Example pedigrees for pedtodot

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1 Introduction

The `pedtodot` function can be used to create sophisticated pedigree diagrams with `graphviz`. Here I would like to give three examples to illustrate.

2 The data

The data were on mouse, baboon and vulture pedigrees originally from Richard Mott (`http://www.well.ox.ac.uk/rmott/`), Jinliang Wang (`http://www.zsl.org/science/ioz-staff-students/wang,1086,AR.html`) and Franziska Lorcher (`franziska.loercher@ieu.uzh.ch`) but for convenience they are collectively stored in a `R` data file which can loaded as follows.

```
> load("pedigrees.rda")
> head(one,5)
```

```
  pid         id          fid          mid sex aff
1   1 A048005080 H2.3:G2.2(3) H2.3:C5.2(3)   2   2
2   1 A048010273 G5.2:F5.1(2) G5.2:B5.1(4)   2   2
3   1 A048011567 C2.2:B5.1(4) C2.2:F3.1(5)   1   1
4   1 A048013559 C5.2:B5.1(4) C5.2:F3.1(5)   2   2
5   1 A048036063 H2.3:G2.2(3) H2.3:C5.2(3)   1   1
```

```
> head(two,5)
```

```
  pid id fid mid sex aff
1   2  1  F5  M3   2   1
2   2  2  F5  M4   1   1
3   2  3 F24  M1   1   1
4   2  4  F5  M3   2   1
5   2  5  F5  M4   1   1
```

```
> head(three,5)
```

```
  pid id sire dam sex aff
1   3  1    0   0   1   1
2   3  2    0   0   2   1
3   3  3    0   0   1   1
4   3  4    0   0   1   1
5   3  5    0   0   2   1
```

3 Generation of .dot files

This is simply done with the following commands,

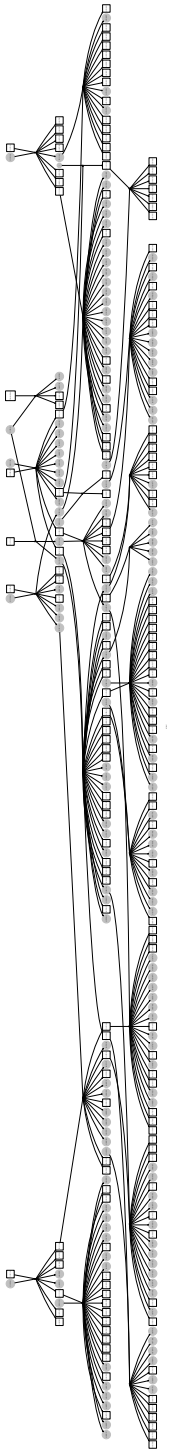
```
> pedtodot(one, dir="forward")
> pedtodot(two, dir="forward")
> pedtodot(three,dir="forward")
```

