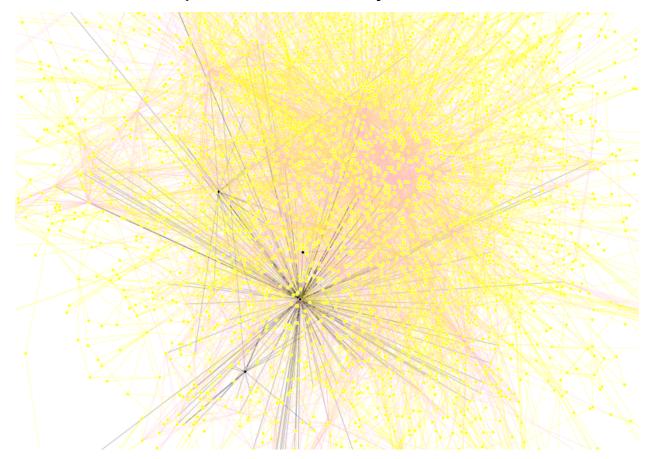
# **Interactive Visualisation 2**

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#### Introduction

This report discusses the patterns and relationships of four suspect entities in a networked dataset. We focused on these entities: "Mar de la Vida OJSC", 979893388, "Oceanfront Oasis Inc Carriers", and 8327. The analysis utilizes advanced visual analytics to study potential illegal activities.

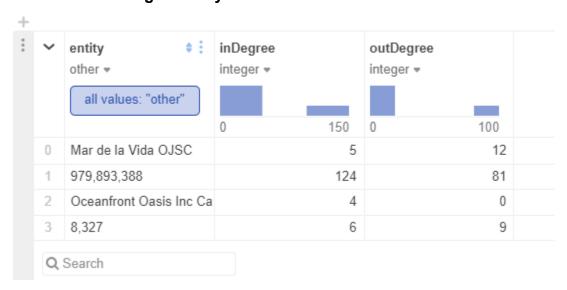
**Visualization 1: A Comprehensive Network Analysis** 



The initial visualization of the dataset offers a macroscopic perspective. The network, primarily consisting of nodes and links in yellow, clearly outlines the relationships among entities. Notably, suspect entities are represented by black nodes with their immediate and secondary connections in black and pink, respectively.

In this overview, a majority of the unrelated entities, coloured yellow, are far removed from the suspect nodes. This signifies that any questionable activities are likely confined to the vicinity of the suspect entities.

## Visualization 2: degree analysis



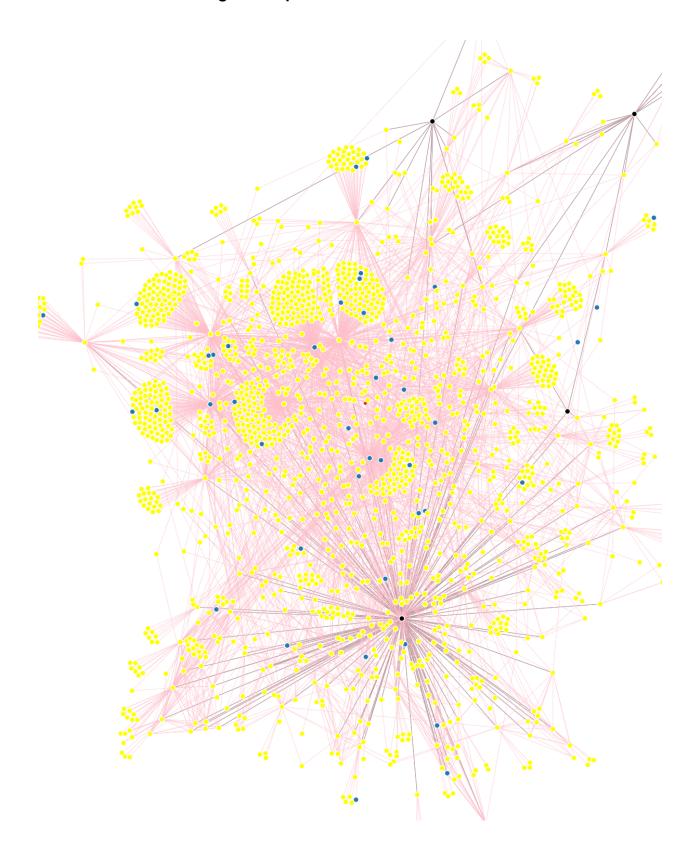
# Visualization 3: Showing links

Oceanfront Oasis Inc Carriers 🗸

selectedEntity = "Oceanfront Oasis Inc Carriers"

Source	Target	Туре
2262	Oceanfront Oasis Inc Carriers	family_relationship
8787	Oceanfront Oasis Inc Carriers	family_relationship
979893388	Oceanfront Oasis Inc Carriers	ownership
FishEye International	Oceanfront Oasis Inc Carriers	membership

**Visualization 4: Focusing on Suspect Entities** 



To delve deeper into the relationships involving the suspect entities, we employed a second, more refined visualization. This visual only includes the suspect entities, their immediate connections, and second-degree nodes.

An interactive drop down allows for the selection of a specific node type. Upon selection, nodes of this type change to blue from their default yellow, facilitating easier identification. The suspect nodes, their immediate links, and second-degree links remain in black and pink, respectively.

## **Insights from the Visualizations**

#### **Entity 979893388**

The visualizations suggest that Entity 979893388 is closely connected with nodes that wield considerable influence within the network. However, it also links to less influential nodes. This scenario raises the possibility of this entity being involved in illegal fishing activities. Its influence could enable such activities while the connections to less influential nodes might serve to divert suspicion or scrutiny. However, we must acknowledge the uncertainty here as the potential risk to its industry reputation might deter such illicit activities.

#### Mar de la Vida OJSC and Oceanfront Oasis Inc Carriers

Our visual analytics tool reveals that Mar de la Vida OJSC maintains memberships and partnerships with FishEye International and Ancla Azul Company Solutions. The diverse range of partnerships suggests a far-reaching presence in the fishing industry, potentially facilitating unlawful activities. The "Oceanfront Oasis Inc Carriers" also share a connection with "FishEye International," indicating a network of suspect entities.

#### Entity 8327

The visualization shows that entity 8327 shares an unusual connection with 'â &Illegal', signifying potential illicit activities.

### **Degree Analysis of Suspected Entities**

We further utilized degree analysis to explore the suspect entities' connections, which confirmed the unusual nature of entity 8327's connections. Entities with which it associates include 'today', 'coast', 'water', 'cutters', 'weeks', '160' - names that are atypical and stand out when compared to the connections of other suspect entities.

In contrast, Mar de la Vida OJSC's connections are more conventional, aligning well with what one would expect within an industry. The distinct difference in connection patterns indicates a higher likelihood of illicit activities associated with entity 8327.

## Summary

The visual analytics tool, through its dynamic and interactive visualizations, allows for an insightful exploration of suspect entities and their network relationships. It not only identifies potential patterns indicative of illegal activities but also provides a measure of confidence in such patterns. However, the tool also acknowledges the existence of uncertainties that could affect confidence in the identified patterns.

The presence of entities with significant influence within the network, such as 979893388, along with those having unusual connections, such as 8327, underscores the need for continued monitoring and investigation. More focused study on these entities could unravel the complexity of their relationships and the extent of potential illicit activities.

Visual analytics, therefore, play a pivotal role in investigating suspicious activities, empowering analysts to identify patterns, explore connections, and make informed decisions for further actions.