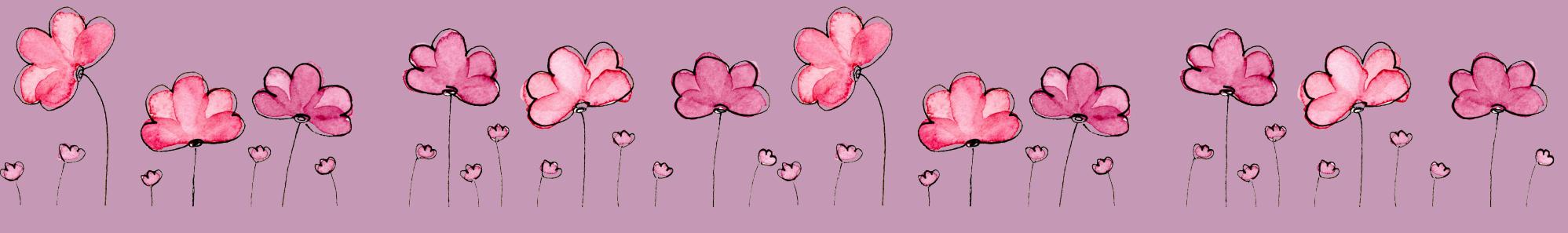


FOLK FLOW PROJECT

Tracing the Tides of Influence: The Rise of Sailor Shift and Oceanus Folk

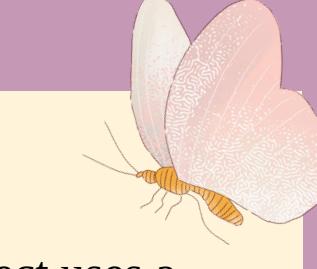


ISS608 Visual Analytics & Applications | Group 13 |
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INTRODUCTION

From island roots to global fame, Sailor Shift has redefined Oceanus Folk. This project uses a knowledge graph and interactive visualizations to explore her influences, impact, and the genre's evolution—uncovering rising stars and mapping Oceanus Folk's worldwide spread.

