• You can automatically grow some parts of the tree but manually specify splits for other branches or nodes.
• You can define specific splits and select alternative important predictors other than those chosen automatically by the program.
• You can quickly copy trees into new projects to explore alternative splits and methods for growing branches.
• You can save entire trees (projects) for later use.

**Building Trees Interactively**

Building trees interactively has proven popular in applied research, and data exploration is based on experts’ knowledge about the domain or area under investigation, and relies on interactive choices (for how to grow the tree) by such experts to arrive at “good” (valid) models for prediction or predictive classification. In other words, instead of building trees automatically, using sophisticated algorithms for choosing good predictors and splits (for growing the branches of the tree), a user may want to determine manually which variables to include in the tree and how to split those variables to create the branches of the tree. This enables the user to experiment with different variables and scenarios and ideally to derive a better understanding of the phenomenon under investigation by combining her or his expertise with the analytic capabilities and options for building the tree (see also the next section).

**Combining Techniques**

In practice, it may often be most useful to combine the automatic methods for building trees with educated guesses and domain-specific expertise. You may want to grow some portions of the tree using automatic methods and refine and modify the choices made by the program (for how to grow the branches of the tree) based on your expertise. Another common situation in which this type of combination is called for is when some variables that are chosen automatically for some splits are not easily observable because they cannot be measured reliably or economically (i.e., obtaining such measurements would be too expensive). For example, suppose the automatic analysis at some point selects a variable Income as a good predictor for the next split; however, you may not be able to obtain reliable data on income from the new sample to which you want to apply the results of the current analysis (e.g., for predicting some behavior of interest, such as whether or not the person will purchase something from your catalog). In this case, you may want to select a surrogate variable, i.e., a variable that you can observe easily and that is likely related or similar to variable Income (with respect to its predictive power; for example, a variable Number of years of education may be related to Income and have similar predictive power; while most people are reluctant to reveal their level of income, they are more likely to report their level of education, and hence, this latter variable is more easily measured).

The I-Trees module provides a large number of options to enable users to interactively determine all aspects of the tree-building process. You can select the variables to use for each split (branch) from a list of suggested variables, determine how and where to split a variable, interactively grow the tree branch by branch or level by level, grow the entire tree automatically, delete (“prune back”) individual branches of trees, and more. All of these