Creation and Comparison of Sustainable Neighbourhood Patterns

CPSC 533C
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The Problem – Overview

- Landscape Architecture group aims to create sustainable neighbourhoods
- Collaboration with city planners
- End result: a “pattern”

The Problem – The Goal

<table>
<thead>
<tr>
<th>Inputs:</th>
<th>3p, 0j</th>
<th>3p, 0j</th>
<th>0p, 10j</th>
<th>0p, 10j</th>
<th>0p, 10j</th>
<th>0p, 10j</th>
<th>919p, 32j</th>
</tr>
</thead>
</table>


The Problem – The Goal

**Inputs:**
- 3p, 0j
- 3p, 0j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 919p, 32j

**Pattern:**

[Diagram of a complex layout with various patterns and numbers]
The Problem – The Goal

Inputs:

- 3p, 0j
- 3p, 0j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 919p, 32j

Pattern:

Outputs:

- Total Population = 925
- Total Jobs = 72
- Total Energy Consumption = 1.21 GW
- Average Floor-to-Area Ratio: 2.5
The Problem – Current Method

- Collaboration around table:
  - Paper maps
  - Paper cutouts of elements
  - Manually compute outputs in spreadsheet
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- Issues:
  - No way to “save” at any point
  - Hard to compare different solutions
  - Labour intensive calculation
My Solution – Multi-touch Table!

- Demo
Strengths

- InfoVis
  - Scroll/Drag menus provide context
  - Offer insight for selection
  - Easy comparison of multiple patterns

- HCI
  - Use images/colours familiar to group
  - Maintain familiar interaction
  - Provide lots more functionality
Weaknesses

- Bad for the colour-blind
- But colours necessary for client
- Hard to give “good” suggestions for potential elements
Future Work

- “Snap” feature for elements in map
- Provide context for map location in the world
- Scale elements, automatically update their attributes