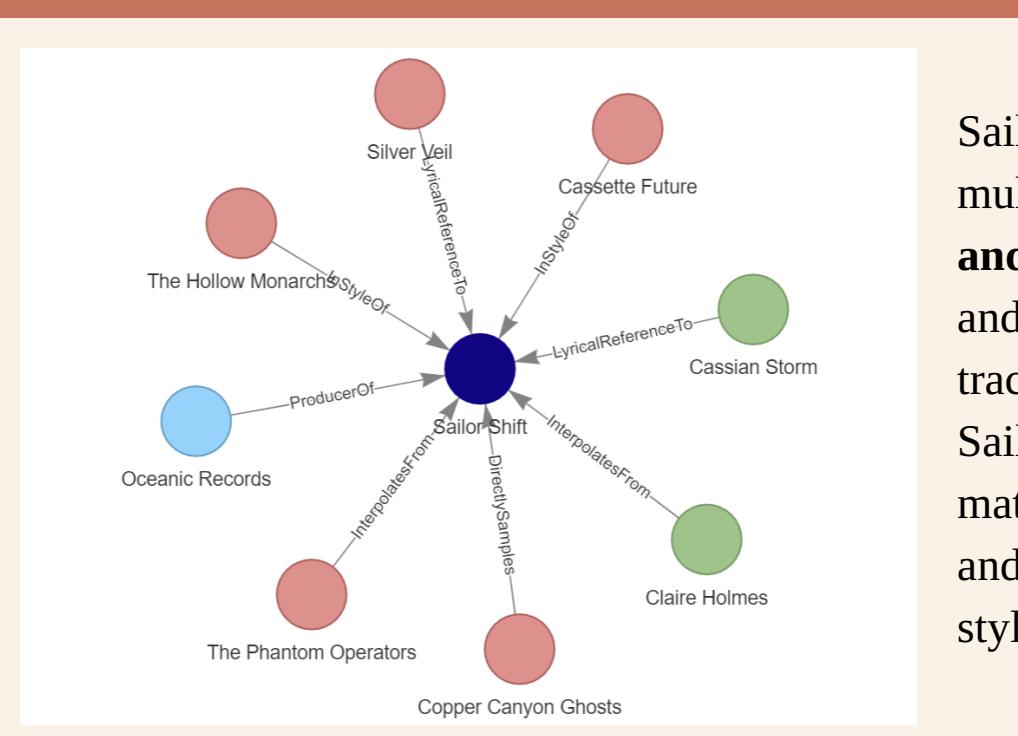


METHODOLOGY

DATA PREP

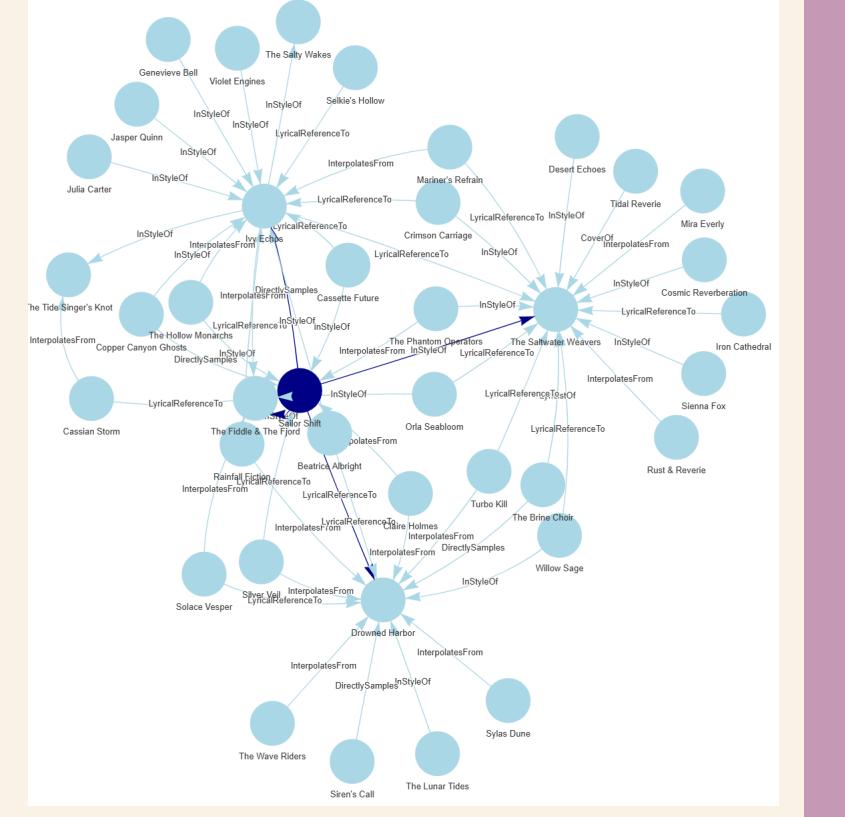
Data set derived from [VAST Challenge 2025 Mini-Challenge 1](#), with key features including:

- 17,412 nodes
- 37,857 edges
- 18 connected components



INFLUENCE NETWORK

Sailor Shift's musical style has been shaped by multiple artists, **most notably Cassian Storm and Claire Holmes**. Through lyrical references and musical interpolation, their influence can be traced in her work. These connections highlight Sailor's deep engagement with other artists' material, reinforcing her commitment to honoring and evolving the Oceanus Folk and broader indie styles.



This influence network illustrates **Sailor Shift's pivotal role** in shaping the Oceanus Folk genre. She is deeply connected to a wide range of artists through diverse influence types—such as "InStyleOf", "LyricalReferenceTo", and "InterpolatesFrom"—highlighting her **multidimensional artistic impact**. The network reveals both direct collaborators and indirect artistic echoes, emphasizing her **reach across stylistic, lyrical, and production domains**. Her position at the center of multiple creative pathways reflects her enduring influence **within and beyond her musical circle**.