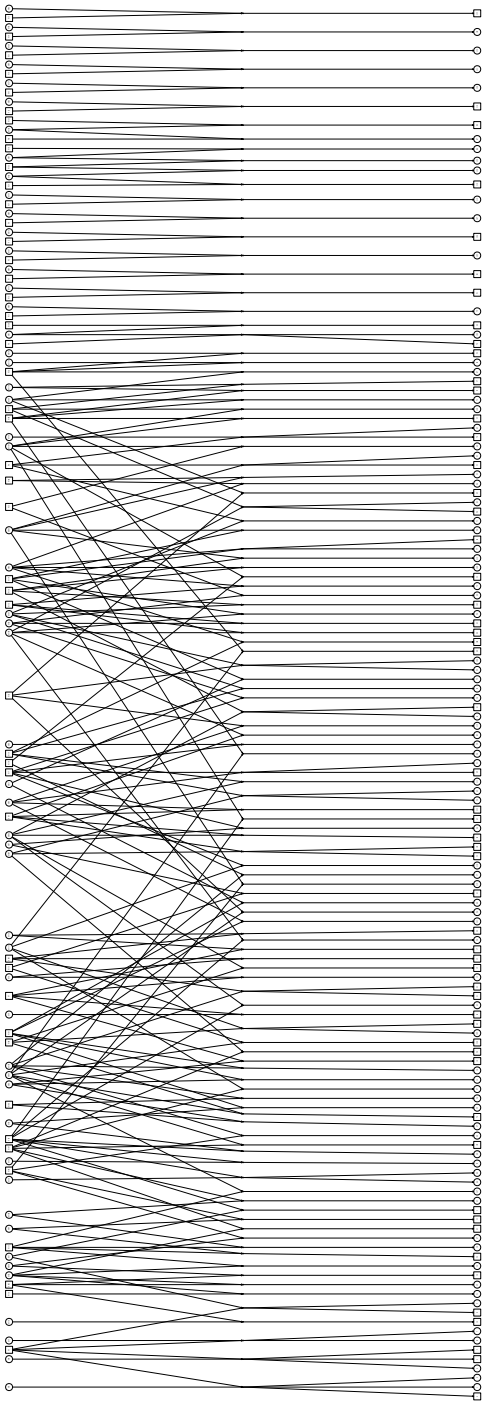
which gives three `graphviz` command files named 1.dot, 2.dot and 3.dot.

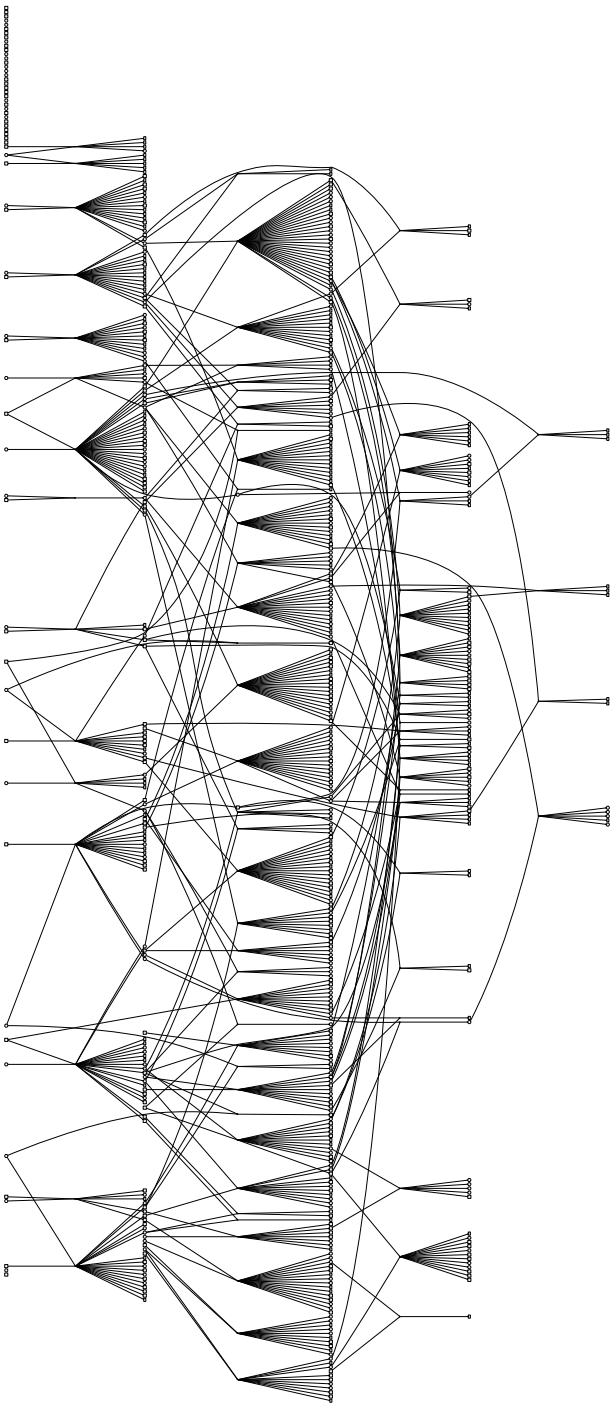
4 Generation of diagrams in portable document format

