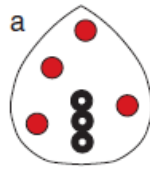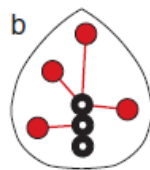We begin following it at the stage when the vein system consists of three nodes (black disks with white centers) and there are four auxin sources (red disks) (a).

First, each source is associated with the vein node that is closest to it (b, red lines);
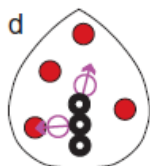

This establishes the set of sources that influences each node. The normalized vectors from each vein node to each source that influences it are then found (c, black arrows).
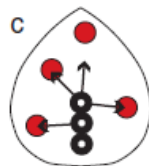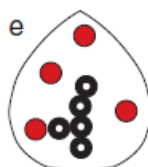

These vectors are added and their sum normalized again (d, violet arrows)
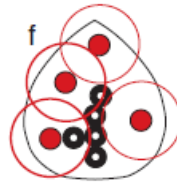
Providing the basis for locating new vein nodes (d, violet circles).

The new nodes are incorporated into the venation, in this case extending the midvein and initiating a lateral secondary vein (e).
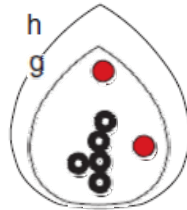
The neighborhoods of sources (red circles) are now tested for the inclusion of (the centers of) vein nodes (f).


The neighborhoods of the two leftmost sources have been penetrated by the veins, as indicated by the bolder representation of the corresponding circles. The affected sources are removed from the set of sources (g).
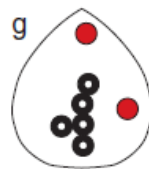

The leaf then grows (h); In this example we have assumed marginal growth, so the existing sources and vein nodes are not moved.


The candidate new sources are now randomly placed within the expanded blade (i).
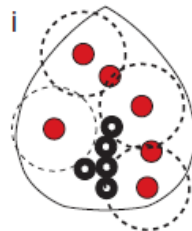
Their neighborhoods, indicated by dashed circles, are checked for the inclusion of (the centers of) previously placed vein nodes and sources. The only candidate source with an empty neighborhood is incorporated into the set of sources (j)
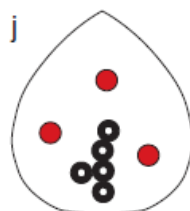
and the vein nodes closest to these sources are identified (k).
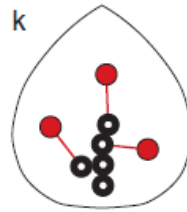
This is the beginning of the next iteration of the algorithm execution, with stages (j) and (k) corresponding to the stages (a) and (b) from the previous iteration.