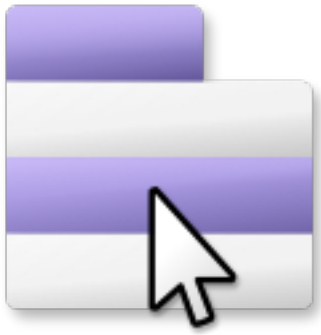
Save tree

Version 1.0.0, by Giorgio Bianchini



Description: Saves the tree file.

Module type: MenuAction

Module ID: `a8f25c08-4935-4fd5-80ea-1d29ada66f1e`

This module is used to save the currently opened tree to a file on disk. The tree can be saved in Newick, NEXUS or Binary format.

Further information

When saving the tree, the first choice that needs to be done is *which* tree to save. There are three possible options:

1. The original tree(s) that were loaded from a file that was opened in TreeViewer.
2. The transformed tree that was produced by the Transformer module (e.g. a consensus tree).
3. The final transformed tree that was produced after all the Further transformation modules acted on the transformed tree.

If the tree(s) is/are saved in Newick or Newick-with-attributes format, only the tree itself is saved, without including any information about the modules that are currently active in the plot. This means that if the file is later opened again in TreeViewer, all information about the active modules will be lost.

Instead, if the file is saved in NEXUS or Binary format, all the information about the modules can be kept, if desired. This means that the tree can be opened again in TreeViewer to obtain exactly the same plot. Other software opening the file should ignore the information about TreeViewer modules; thus, including information about the active modules should not cause compatibility issues with other programs. The attachments that have been added to the tree can be included in the file as well; this makes it possible to obtain a portable file that contains all the information required to reliably reproduce the plot. Note however that users opening the file need to have the relevant modules installed.

If the tree being exported is the original tree, the state of all the modules that are currently enabled is saved. If the transformed tree is being exported, the state of the Transformer module is not exported. If the final transformed tree is saved, only the state of the Coordinates and Plot action modules is saved.

Furthermore, if the file includes information about the modules or attachments, it can be signed. This adds a layer of security, by ensuring that the source code contained in the module information (e.g. in attribute formatters) has not been tampered with. The files are signed with the user’s unique private key.

When a user opens a file created by someone else that contains source code, they will be asked if they trust the origin of the file. The source code is only loaded and compiled if they

respond affirmatively. In addition, if the file has been signed, the public key of the signer can be added to the users key store; this causes subsequent files that have been signed with the same private key (i.e. by the same user) to be opened automatically, without asking for confirmation (and thus providing a more streamlined interface when repeatedly opening files coming from the same collaborators).