Node Types	Edge Types
Person: Artists, composers, producers, lyricists	Collaboration and authorship: Performer Of, Composer Of, Lyricist Of, Producer Of
Musical Group: Groups/bands like Ivy Echoes	Influence relationships: In Style Of, Cover Of, Directly Samples, Lyrical Reference To, Interpolates From
Song: With attributes like genre, notable charting, and release dates	Membership and recording: Member Of, Recorded By, Distributed By
Album: Includes similar metadata as songs	
RecordLabel: Institutions that record/distribute music	



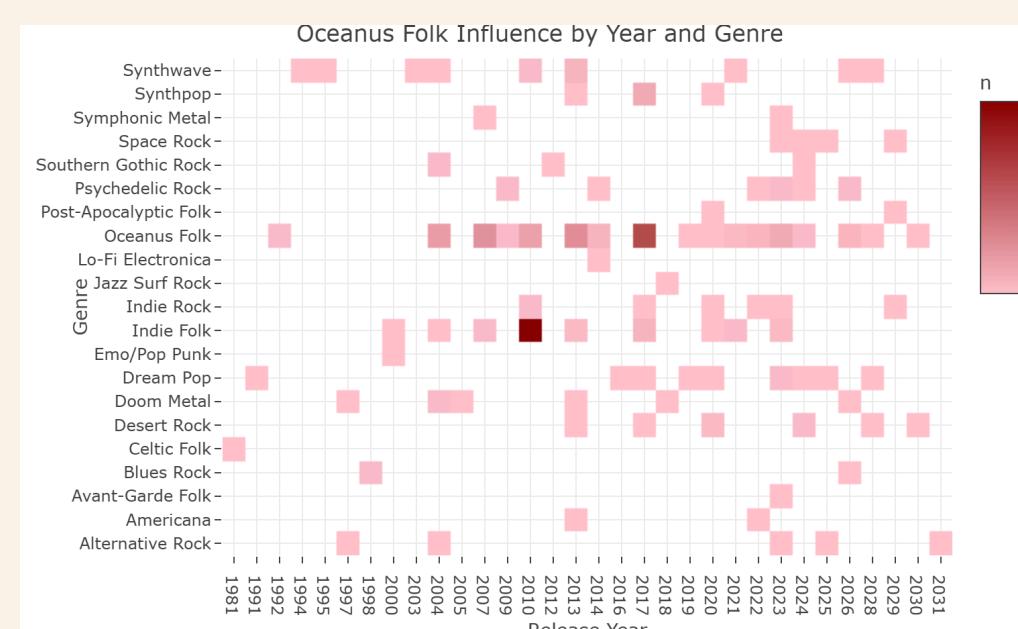
SHINY PACKAGES



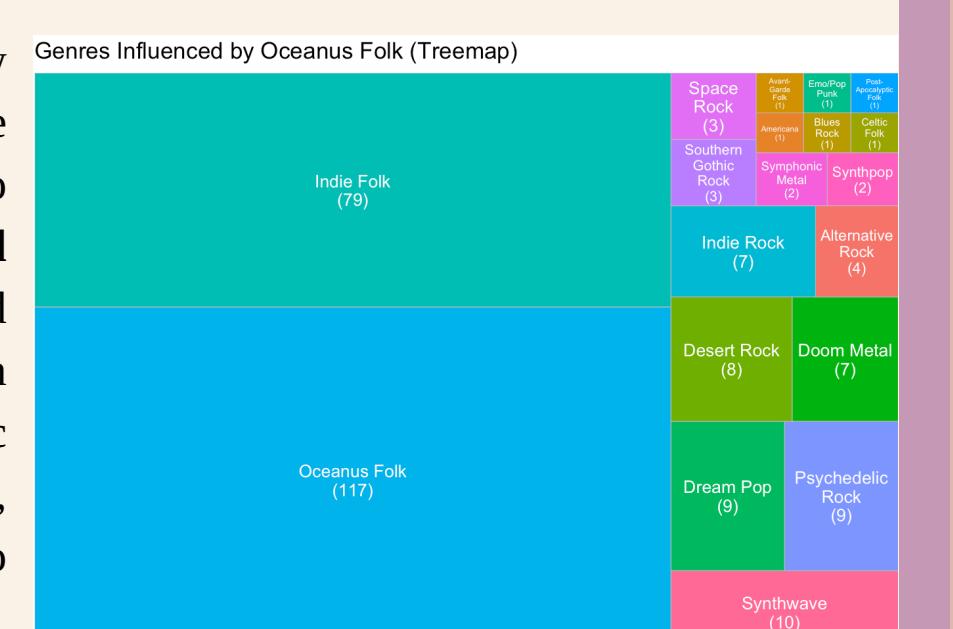
R programming was used for the data processing, statistical analyses and building models.

