The qdotbranch Package
Dotted Branches for qTree

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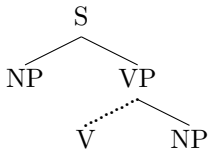
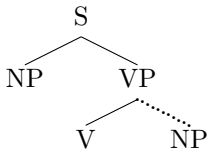
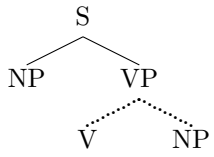
1 Introduction

This small package allows dotted branches in trees drawn with Alexis Dimitriadis' qtree package. It allows trees of the following sort to be produced:

(1) a. 

b. 

c. 

The code is based on a suggestion in section 5.3 of the qtree documentation, and uses code originally written by Chris Heath, which allows dotted lines to be defined in the picture environment.

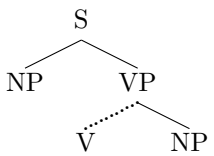
2 Usage

2.1 Basic commands

Dotted lines are only defined for binary branches; if you need have dotted branches on n-ary branches, it is simple enough to adapt the qtree code based on the present package to do so.

The package defines two commands which are to be used within the qtree escape mechanism (which allows low level access to the tree drawing code of qtree.) The command `\DottedBranch` makes the next node(s) dotted. The command `\LineBranch` restores the line drawing to the default. Both commands are called using the qtree escape mechanism, and thus should be called as in (2a). This makes the left branch (default) of the VP node dotted, as in (2b).[1]

(2) a.
```
\Tree [.S [.NP ] [.VP V [.NP ].NP !{\DottedBranch} ].VP
      !{\LineBranch} ].S
```

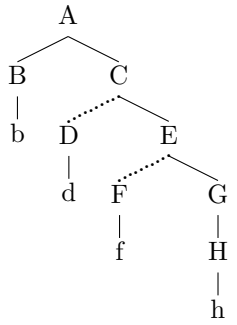
b. 

[1] For prettier looking trees, the actual code that produced the trees in the examples contain judiciously placed `!{\qbalance}` commands. These have been left out of the sample code for clarity.

The command will dot the branches of every node within the scope of the `\DottedBranch` command. In the following tree, the left branches of nodes E and C are dotted, as in (3)

(3) a.
```
\Tree [.A [.B b ] [.C [.D d ] [.E [.F f ] [.G [.H h  ].H  ].G
      !{\DottedBranch} ].E ].C  !{\LineBranch} ].A
```

b.



2.2 Changing which branches are dotted

The default setting is that only the left branch of a node will be dotted. (This was an arbitrary decision based on the use that I originally had for the functionality.) The branches that are dotted can be changed with the following commands:

(4) a. `\rDotBranchtrue` to make right branch dotted.

b. `\rDotBranchfalse` to make left branch dotted.

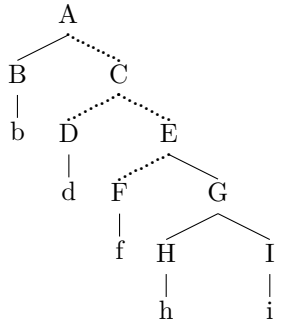
c. `\bothDotBranchtrue` to make both branches dotted.

d. `\bothDotBranchfalse` to unset both branches dotted.

These can be set within a tree so that different nodes can have different types of dotted branches, as in (5).

(5) a.
```
\Tree [.A [.B b ] [.C [.D d ] [.E [.F f ]  [.G [.H h ].H
      [.I i ] ].G !{\DottedBranch} ].E !{\bothDotBranchtrue} ].C
      !{\bothDotBranchfalse\rDotBranchtrue} ].A
```

b.



Note that in this example, `\bothDotBranchfalse` must be called before subsequently setting `\rDotBranchtrue` otherwise both branches of node A would end up dotted.