Forest Products Modernization Innovation Underway

Improvements in Hardware and Software for Cruising Timber

Overview

Software: Starting in 2013, the U.S. Department of Agriculture, Forest Service reengineered the National Cruise System software to take advantage of new technology and to mitigate problems with data corruption. The Forest Service originally released the National Cruise System in 2003 to collect and process cruise data. The new software works with all approved cruise methods. It is fully customizable across all Forest Service regions to account for differing timber types and measurement techniques. The reengineering focused on data integrity and improving efficiency in data collection.

Hardware: The Forest Service lagged behind private industry in the use of data recorders. Development targeted current data recorder devices running Windows Mobile while providing for easy adaption to future devices running Windows 10 and Android operating systems. To gain ground in the new technology, the Forest Service is encouraging its regional staff to purchase and use data recorders with the new software

Ingredients for Success

To ensure the success of the program, the Forest Service has:

- Used the National Measurements Steering Team to garner support for the development of the new software.

- Operated the Forest Management Service Center (FMSC) that worked closely with field personnel to improve the last version while keeping popular features. Testers were recruited from every region.

- Given users a platform to report bugs, suggest changes, and request new features from developers.

- Made software training, both virtual and on-site, readily available to promote adaption of the new version of cruising software.

- Purchased additional data recorders as part of the modernization effort.

Forest Service employee using a global position systems unit. USDA Forest Service photo.

Lessons Learned

Efficiency: Using data recorders has been shown to increase the efficiency of timber cruising by 20 to 30 percent overall.

Support from Management: Receiving strong support from the regional and forest-level offices, for both purchasing new equipment and providing opportunities for training, has resulted in high data recorder usage. In 2014, 60 percent of all Forest Service field crews were using data recorders (compared to 100 percent of private industry crews using field data recorders); in 2016, 77 percent of all Forest Service field crews were using data recorders. The Washington Office supports full use of digital technology, whenever possible, by fiscal year 2019.

Training: Providing training (on-site or virtual) for the software is essential for data recorders to be accepted by the field crews.

Responsive Help Desk Support: Offering responsive help desk support for the software requires layers of support to minimize downtime for field crews. This starts with local check cruisers for minor data issues, working up to the regional measurement specialist, and finally to the FMSC.

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