

Stephen F. Austin State University

SFA ScholarWorks

Faculty Publications

Forestry

6-2014

Comparing remotely sensed Pictometry® Web-based height estimates with in situ clinometer and laser range finder height estimates (Abstract)

Daniel R. Unger

I-Kuai Hung

David L. Kulhavy

Follow this and additional works at: <https://scholarworks.sfasu.edu/forestry>

[Tell us](#) how this article helped you.

Repository Citation

Unger, Daniel R.; Hung, I-Kuai; and Kulhavy, David L., "Comparing remotely sensed Pictometry® Web-based height estimates with in situ clinometer and laser range finder height estimates (Abstract)" (2014).

Faculty Publications. 270.

<https://scholarworks.sfasu.edu/forestry/270>

This Article is brought to you for free and open access by the Forestry at SFA ScholarWorks. It has been accepted for inclusion in Faculty Publications by an authorized administrator of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.

Comparing remotely sensed Pictometry® Web-based height estimates with *in situ* clinometer and laser range finder height estimates

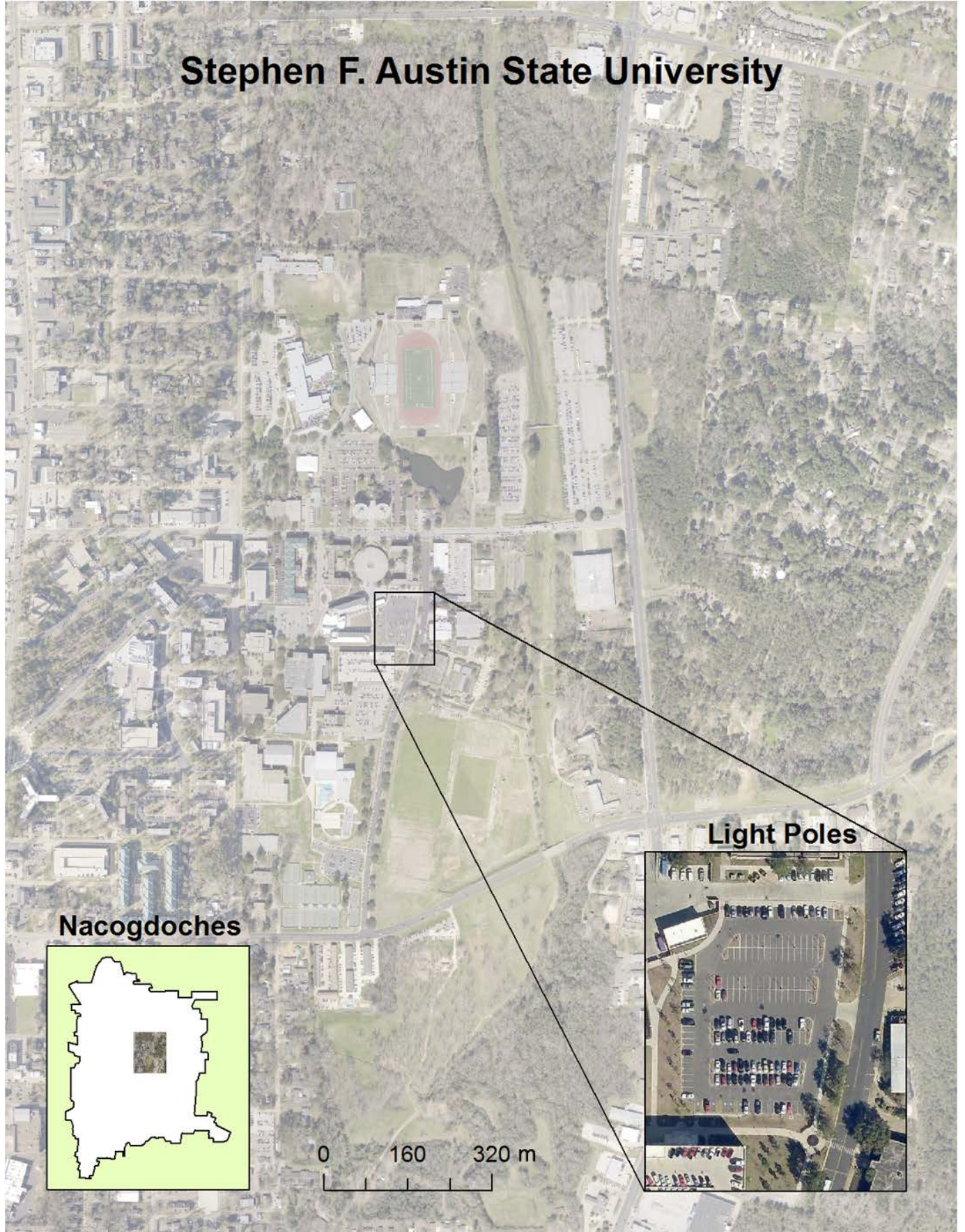
Daniel R. Unger ; I-Kuai Hung ; David L. Kulhavy

J. Appl. Remote Sens. 8(1), 083590 (Jul 17, 2014). doi:10.1117/1.JRS.8.083590

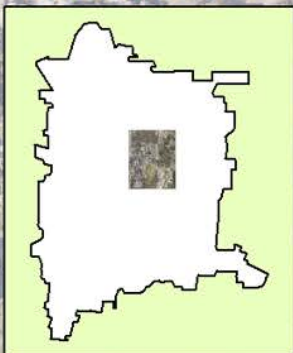
History: Received November 20, 2013; Revised May 19, 2014; Accepted June 27, 2014