From these .dot files we can use the utility `gvedit` from `graphviz` to generate pedigree diagrams in portable document format (PDF). Recent versions of `graphviz` do not chop the graphics into multiple packages so the PDFs can be generated directly from the associate dot/fdp programs.

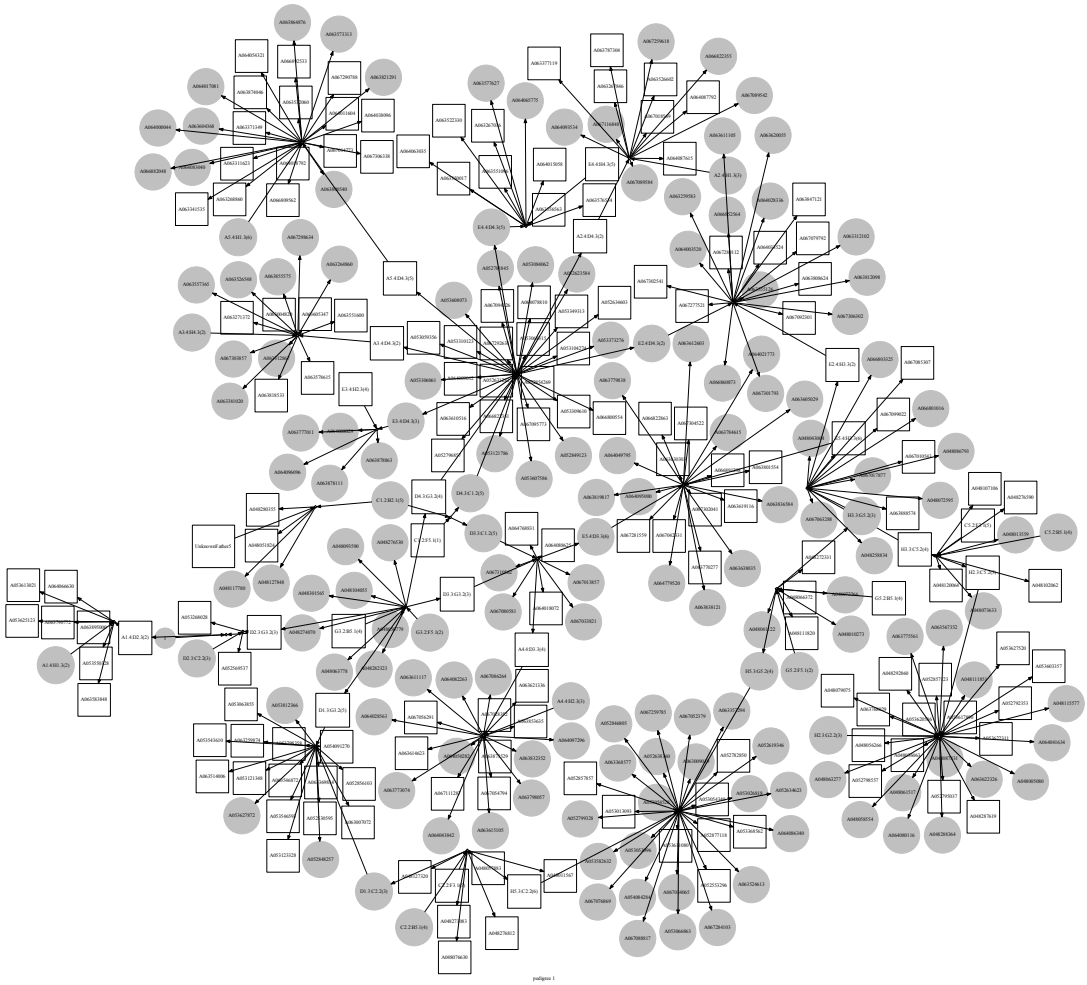
These are either in `dot` format (which are rotated to fit the page and you can zoom in to see the labels)

