Tree

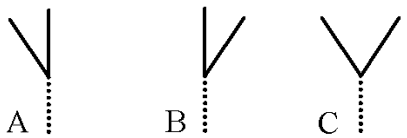
Drabkikker, 2004

Tree ('Boom' in Dutch) is an alternative writing system where words (or sentences) take the shape of stylised trees. The script isn't very practical at all for writing such thing as a book, as its character differs considerably from any 'normal' writing system; personally I think it is more suitable for creating monumental texts on building walls, short proverbs for memorable occasions, and suchlike.

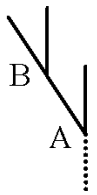
Thus far no special designed language is associated with the script: Tree can be used for any language that uses the Roman alphabet (and versions for other alphabets could easily be devised), although the order of the character shapes is based on letter frequencies in Dutch.

Letters

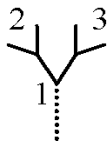
Each letter of the alphabet is represented by a 'mini tree', which consists of a combination of three interconnected branch forks. There are three different fork types: A. left + straight; B: straight + right; and C: left + right:



The dotted line represents the (lower) branch to which the fork is connected. This line is not necessarily vertical: If, for instance, a B-fork is connected to the left branch of an A-fork, the B-fork is tilted to the left, in such a way that the dotted line corresponds with the left branch of the A-fork:



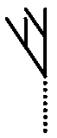
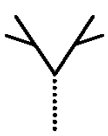
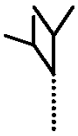
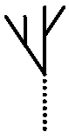
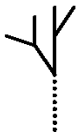
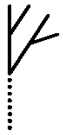
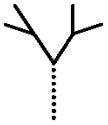
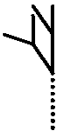
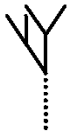
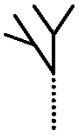
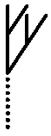
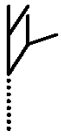
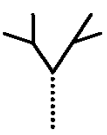
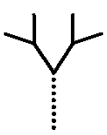
As said, each letter of the alphabet consists of three of these forks: the first one is connected either to a lower mini tree or to the entire tree's trunk (Fork Position 1), the second one to the mini tree's left branch (Fork position 2), and the third one to its right branch (Fork Position 3):



Fork Positions 1, 2, and 3.

The alphabet

Every letter of the alphabet can thus be described as a combination of A's, B's, and C's. Three fork positions and three fork types provide $3^3 = 27$ possible combinations, which is sufficient for the number of letters of our alphabet. These are as follows:

3421  ABA **a**	4312  CAB **b**	4321  ACC **c**	3412  ABB **d**	2134  BAB **e**	4321  CAA **f**	4312  ACB **g**
2134  BAC **h**	1234  BBB **i**	2134  CAC **j**	4321  ACA **k**	3421  ABC **l**	4321  AAC **m**	4312  AAB **n**
4321  AAA **o**	1243  CBA **p**	4321  CCA **q**	2143  BAA **r**	1243  BCA **s**	1243  BBA **t**	1234  BBC **u**
1234  BCB **v**	1234  BCC **w**	1234  CBC **x**	4312  CCB **y**	1234  CBB **z**	4312  CCC	

The 27th sign (CCC) can be reserved for multifunctional purposes. The numbers above the trees will be explained below.

Words

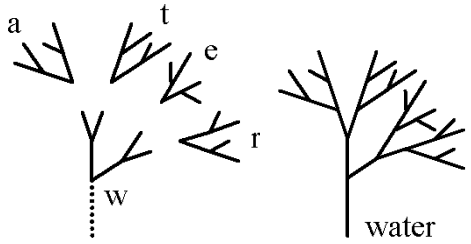
Words are formed by assembling the mini letter trees into bigger trees. This is done, depending on the length of the word, in a number of subsequent levels, which exponentially increase in size. Each level is to be completely 'filled up' with letter trees before continuing the next level, all the way until the letters of the word run out.

The first letter of the word is located on the lowest Level I, connected to the trunk. Subsequent letters are placed on Level II, which is created by the four branches of Level I. Level II thus provides space for four more letters at most. If more letters are needed, these are in turn placed on level III, which contains sixteen free places, provided by the branches of level II; etcetera. For words of typical length no more than three levels will be needed, as these together provide room for 1 + 4 + 16 = 21 letters maximally. For writing short sentences (if one chooses to represent them in one tree) more levels are required; theoretically, the number can be expanded infinitely, but be warned that this causes the final trees to be extremely complex.

