A NEW CITY MAP

VISUALIZING OUR CITY ROADWAYS

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Land Acknowledgement

We are gathered on the traditional, ancestral and unceded territories of the Musqueam (xʷməθkʷəy̓əm) Nation.
Our roads shape our neighborhood

Our neighborhoods shape us

We seek to understand how to capture this relationship by using street maps for efficient, tailored abstract art
Motivation

- Cartographical art on the market is often costly and quite impersonal

- Consumers often times have difficulty finding art tailored to precise geographical locations

- Maps are used more as decorative icons or to help navigate rather than mediums of non-spatial information
Objectives

- To bridge the gap between art and cartography by using a data driven approach

- To deliver art that is accessible to a broad spectrum of users while retaining its meaningfulness

- To present a visualization that can convey the spirit of a given area by encoding the factors which makes it special
The Project:
Visualize the unique features of our space through artistic representation

Enjoyment
See the city through a new lens
Find neighborhoods similar to yours

Discovery
Compare neighborhoods and cities
Highlight neighborhood phenomenon
User selects a location

Roads and Amenities for the surrounding area are gathered

Information about area is encoded

Amenities and road classifications are paired with road edges

Art is returned to user!

Users can choose from oil, watercolor, or color pencil style art
The interface

A New City Map

Choose a City | Pick a Point | Boundary Cut

City: Vancouver

Longitude: -123.1141 | Latitude: 49.2991

Oil Style
Painting in the Oil Style with normalized orientation

Oil Rand Style
Painting in the Oil Style with random edge orientation

Make Map
The interface

A New City Map

Choose a City  Pick a Point  Boundary Cut

User can select 3 modes of operation

City interface allows user to select city to artistically render

Point interface allows users to drop pin on the map to artistically render around its radius

Boundary interface allows users to input address or take the current map view to artistically render around its radius
Consistent art views that match the map help orient the visualization through juxtaposition.
The interface

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Doughnut style piechart interface shows amenity mappings to color palette
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Strengths and Research Contributions

- Easily digestible representation of neighborhood culture
- Standardized visualizations for quick comparison between views
- Unique artistic rendering of city streetscapes
- Alternative method of delivering information about a place

Weaknesses and Limitations

- Trade-off between amount of information available to share and cognitive overload
- Currently only one color palette based on background research
- Longer computation time with large areas (e.g. full cities)

Future Work

- Greater granularity of amenity types (regional awareness)
- Improved computation time / dynamic rendering
- Responsive art for moving cursor around base map
Thank you!