Presentation of Solutions
The Black Arcs

"LP" group

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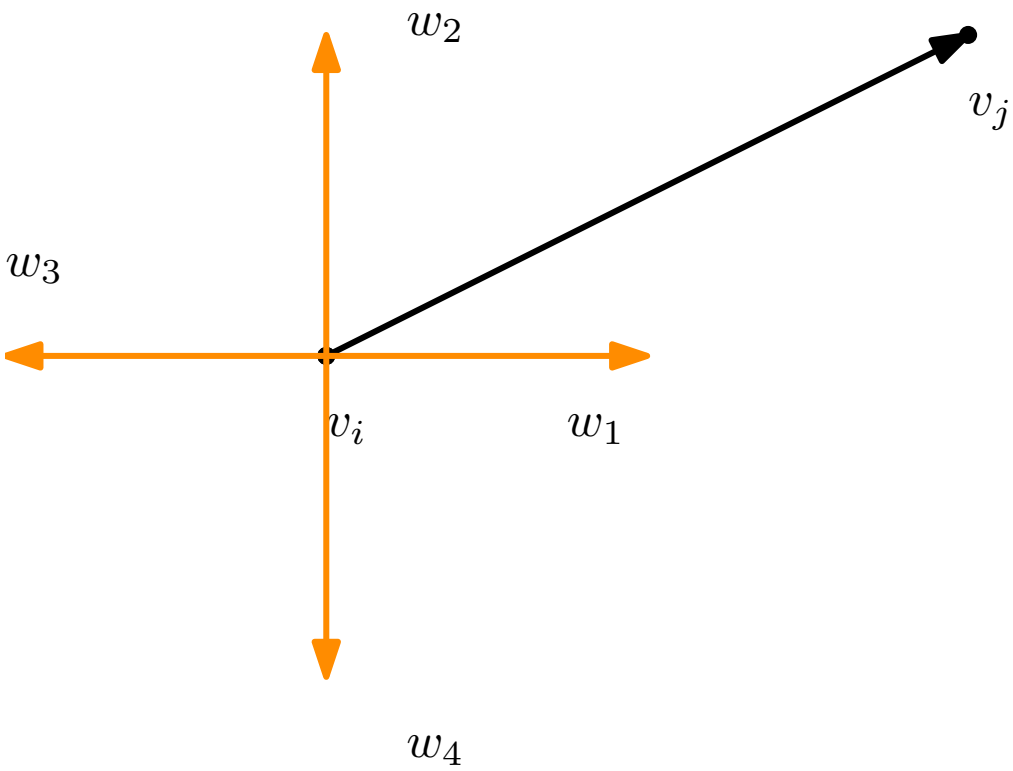
Proposed in Progress report:

(Integer) Linear Models(1)



$$\min \sum_{(i,j)\in E} |\epsilon_{i,j,1}|+|\epsilon_{i,j,2}|$$

$$\tilde{v}_i + \ell_{i,j} \sum_{d\in 1\ldots 4} c_{i,j,d} w_d = v_j + \epsilon_{i,j}$$