Connection order

As for the order in which the letters of a level are to be connected to the one below it, this is indicated by the numbers from 1 to 4 above the trees in the alphabet table (in red). Each letter tree has been assigned a fixed order, based on its shape, in which the letters of a higher level are to be connected to its four branches.

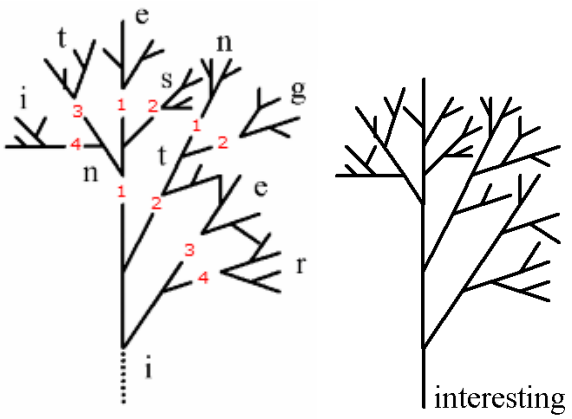
If, for instance, the word *water* is to be written, the ***w*** will be on Level I; the ***a*** will be on Connection Position 1 of Level II, the ***t*** on Connection Position 2, the ***e*** on Connection Position 3, and the r on Connection Position 4:



(As can be seen, sometimes it is necessary to slightly change the angle and length of the branches to avoid collisions: this is perfectly acceptable, since only the place (i.e. on which level) and the direction (left or right) of the forks are important: see section *Aesthetics* for more information on tree shaping.)

The higher the level, the more complicated the connection order becomes. The standard rule is as follows: *The first letter of Level x is placed on Connection Position 1 of the letter which in its turn is connected to Connection Position 1 of the level below x.* The second to fourth letters are placed on Connection Position 2 to 4 of that same letter; the following four

letters are placed on Connection Positions 1 to 4 of the letter which is on Connection Position 2 of the lower level, etcetera. For example the word *interesting*:



It is obvious how easily one loses track of which letter is which; therefore it is highly recommended to make a draft of the desired tree, provided with the necessary notes, before starting the final drawing.

Sentences

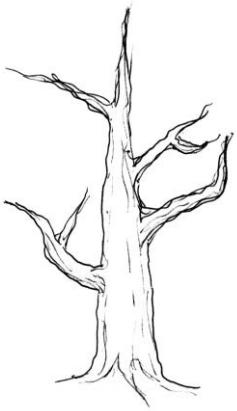
For writing sentences there are two possibilities: assigning each word to a separate tree, or putting a whole sentence into one tree. The last option isn't advisable in the case of very long sentences, as this will make the final tree extremely complex. The method is, however, well suited for writing short proverbs. The 27th sign (CCC) can be used, if desired, as a space or punctuation mark.

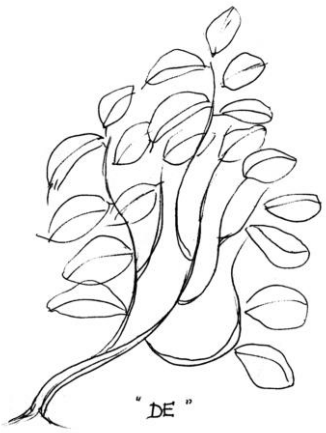
The first method uses a special writing direction, which is somewhat peculiar. Writing is started at the bottom of the page (or wall, or whatever), and runs up in horizontal lines. The word order within these lines runs from the centre of the line towards the edges: the first word stands in the middle; the second word is placed on the left of it; the third word is again placed on the right of the first word, and so on. A new sentence is always started on a new (higher) line. The reading order of a typical piece of text thus can be as follows:

20 18 16 15 17 19 21
14 12 11 13
10 8 6 4 2 1 3 5 7 9

Aesthetics

Thus far only the global structure of the trees has been explained. The drawings as shown here are merely crude sketches of what can be far more elaborately shaped trees. There are no rules which apply to the length of the branches, nor to the angle they make – they don't even necessarily have to be straight: Only the position and the direction of the branch forks matter. Some examples are given below.




" DE "