

## TreeAge Pro 2009 Release 1.0 Changes from v2008

TreeAge Pro 2009 Release 1.0.....	1
Multivariate Normal Distribution .....	1
Tree() function syntax .....	1
Insert Branch / Node Options.....	2
TreeAgeProLib Object Interface / Tree Workbook [Excel module] .....	2
TreeObj – Sensitivity Analysis .....	2
NodeObj – Node Outline Property.....	2
Cost-Effectiveness Acceptability Curve Frontier [Healthcare module] .....	3
Net Benefits vs. WTP [Healthcare module].....	3
Two-Way C/E Sensitivity Analysis Isocontours [Healthcare module].....	3

**NOTE:** TreeAge Pro 2009 will be generally available on *15 January 2009*.

### ***Multivariate Normal Distribution***

A new distribution type allows sampling from multiple correlated normal distributions. The correlated normal distributions are created within a single Multivariate Normal Distribution by providing a correlations / covariances via a TreeAge table. Samples can then be drawn from the individual correlated normal distributions contained within the Multivariate Normal Distribution.

For details on setting up and sampling from a Multivariate Normal Distribution, refer to Tech Note #16 at TreeAge support website. The Tech Note includes instructions and an example.

- <http://www.treeage.com/files/pdfs/pro2009/technote16.pdf>

### ***Tree() function syntax***

The Tree() syntax now allows visible "subsidiary" trees to be referenced in a master tree calculation and left "connected" to the last master tree node that called it. Enables debugging of a subsidiary tree via direct analysis commands (e.g., allows subsidiary tree to be rolled back based on variable definitions inherited from the calling master tree node/path). To help visualize the temporary connection, navigation is enabled from the root of the subsidiary tree back to the calling master node using the left arrow key, and the Variable Definitions window shows definitions that can be inherited from the currently connected master tree node/path.

## ***Insert Branch / Node Options***

A new submenu offers more control over the operation of inserting a branch and node. It is now possible to: a) specify the type of node to be created in the specified direction; or b) to do an "in-place" insert, which creates a new node of the same type as the currently selected node and also works better at the root of a clone master or clone copy.

## ***TreeAgeProLib Object Interface / Tree Workbook [Excel module]***

The TreeAgeProLib Object Interface has been enhanced to enable Sensitivity Analysis and to provide access to the Node Outline.

### **TreeObj – Sensitivity Analysis**

The TreeObj object now includes methods for One-Way and Two-Way Sensitivity Analysis. The new object methods are described in detail in the TreeAge Object Interface online documentation.

- <http://server.treeage.com/ObjDocs/TP/TreeObj/Sensitivity.php3>
- <http://server.treeage.com/ObjDocs/TP/TreeObj/SensitivityTwo.php3>

These sensitivity analyses were also added as options in the Tree Workbook.

### **NodeObj – Node Outline Property**

The NodeObj was enhanced to allow read-only access to a node's Node Outline property, as demonstrated below.

```
Set nodeX = treeX.GetNodeObj
Debug.Print nodeX.outline(" ")
Debug.Print nodeX.outline("<-")
Debug.Print nodeX.outline("r")
```

In the first call, the outline text printed is the same as provided in the Node Outline pane of the TreeAge Pro window; the second prints only the text of a bound note at the node (if any); the third prints only the Markov state rewards (up to 9\*3 expressions separated by "/"). The single parameter passed in the call should either be an empty string, or match one of the node outline syntax "keys" described in Chapter 21 of the user's manual.

## ***Cost-Effectiveness Acceptability Curve Frontier [Healthcare module]***

This is a new cost-effectiveness Monte Carlo simulation graphing option. It shows varying "acceptability" of the possibly changing optimal strategy, as the CE threshold (e.g., willingness-to-pay/"WTP", or weight on effect) is increased.

## ***Net Benefits vs. WTP [Healthcare module]***

The Net Benefits vs. WTP cost-effectiveness Monte Carlo simulation graph has been updated to show threshold information. An option was added to convert the graph to a strategy graph display, which clearly identifies the optimal strategy for varying WTP.

## ***Two-Way C/E Sensitivity Analysis Isocontours [Healthcare module]***

Under C/E calculations, the 2-way region graph has an option (via Cancel button in Net Benefits dialog) to calculate Costs and Effects separately, dividing visible regions based on cost only. If two strategies, users can then use the Graph Options to add isocontour lines to show ICER thresholds.

The new version corrects the problem of extra lines being drawn when "asymptotes" exist (i.e., intervals containing changes in dominance and points where ICER is negative infinity/undefined/positive infinity).

The new version also places thresholds more accurately and correctly draws negative ICER isocontours where dominance exists. Temporary Net Monetary Benefits calculations are used to locate thresholds.

\*\*\*\*\*