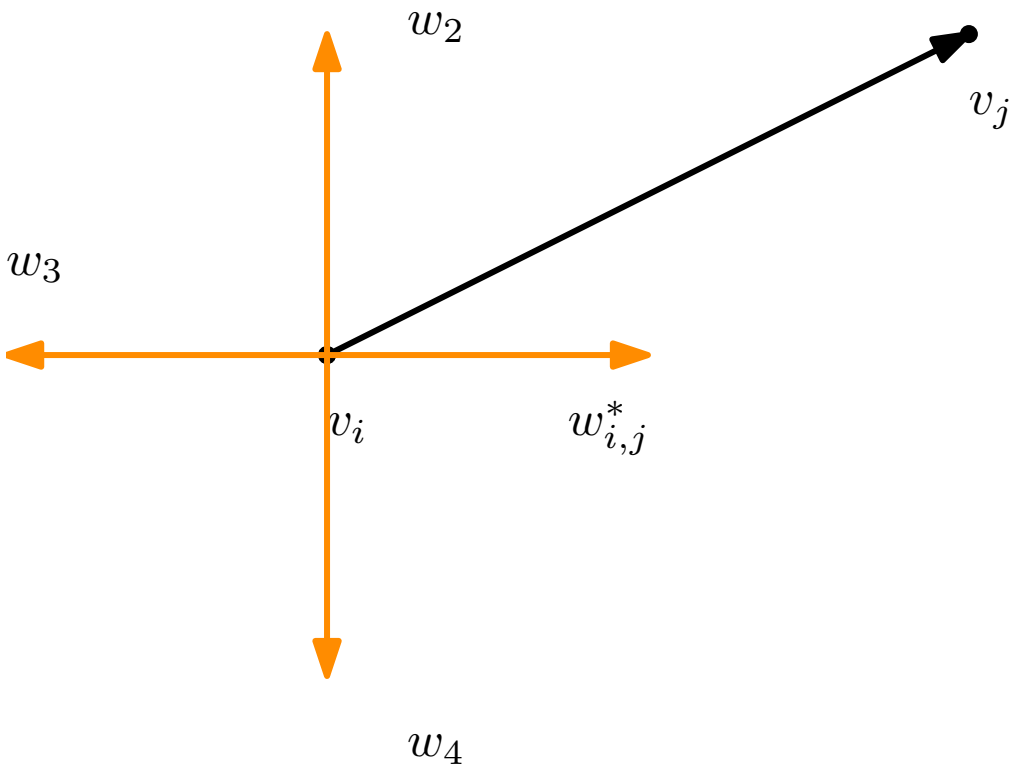
$$c_{i,j,d} \in \{0,1\}$$

$$\sum_d c_{i,j,d} = 1$$

$$\ell_{i,j} = \|v_i - v_j\|$$

Proposed in Progress report Cont.

Linear Models(2)



$$\max \sum_{(i,j)\in E} \langle z_{i,j}, w^*_{i,j} \rangle$$

$$z_{i,j} = (\tilde{v}_i - \tilde{v}_j)/\ell_{i,j}$$

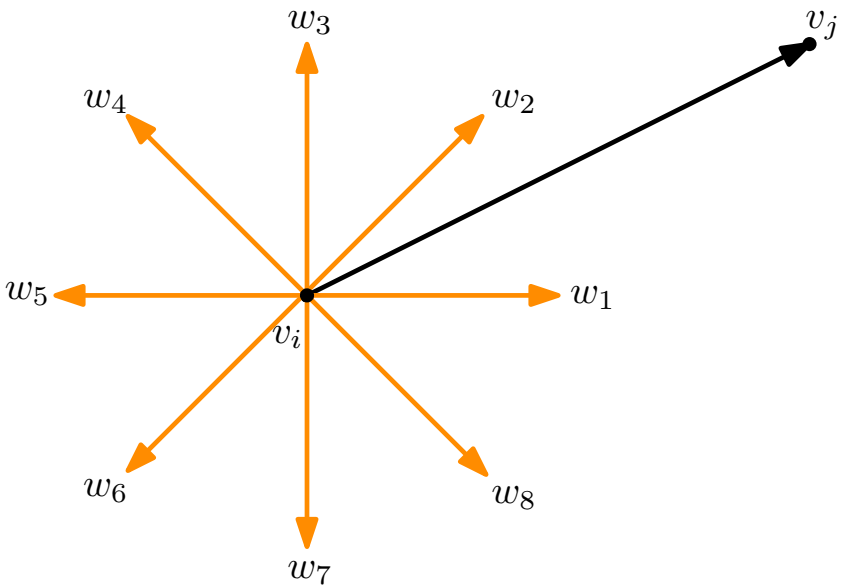
$$w^*_{i,j} = \text{closest } w_d$$

$$\ell_{i,j} = \|v_i - v_j\|$$

In both cases we need penalties/bounds to prevent vertices from moving too far.

