



Note: With only one SNP, the descendancy chart greatly improves and looks more like a genealogical descendancy chart. However, the trunk of the tree has been divided into two trunks. Each new private SNP will add another trunk anywhere on the descendancy chart.

Note: With just one private SNP added, another MRCA is created and informs researchers that several branches share a common ancestor and are more closely related than other branches. This allows genealogical research to be more focused on lines that are now known to share a more recent MRCA than the original Irwin MRCA.

Note: This also greatly improves the plight of those that currently have no ties to existing branches. In the above hypothetical scenario, 20 submissions with no known branch now belong to a more recent MRCA based on the newly discovered private SNP.

Note: STRs only show common mutations that define clusters of future possible branches. They rarely show how the branches are connected or the age of each branch. On the other hand, private SNPs reveal connections and also are tree structured in nature which will show age of mutations as well.