

Managing Timberland Using Digital Aerial Imagery

Category: Forest Management

Authors: Jeff DeWitt, Pacific Meridian Resources, Atlanta, GA
Wilson Edwards, Bowater Corporation, Calhoun, GA
Christine Jenkins, Pacific Meridian Resources, Atlanta, GA
Kass Green, Pacific Meridian Resources, Atlanta, GA

The Bowater Corporation in Calhoun, Tennessee manages approximately 496,000 acres of timberland in the southern Appalachian region. Traditionally, the foresters have relied on ground knowledge, hard-copy records, and aerial photographs to manage this extensive land base. Bowater contracted with Pacific Meridian Resources to convert the existing hands-on land management system to a digital GIS database. In cooperation with Emerge, Pacific Meridian acquired 1-meter digital imagery of the Bowater land base. GIS technicians delineated stand boundaries with heads-up digitizing using the imagery as a backdrop. This process eliminated a major step in the data capture process: the need to digitize stands from a map derived from aerial photography. Stands were labeled as to species, origin, and thinning condition. Base map layers for transportation, hydrology, hypsography and political boundary layers were derived from USGS 1:24,000 and 1:100,000 DRG's. A simple automated mapping tool was developed in ArcView to provide Bowater's foresters easy access to the imagery and GIS data and to facilitate printing of stand maps.

Contact: Jeff DeWitt

Address Pacific Meridian Resources
4501 Circle 75 Parkway
Suite F-6320
Atlanta, GA 30339

Phone: (770) 953-4143

Fax: (770) 953-1165

Email: jdewitt@pacificmeridian.com