

SYLVIEW: A VISUALIZATION SYSTEM FOR FOREST MANAGEMENT

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ABSTRACT

In the field of forestry, the output of forest growth models provide a wealth of detailed information that can often be difficult to analyze and perceive due to presentation either as plain text summary tables or static stand visualizations. This thesis describes the design and implementation of a cross-platform computer application for dynamic and interactive forest stand visualization, titled Sylview. Sylview allows users to visualize many aspects of forest stands from overall stand makeup to wood quality characteristics of individual trees. From these visualizations the user can infer the effects of different stand management practices. A primary focus in the design of the Sylview is usability. Sylview features a simple, interactive interface and intuitive visualizations focusing on legibility. As part of the development of Sylview a new data structure was designed for the efficient retrieval of required data, which will also be applied to future growth model development.