Placing QR codes on Tactile Graphics

Catie Baker, Lauren Milne, Kyle Rector
Motivation:

We want to turn this...
Motivation:

We want to turn this... Into this.

Image produced by Josh Scotland as part of the Tactile Graphics Project at the University of Washington
Labor needed for each step in the automated image translation process

## Algorithms

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greedy</td>
<td>19.76 s</td>
</tr>
<tr>
<td>Simulated Annealing</td>
<td>1553.07 s</td>
</tr>
</tbody>
</table>

Christensen, Jon, Joe Marks, and Stuart Shieber. "Placing text labels on maps and diagrams." *Graphic Gems 4* (1994)
Initial Placement on the Slide:
Evaluation Functions

<table>
<thead>
<tr>
<th></th>
<th>Catie</th>
<th>Lauren</th>
<th>Kyle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1.png" alt="Graph" /></td>
<td><img src="image2.png" alt="Graph" /></td>
<td><img src="image3.png" alt="Graph" /></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
Works Well
Limitations/Future Direction
Division of Tasks

Parsed XML and TXT files and stored relevant information, wrote an evaluation function

Wrote Greedy Algorithm and evaluation function

Wrote Simulated Annealing and evaluation Function
Citations and Acknowledgements

Thanks to Richard Ladner for the idea, input and help.

All images not cited in their slide are based on *Advanced Mathematical Concepts, Precalculus with Applications* by Gordon-Holliday, Yunker, Vannatta and Crosswhite published by Glencoe/McGraw-Hill.