Supporting Information

File S2. Visible transitions between Tajima's genealogies

A Tajima's genealogy g^T corresponds to the pair of coalescent times and a ranked tree shape with n tips (i.e. with no labels but ranked coalescent events). In Figure S2, we show four possible visible transitions. In the first case (Figure S2A), when we compare the number of *children* of the blue circle node on the right tree at time t with the *children* of the red circle node on the left tree, we can conclude that only the green branch could have been selected for pruning. In Figure S2B, comparing the *children* of the blue circle node on the right genealogy to the *children* of the red circle in the left genealogy, we conclude that the two *children* of the red circle are possible pruning locations. In Figures S2C-D, $t_{new} < t_{del}$. This implies that the possible pruning locations will necessarily have heights up to t_{new}. Again, by comparing the *children* of the blue circle node on the right to the *children* of the red circle node on the left, we can asses the possible pruning locations.

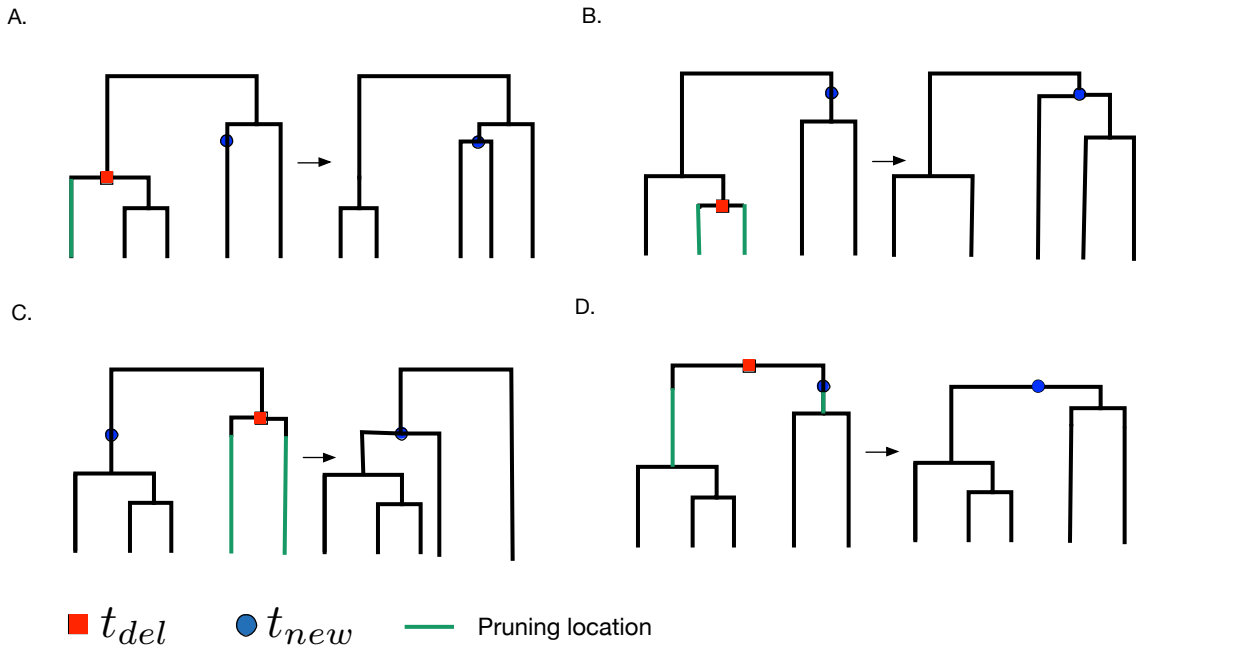

Figure S2: Examples of visible transitions between local Tajima's genealogies. Red circle indicates deleted node at coalescent time t_{del}, blue circle indicates new node at coalescent time t_{new}. Green lines indicates possible pruning locations that could have resulted in such a visible transition.