Shiny Dashboard is used to build the web application.

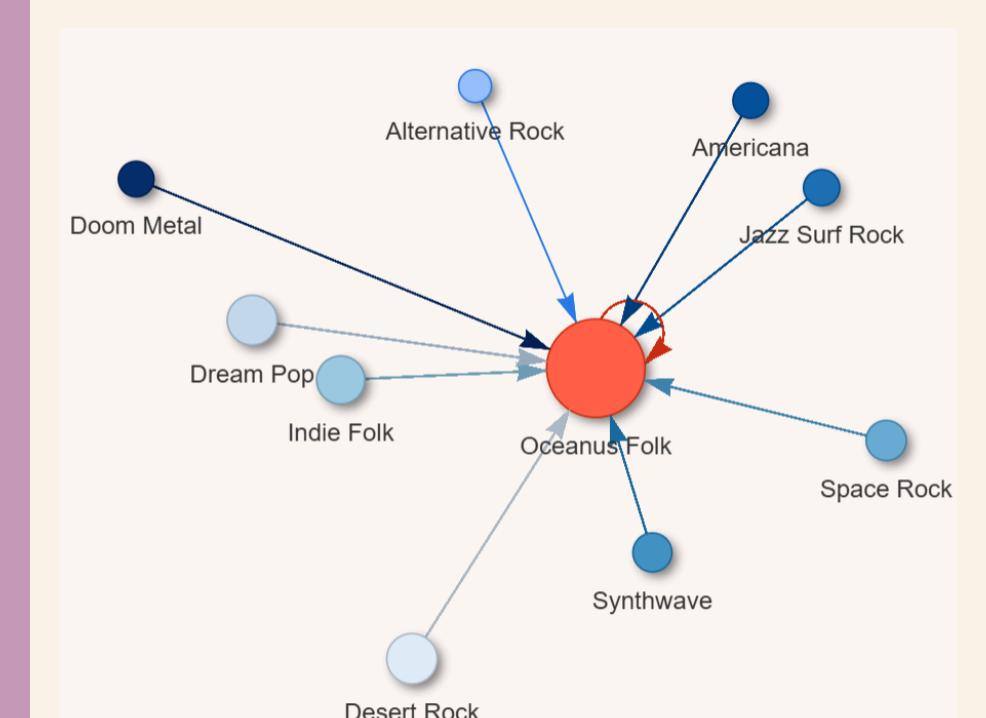
Packages used include Shiny, shinydashboard, tidyverse, ggstatsplot, plotly, DT, visNetwork, ggplot2, igraph, etc.,



The heatmap shows the number of **Oceanus Folk influenced songs by genre and release year**. Each tile represents a specific genre-year combination, with darker shades indicating a higher count of influenced works. The chart also reveals that the genre's influence is **intermittent** rather than continuous, as evidenced by the scattered and missing tiles across many rows and years.

