



|       | {A,B}      |             | {B,C}      |             | {A,C}      |             | {B,A}  |             | {C,B}  |             | {C,A}  |             |
|-------|------------|-------------|------------|-------------|------------|-------------|--------|-------------|--------|-------------|--------|-------------|
|       | $\Pi+$     | $\Pi-$      | $\Pi+$     | $\Pi-$      | $\Pi+$     | $\Pi-$      | $\Pi+$ | $\Pi-$      | $\Pi+$ | $\Pi-$      | $\Pi+$ | $\Pi-$      |
| $t_1$ | <b>1.0</b> | <b>-0.6</b> | <b>1.0</b> | <b>-0.6</b> | 0.6        | <b>-1.0</b> | 0      | <b>-1.0</b> | 0      | <b>-1.0</b> | 0      | <b>-1.0</b> |
| $t_2$ | 0.9        | <b>-0.7</b> | 0.9        | <b>-0.7</b> | 0.7        | <b>-0.9</b> | 0      | <b>-0.9</b> | 0      | <b>-0.9</b> | 0      | <b>-0.9</b> |
| $t_3$ | 0.8        | <b>-0.8</b> | 0.8        | <b>-0.8</b> | 0.8        | <b>-0.8</b> | 0      | <b>-0.8</b> | 0      | <b>-0.8</b> | 0      | <b>-0.8</b> |
| $t_4$ | 0.7        | <b>-0.9</b> | 0.7        | <b>-0.9</b> | 0.9        | <b>-0.7</b> | 0      | <b>-0.9</b> | 0      | <b>-0.9</b> | 0      | <b>-0.9</b> |
| $t_5$ | 0.6        | <b>-1.0</b> | 0.6        | <b>-1.0</b> | <b>1.0</b> | <b>-0.6</b> | 0      | <b>-1.0</b> | 0      | <b>-1.0</b> | 0      | <b>-1.0</b> |

The figure at left shows observed and inferred routing paths for a network of 3 nodes over 5 timesteps. Observed packet transmissions are shown as solid arrows; potential links are shown as dashed arrows. At time  $t_1$ , packets  $A \rightarrow B$  and  $B \rightarrow C$  are observed. At time  $t_5$ , packet  $A \rightarrow C$  is observed. At intermediate times, the inferred path is shown in bold. At  $t_3$ , both paths  $A \rightarrow B \rightarrow C$  and  $A \rightarrow C$  have equal probability.

The table above shows the positive ( $\Pi+$ ) and negative ( $\Pi-$ ) score for each link at each timestep. Values in boldface are direct observations; those in italics are time-dilated scores based on past or future values. Here we assume a time-dilation constant  $s = 0.1$ .