

## Visualization of large pedigree charts

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This talk will present some innovative ideas that Dr. Saito developed and implemented during a sabbatical leave at BYU in 2000, and a demonstration of some software that Dr. Saito wrote will also be presented.

In displaying genealogical data, most genealogy software mimics standard printed forms: pedigree charts are displayed one page at a time with a limited number of generations per page. Furthermore, most genealogical software was written so as to accommodate the lowest common denominator of existing PCs.

Dr. Saito's project takes advantage of graphics cards that are increasingly commonplace in PCs. This allows a user to examine a large pedigree chart using computer graphics techniques such as panning and zooming. As a pedigree chart is scaled, the fonts scale also so there is a tradeoff between being able to read the genealogical information and being able to see the entire tree.

Another innovation is that the pedigree chart is displayed with the root at the right. This enables the pedigree chart to optionally be viewed like a time line, with branches of the tree scaled so that an individual's birth and death dates dictate the length of the rectangle containing the person's name, and the birth date also determines the location of the left edge of the rectangle.

The software also enables a user to view possible errors in the data, as well as intersections in the pedigree chart.

A second piece of software that Dr. Saito wrote helps to visualize the degree of inbreeding of a person (the "coefficient of consanguinity"). This software uses an innovative quad-tree representation.