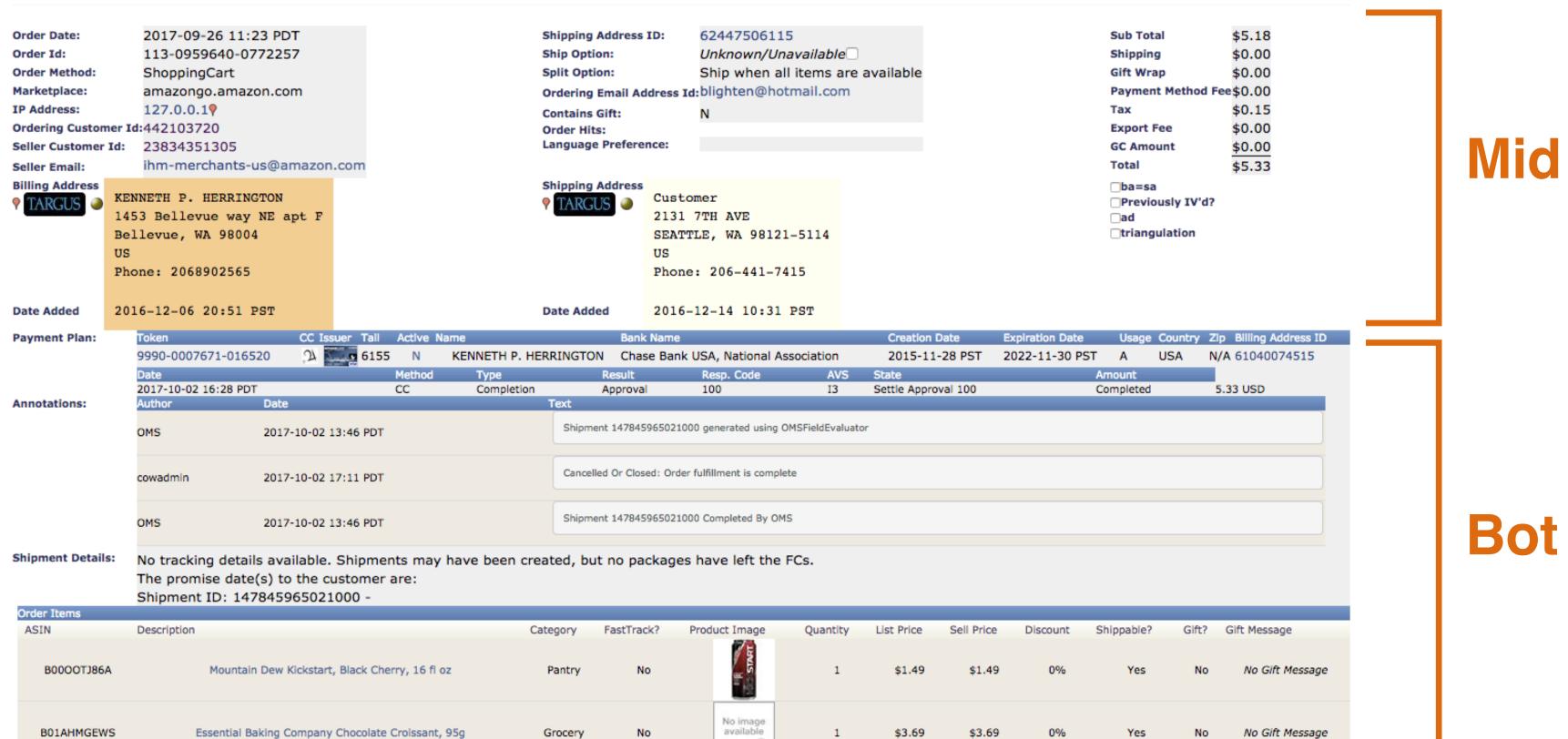
This metric measures the sum of the duration for all fixations within an AOI.



Total Fixation Duration: Quick Findings

Very closely mimics the metrics from Fixation Count.
 Slight difference in spending more time in the 'Order Data Mid' but having to fixate slightly less when compared to 'Order Data Bottom'.





Thank you, questions?