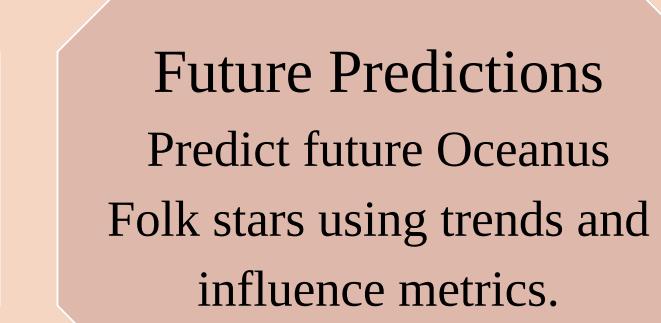
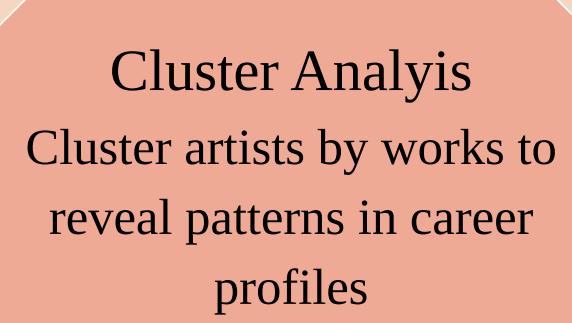
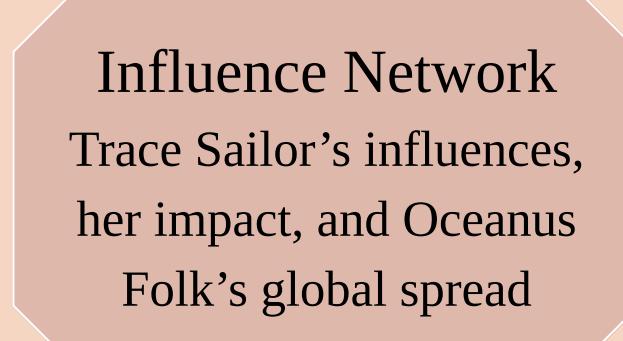
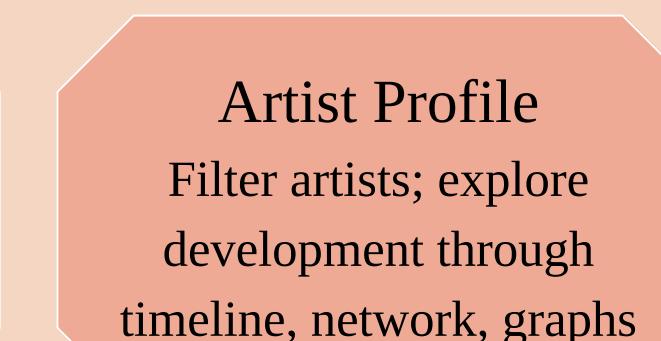
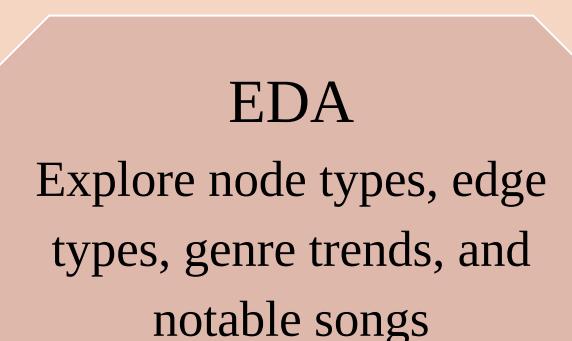


The treemap visualization offers a summarized view of the cumulative genre impact to see what genres have been most influenced by Oceanus Folk. The two largest segments, **Oceanus Folk (117 songs)** and **Indie Folk (79 songs)**, highlight that the genre has had the strongest effect. Secondary influences appear in Synthwave (10 songs), Dream Pop and Psychedelic Rock (9 each), and Desert Rock and Doom Metal, indicating that Oceanus Folk has also reached into diverse stylistic territories, albeit to a lesser extent.



The network visualization shows how Oceanus Folk has been **shaped by a range of musical genres**. Each node represents a genre, with directed edges pointing to Oceanus Folk to indicate influence. Styles like Indie Folk, Dream Pop, and Synthwave contribute to its melodic and ambient qualities, while heavier genres like Doom Metal and Space Rock add depth and intensity. Together, these influences **highlight Oceanus Folk's hybrid nature**—blending diverse sonic elements into a cohesive yet experimental musical identity.