Updated models

(Integer) Linear Models(1)



Linear Models(2)

$$\min \sum_{(i,j)\in E} |\epsilon_{i,j,1}| + |\epsilon_{i,j,2}| + \sum_{i\in V} q_i$$

$$\tilde{v}_i + \ell_{i,j} \sum_{d\in 1\ldots 4} c_{i,j,d} w_d = v_j + \epsilon_{i,j}$$

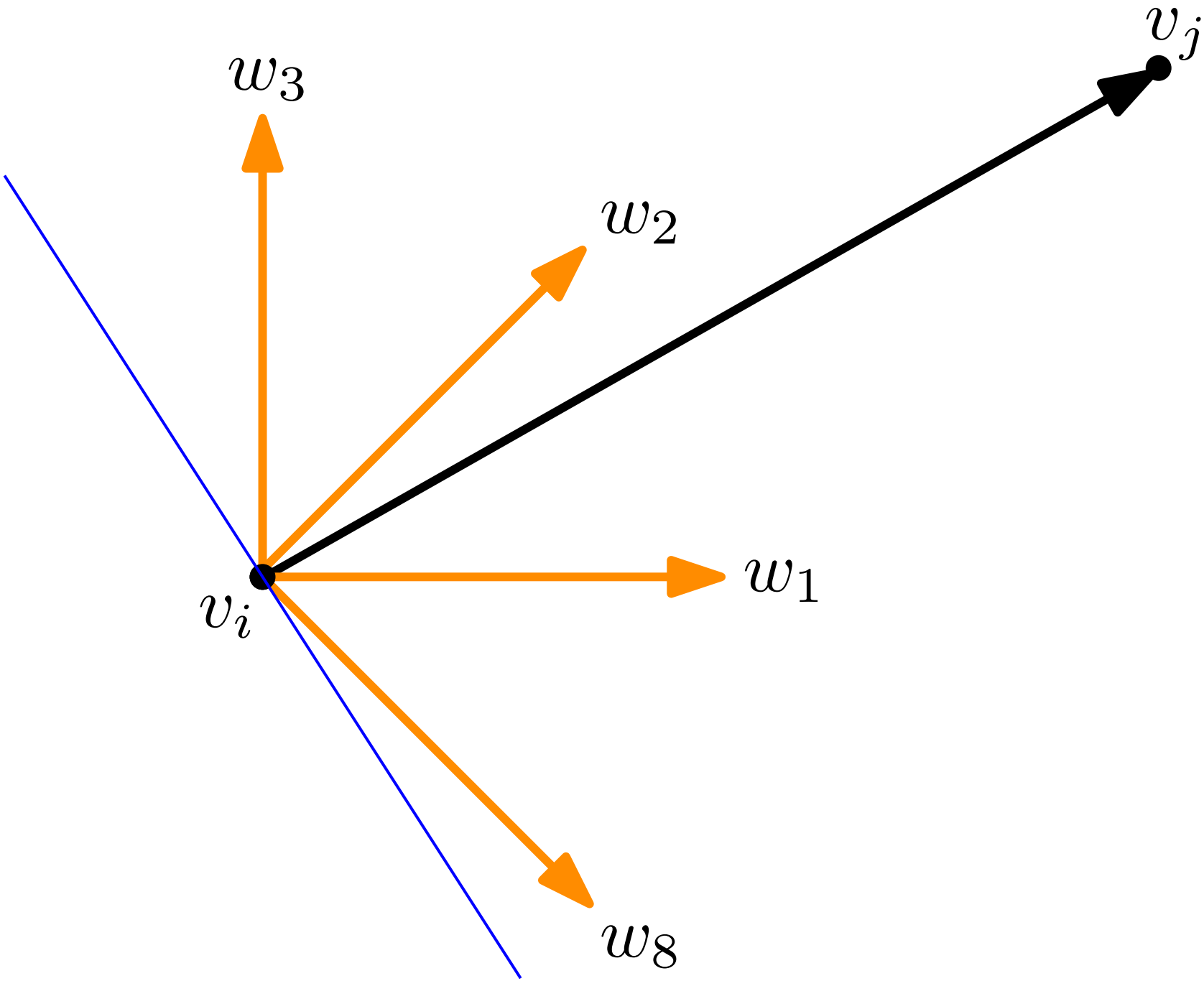
$$c_{i,j,d} \in \{0,1\} \& \sum_d c_{i,j,d} = 1$$

$$\ell_{i,j} = \|v_i - v_j\|_2$$

$$q_i = \|v_i - x_i\|_1$$

Let's see the results!!

