pedcsharp

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An utility program to work on pedc files

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August 16, 2005
Version 0.5

Abstract

pedcsharp is an program to allow some editing of a pedc file (a small variant of the pedigree coordinates file as defined in **Pedpack**). It is part of the **Pedfiddler** suite of programs for pedigree drawing.

1 Synopsis

pedcsharp [**options**] *pedcfile*

2 Description

Mainly intended to improve the general apperance of the graph, *pedcsharp* is a program that does simulated annealing to minimize a energy function that accounts for two general forces, expansion and contraction, and two specific forces, edge length and sibship aggregation. Expansion energy drives the nodes apart (a function of the reciprocal of the squared distance among individuals is used); and contraction energy does the opposite (a function of the reciprocal of the distance from the border for each point is used). Length edge and sibship aggregation energies are function of the square length of edges and distance among sibs. Given some weight to these four variables, the algorithm tries to find the state of lowest energy.

Additionally, *pedcsharp* allows for label deletion, label change, and tidying coordinates.

3 Options

{ **-o** | **--output** }***outfile*** Output file (default `stdout`).

{ **-c** | **--cleanlabels** } Delete all labels.

{ **-p** | **--printlables** } Print id-index and label table.

{ **-A** | **--aliases** }***file*** Set labels to aliases. Each row of aliases file contains a pair `id-index label`.

{ **-R** | **--replace** }***file*** Replace labels. Each row of input file contains the pair `oldlabel newlabel`. Since labels in pedc file may not be unique, every instance of `old-label` is replaced.

{ **-e** | **--elbowroom** } Make elbow room.

{ **-E** | **--elbowsize** }***f*** Set size of elbow room, some value in [0, 0.5).

{ **-t** | **--tidy** } Tidy coordinates, i.e., it puts all individuals and marriage nodes located on a grid of equally spaced y-coordinates with individuals at even-numbered levels and marriage nodes on odd-numbered levels.

{ **-a** | **--annealing** } Tries to improve the look of the graph by simulated annealing.

{ **-I** | **--iterations** }***n*** Number of iterations for annealing.

{ **-T** | **--temperature** }***f*** Annealing starting temperature.

{ **-C** | **--cooling** }***f*** Annealing cooling factor, a number in [0, 1).

{ **-w** | **--contraction** }***f*** Weight for contraction energy.

{ **-x** | **--expansion** }***f*** Weight for expansion energy.

{ **-y** | **--edge** }***f*** Weight for edge length.

{ **-z** | **--sibship** }***f*** Weight for sibship aggregation.

{ **-d** | **--default** } Show default values.

{ **-v** | **--version** } Show version.

4 See Also

editpedc(1), *index2pedc*(1), *list2pedc*(1), *pedc2ps*(1), *pedfiddler*(1) and *pfiddler*(1).

5 Version

Version: 0.5 of August 16, 2005

6 Acknowledgment

As part of **Pedfiddler**, *pedcsharp* is based on the publicly available version of **Pedpack** (`http://www.stat.washington.edu`). The closest **Pedpack**-v2.2 counterpart of *pedcsharp* is Charlie Geyer's *tidy*. Bugs and pitfalls in *pedcsharp* are solely the responsibility of J C. Loredo-Osti and Kenneth Morgan.

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