SHINY APP FEATURES



CLUSTER ANALYSIS

Classes	BIC (Rep=1)	AIC (Rep=1)	Likelihood (Rep=1)	Entropy (Rep=1)	BIC (Rep=6)	AIC (Rep=6)	Likelihood (Rep=6)	Entropy (Rep=6)
2	7304	7255	744	0.998	7304	7255	744	0.998
3	6747	6673	1219	0.997	6747	6673	1219	0.997
4	6292	6193	1571	0.997	6290	6192	1572	0.998
5	5923	5801	1836	0.996	5914	5791	1842	0.996
6	5599	5452	2055	0.998	5586	5439	2063	0.999
7	5342	5170	2222	0.997	5333	5161	2227	0.998
8	5128	4931	2356	0.998	5121	4925	2360	0.993

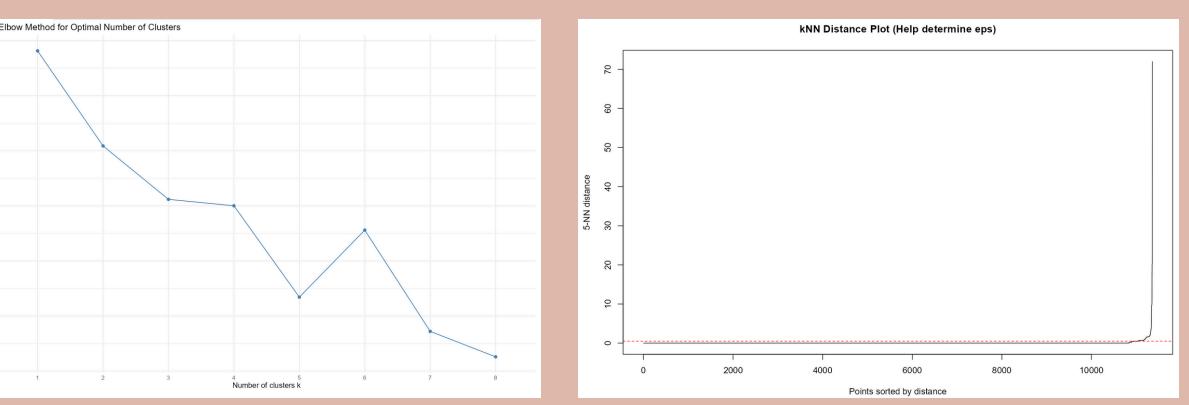
When the number of classes is **5 and below**, repetitions have minimal impact on diagnostic statistics; **BIC score** starts showing greater improvement **with repetition** only when the number of clusters exceeds **5 classes**. AIC and Likelihood show a similar trend to BIC, but Entropy remains consistently high across all values, and the **lowest BIC does not always yield the best Entropy**.

- Literature suggests that **BIC** is a reliable and widely used indicator for model selection. In contrast, **Entropy values close to 1** indicate well-separated clusters but are not sufficient on their own. Hence, we do not rely solely on Entropy when determining the optimal class solution.
- Based on the metrics, **Class = 8 and Repetition = 6** gives the best clustering solution: it achieves the **lowest BIC (5121)** and **highest Likelihood (2360)**, with a **high Entropy of 0.993**.

Clustering Diagnostics Summary

- **Elbow Plot:** WSS drops sharply until **k = 5**, suggesting it as a potential optimal cluster count. Further reductions are minimal.
- **kNN Distance Plot:** The sharp rise begins around distance **1–2**, indicating a good **eps value** for DBSCAN.

These plots support effective parameter choices for both k-means and DBSCAN clustering.



FUTURE PREDICTION ANALYSIS

To identify rising stars and influential artists in the Oceanus Folk genre, we employed three complementary approaches: **Growth Trajectory**, **Composite Score Prediction**, and **Network Centrality Analysis**.

Future Star Prediction - Composite Score Method										
#	future_star_score	prediction_star	total_works	notable_works	oceanus_folk_works	collaborations	growth_t	degree	betweenness	clusters
1000	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1001	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1002	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1003	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1004	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1005	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1006	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1007	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1008	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1009	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1010	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1011	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1012	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1013	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1014	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1015	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1016	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1017	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1018	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1019	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1020	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1021	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1022	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1023	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1024	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1025	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1026	0.000	0.000	100	100	100	100	0.000	0.000	0.000	1.00
1027	0.000	0.000	100	100	100	100	0.0			