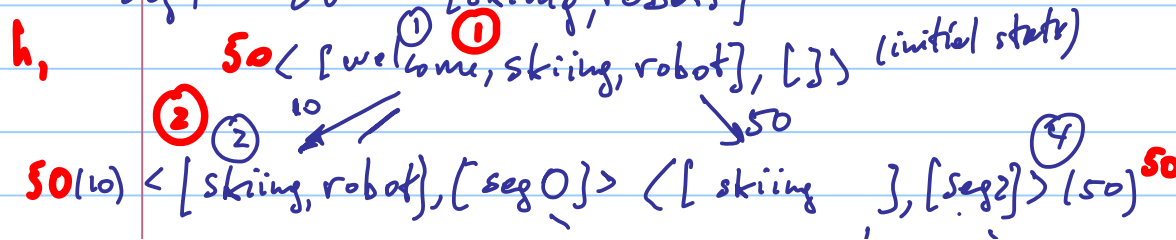


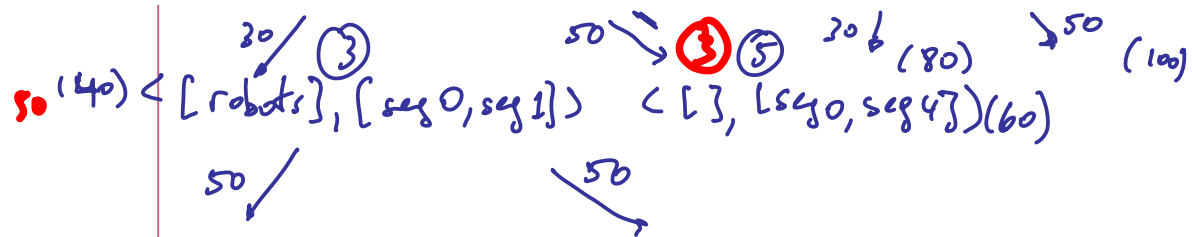
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Note Title

2014-03-20

Seg	length	Topics covered	10 *  Topics Covered
seg 0	10	[welcome]	10
seg 1	30	[skiing, views]	20
seg 2	50	[welcome, AI, robots]	30
seg 3	40	[graphics, dragons]	20
seg 4	50	[skiing, robots]	20





$$(90) \langle [], [seg_0, seg_1, seg_2] \rangle \langle [], [seg_0, seg_1, seg_4] \rangle (90)$$

(b) Give a heuristic.

Let  $n = \langle \text{To Cover}, \text{Segs} \rangle$

$$h(n) = 10 * |\text{To Cover}|$$

To show monotonicity,  $h(n) - h(n') \leq \text{cost}(n, n')$

$\forall n' \in \text{SCS}(n)$

You can check this on every pair of nodes

There are better heuristics

(a) For each topic, let  $s(t)$  be the length of the smallest segment that covers topic  $t$ . Then,

$$h(\langle C, TC, \text{segs} \rangle) = \max_{t \in TC} s(t) = h_1(\langle TC, \text{segs} \rangle)$$

(b) For each segment, let the contribution of the segments be the time of the segment divided by the number of topics covered in

the segment. For each topic  $t$ , let  $s(t)$  be the smallest contribution over all segments that cover the topic. Then

$$h(\langle TC, Segs \rangle) = \sum_{t \in TC} s(t)$$

Topic	$s(t)$
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(used to compute  $h$ )

AI	50
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dreys	40
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graphics	40
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Note that using  $h$ , only 3 nodes are closed

robots 50

by A\*.

sking 30

views 30

welcome 10