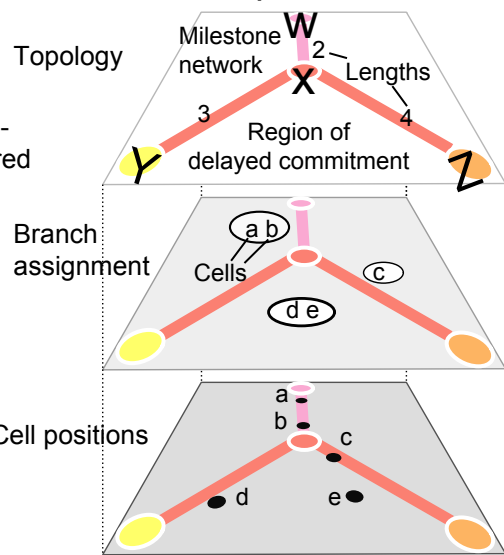
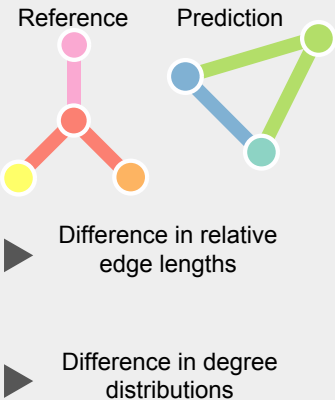


Common probabilistic trajectory model

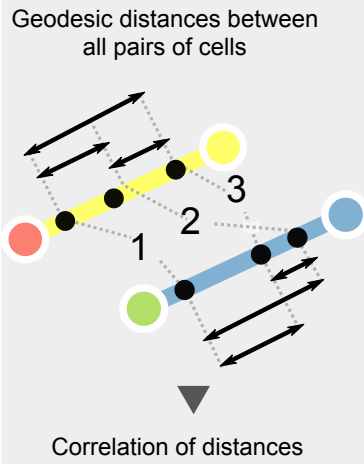
Multi-layered



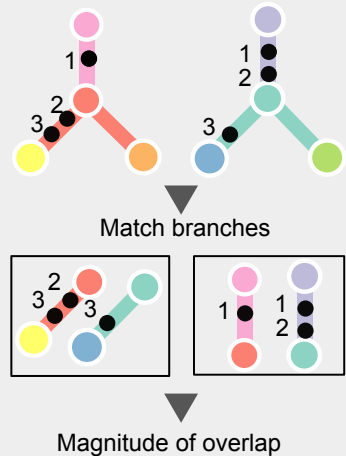
Topology: HIM



Cell positions: cor_{dist}



Branch assignment: $F1_{branches}$



$$Jaccard(c, c') = \frac{c \cup c'}{c \cap c'}$$

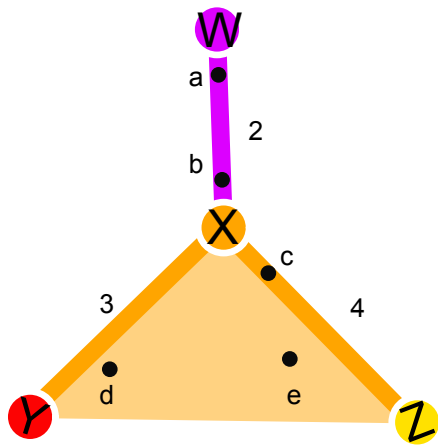
$$Recovery = \frac{1}{|C|} \sum_{c \in C} \max_{c' \in C'} Jaccard(c, c')$$

$$Relevance = \frac{1}{|C'|} \sum_{c' \in C'} \max_{c \in C} Jaccard(c, c')$$

Milestone percentages

region to is_begin

a	W	0.9
a	X	0.1
b	W	0.2
b	X	0.8
c	X	0.8
c	Z	0.2
d	X	0.2
d	Y	0.7
d	Z	0.1
e	X	0.3
e	Y	0.2
e	Z	0.5



Milestone network

from to length

W	X	2
X	Y	3
X	Z	4

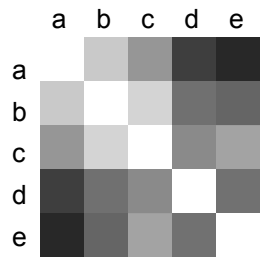
Region of delayed commitment

region to is_begin

XYZ	X	TRUE
XYZ	Y	FALSE
XYZ	Z	FALSE

pairwise geodesic distances

$$\begin{aligned} d(a,b) &= 2 \times (0.9 - 0.2) = 1.4 \\ d(a,c) &= 2 \times 0.9 + 4 \times 0.2 = 2.6 \\ d(b,c) &= 2 \times 0.2 + 4 \times 0.2 = 1.2 \\ d(a,d) &= 2 \times 0.9 + 3 \times 0.7 + 4 \times 0.1 = 4.3 \\ d(b,d) &= 2 \times 0.2 + 3 \times 0.7 + 4 \times 0.1 = 2.9 \\ d(c,d) &= 3 \times (0.7 - 0) + 4 \times (0.2 - 0.1) = 2.5 \\ d(a,e) &= 2 \times 0.9 + 3 \times 0.2 + 4 \times 0.5 = 4.4 \\ d(b,e) &= 2 \times 0.2 + 3 \times 0.2 + 4 \times 0.5 = 3.0 \\ d(c,e) &= 3 \times (0.7 - 0.2) + 4 \times (0.5 - 0.2) = 1.8 \\ d(d,e) &= 3 \times (0.7 - 0.2) + 4 \times (0.5 - 0.1) = 3.1 \end{aligned}$$



Geodesic distance