

Forest Renewal BC Activity Centre

Detailed Installation Instructions (IBM-PC Version)

1. Insert the supplied CD-ROM in the CD caddy.
2. Install the program by running SETUP.EXE on the CD-ROM.
3. To run the program, click on the Win95 Start button and choose Programs/Forest Renewal BC Activity Centre/Squeeze Play or Programs/Forest Renewal BC Activity Centre/VRForest.

Note: To adjust the volume at the Squeeze Play, either use the Windows volume control on the task bar, or access the thumb wheel volume control on the speaker wire attached to the speakers.

Squeeze Play

Squeeze Play was developed under direction of Mike Hogan at Forest Renewal British Columbia.

Game Play

In Squeeze Play you are presented with the objective of getting as much value as possible from our forests within the playing time of the game: three minutes. (Hence the name SQUEEZE.) At the top of the screen, logs are arriving from the forest. The player must off-load the logs to a mill, or directly to a ship waiting at the bottom of the screen. The simplest way to play the game is to load the logs on the ship until it departs. However you will not receive a high score for this strategy, as lumber and discrete wood products are much more valuable. To improve the game score, you must deliver finished lumber to the ship, or better still, fulfill orders for trucks waiting at the right side of the screen. These trucks go away, and return with added-value products for off-loading to the ship. The high-scoring player will ship as much value as possible.

At the end of the game, your score is evaluated. If you receive a low score, you are encouraged to improve it.

Educational Objectives

Squeeze Play demonstrates the challenges our society faces in maximizing value from our forest resources.

Requirements

Squeeze Play runs on a Pentium 166 or greater in 8-bit color, with a minimum of 32 Megs memory.

The Virtual Forest

The concept for Virtual Forest originated with Mike Hogan at Forest Renewal British Columbia. He envisioned a program that would explore the dynamics of a BC forest, and forest management practices. Much of the debate about forest use in BC is against a background of competing interests, conflicting goals, and unscientific speculation. A scientifically accurate simulation would model the ecology of a forest, including the impact of forest management practices. Users of the program would be able to test their own theories and ideas about how a forest should be managed. They would see the outcome of their management practices and goals. This clears the air for a more informed debate about forest resource usage.

History

The Virtual Forest project was begun in the fall of 1997. Dr. Hamish Kimmins from the Faculty of Forestry at UBC, and a world-renowned specialist in forest ecology, was contracted to act as an adviser on the project to ensure its scientific credibility.

The Interior Douglas-fir zone, an ecological zone of British Columbia, was chosen as the model for the Virtual Forest because of its relative simplicity and because some of its more interesting dynamics, such as its fire ecology. There is also good scientific data available on this ecozone. Dr. Brad Seely from the UBC forestry department, and a specialist in the Interior Douglas-fir zone, was engaged to help Rage Pictures develop the algorithms that underlay the game.

Although simulations are by their nature imperfect models of forests, such phenomenon as growth rate of Douglas-fir, Trembling Aspen, and Lodgepole Pine, their interactions, animal population dynamics, insect infestation frequency and fire frequency are encoded in the simulation engine underlying the Virtual Forest. Many other attributes were modeled and exposed in a help system embedded in the simulation.

The simulation is continuously running. That is, after it is started, it is driven by an internal set of dynamics that model the ecology of a forest over time, from an stand-initiating disturbance to its climax stage, recursively, unendingly. Although it is a stand-level simulation, and provides a mechanism for studying trees on an individual level, it contains

enough generalization to act as a tool for exploring an entire landscape-level forest.

The game has meters that allow the user to see the effect of their management practices in terms of biodiversity and economic benefit. It has a budget-limiting factor. If the player does not provide the community with revenue from the forest, then the player will not be able to use a wide variety of forest management tools, such as wildlife control, fertilization, fire control, and many other tools.

Virtual Forest is an extremely intelligent simulation because of its object-oriented programming structure. For example, users can explore the behaviour of the forest if they follow a strict forest fire suppression strategy. (The forest will become more susceptible to major forest fires that wipe out the entire stand.) A better strategy is to prevent fuel build-up by containing grass fires with the fire containment tool. These issues are discussed in the built-in help system.

Educational Objectives

The Virtual Forest is a tool valuable to educators in discussions or exercises that explore forest ecology and the effect of forest management practices. It is not meant to be a game, and does not have a “narrative.” It is best used in a situation where a leader or teacher sets the educational goals, such as managing for biodiversity or maximum social benefit.

Requirements

Virtual Forest runs on a Pentium 166 or greater in 8-bit color, with a minimum of 32 Megs memory. It requires 50 Megs of hard drive space.