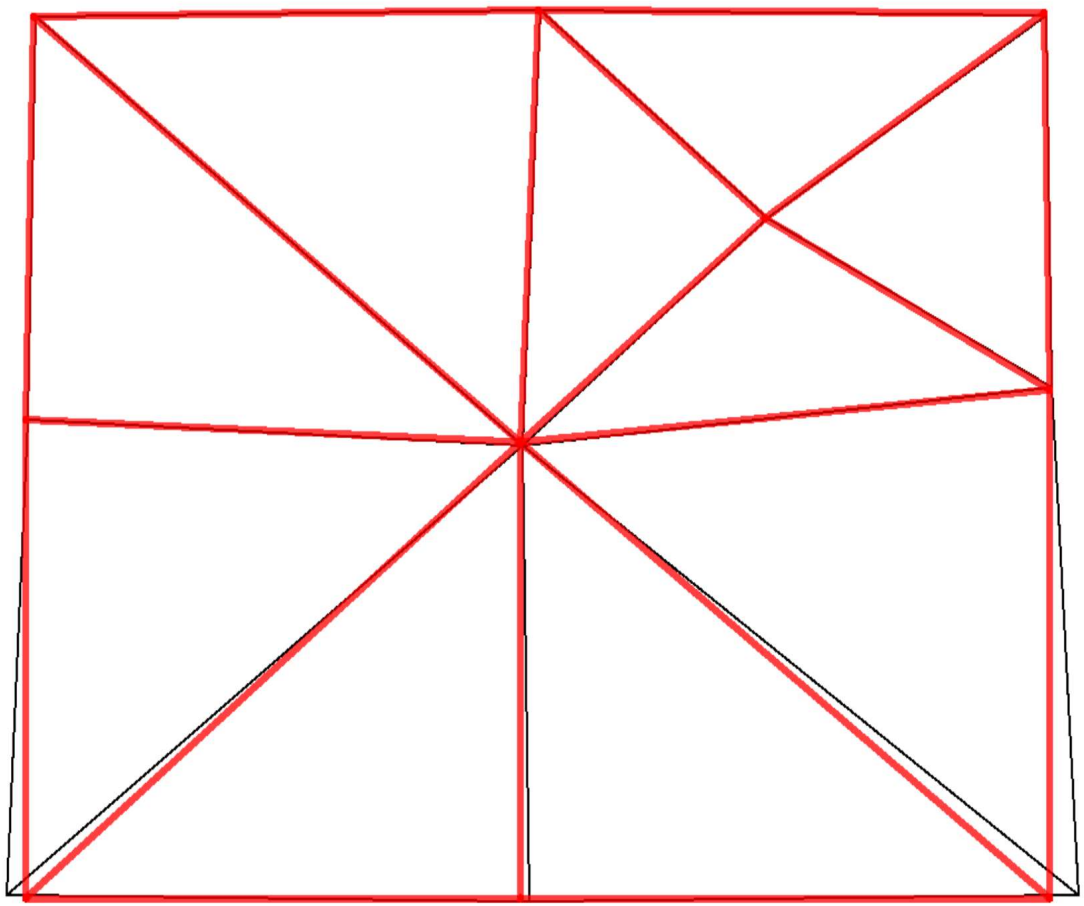
- Click for the output of map1.json
- Click for the output of map2-run1.json
- Click for the output of map2-run2.json
- Click for MapGenerator
- Click for the output of map2-othergroup


v_j
w_3
w_2
w_1
v_i
w_8

Just in case!!!

map1-Output

7/6/2018 Map Sketcher



map2-Output