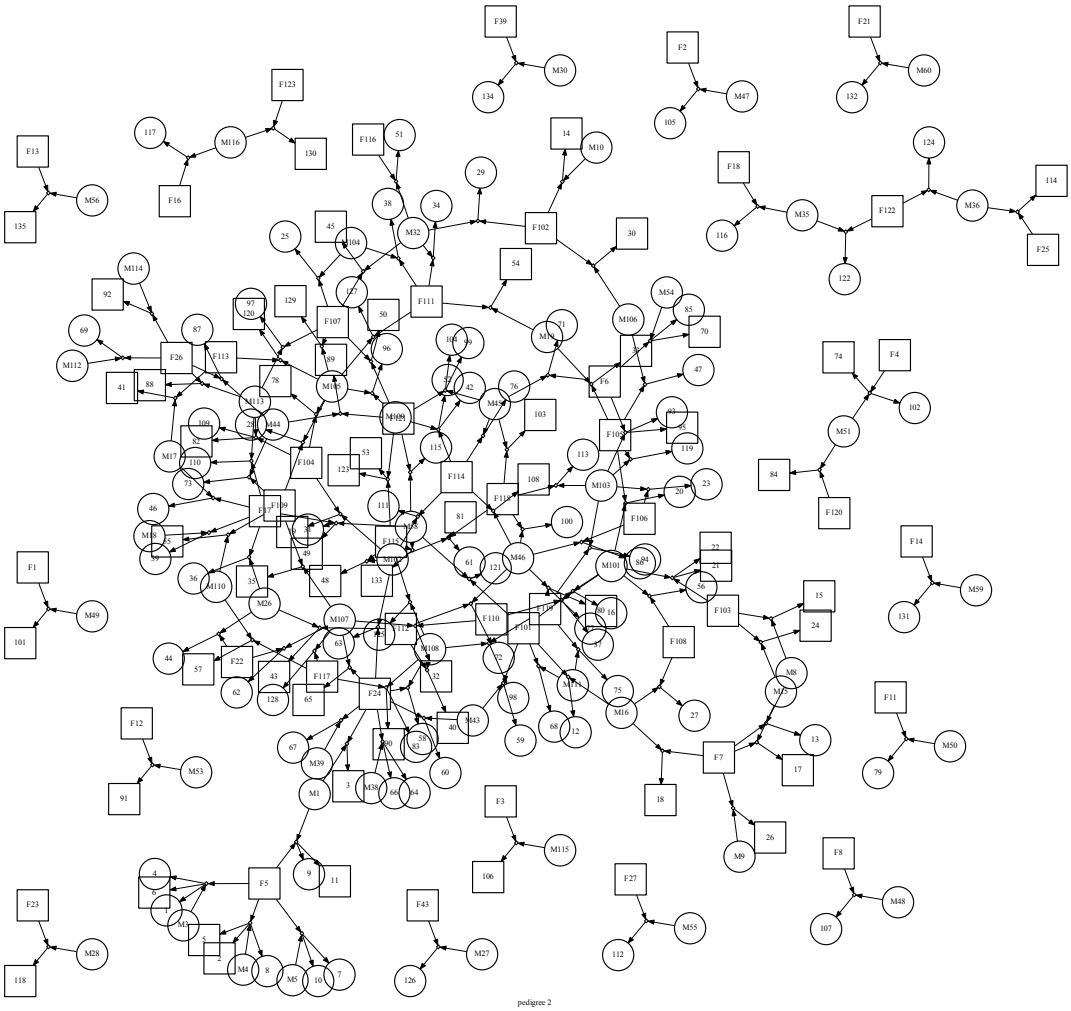




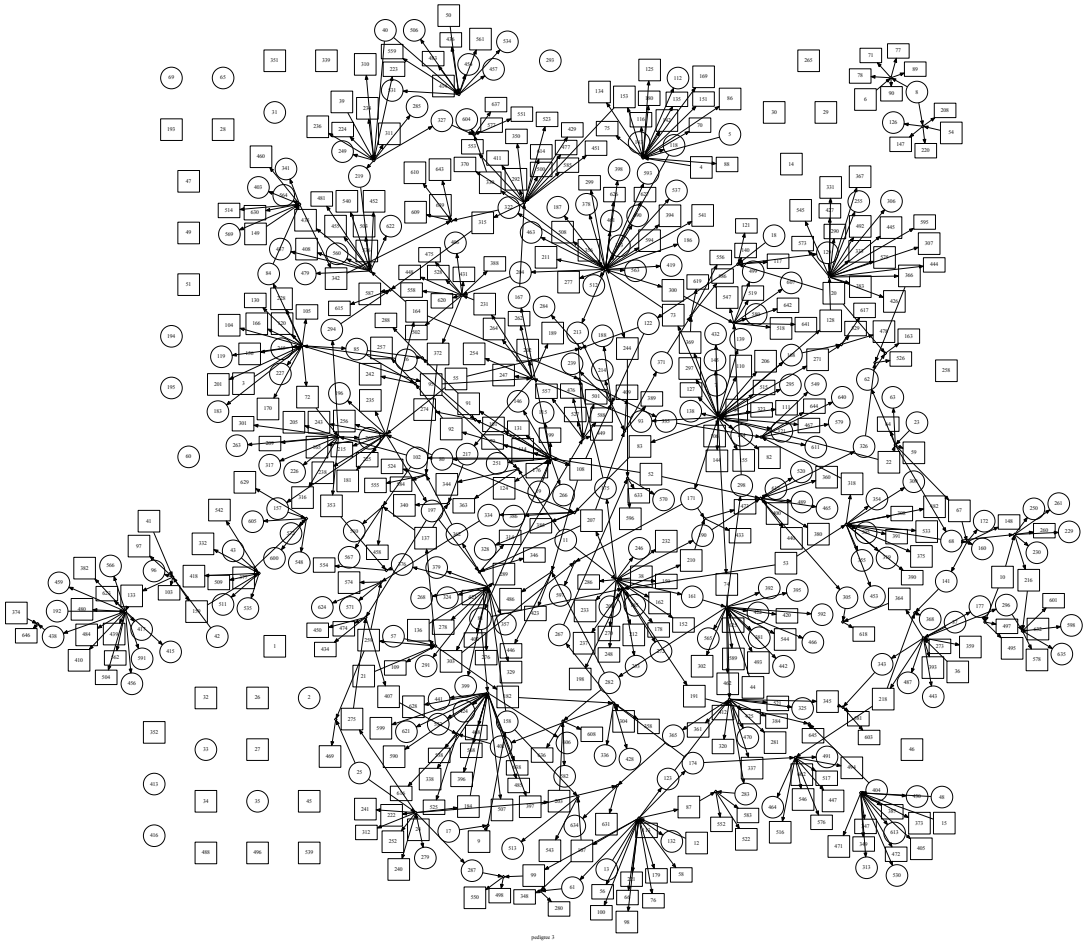


or in `fdp` format (as they are)





pedigree 2



5 Other examples

I have also created examples using data from Genetic Analysis Workshops, e.g. GAW14, but I hope these serve as motivating examples for your own data.

6 Reference

Zhao J.H. Drawing pedigree digrams with R and graphviz. R News 2006, 6(2):38-41, `http://www.r-project.org/doc/Rnews/Rnews_2006-2.pdf`.