Abstract. Heights of 30 light poles were measured with a telescopic height pole. Clinometer and laser range finder *in situ* estimated light pole height was compared to Pictometry® estimated light pole height using hyperspatial 4-in. (10.2-cm) multispectral imagery within a Web-based interface. Average percent agreement between light pole height and clinometer and laser range finder estimated that light pole height ranged from 3.97% to 3.79% for clinometer and laser range finder estimated light pole height, respectively. Average percent agreement between light pole height and Pictometry® estimated light pole height at image magnification factors of 100%, 125%, 150%, 200%, and 300% magnification ranged from 1.77% to 2.39%. Root-mean-square error (RMSE) between light pole height and clinometer and laser range finder estimated that light pole height ranged from 0.22 to 0.20 m for clinometer and laser range finder estimated light pole height, respectively. RMSE between light pole height and Pictometry® estimated light pole height ranged from 0.10 to 0.14 m. An analysis of variance between absolute errors of light pole height estimate by different techniques indicated that Pictometry® was significantly more accurate than both clinometer and laser range finder light pole height estimates.

Stephen F. Austin State University



Nacogdoches



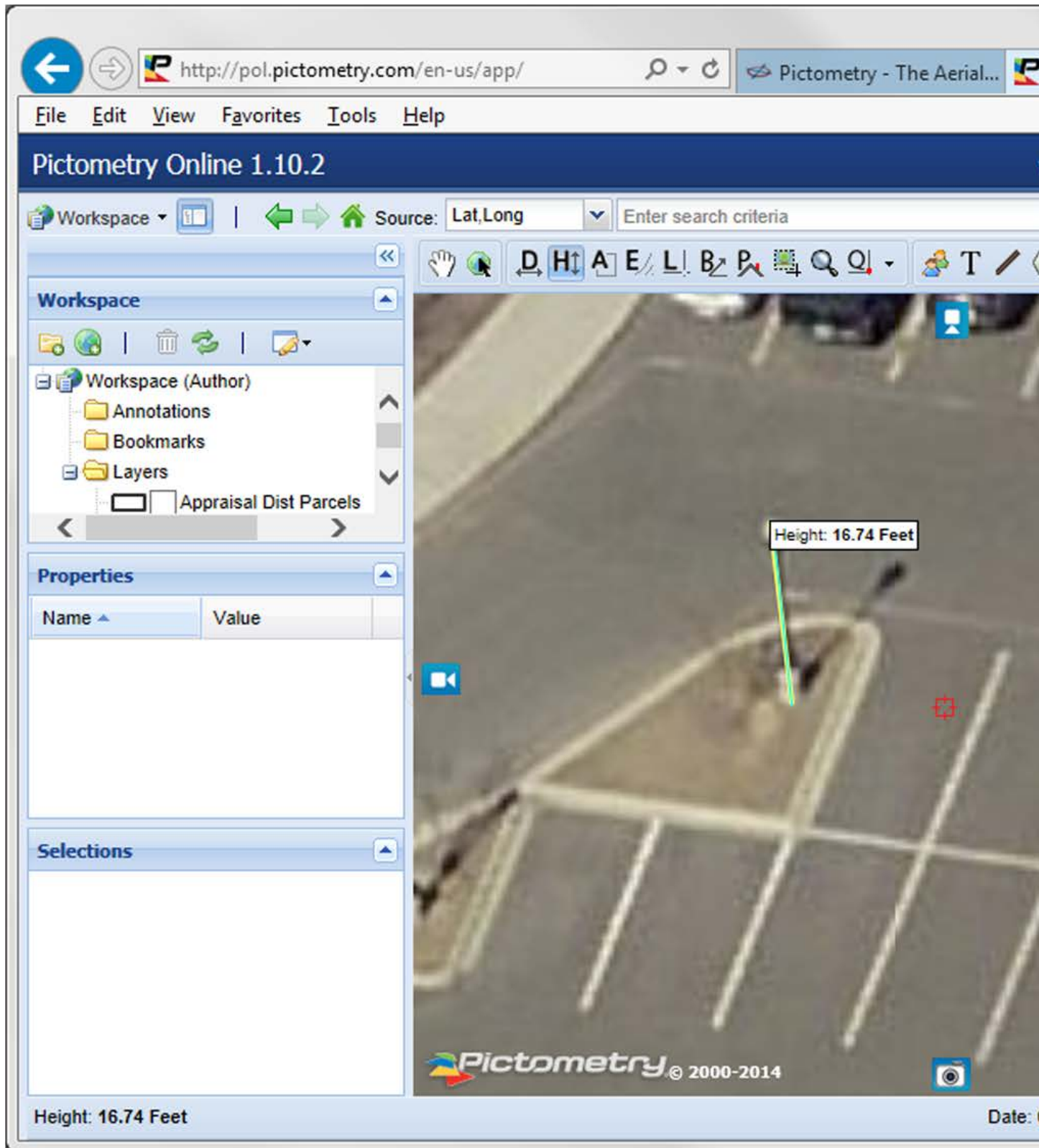
Light Poles



0 160 320 m







Figures in this Article

Topics

Laser range finders ; Interfaces

Citation

[Daniel R. Unger](#) ; [I-Kuai Hung](#) and [David L. Kulhavy](#)

"Comparing remotely sensed Pictometry® Web-based height estimates with *in situ* clinometer and laser range finder height estimates", *J. Appl. Remote Sens.* 8(1), 083590 (Jul 17, 2014). ;

<http://dx.doi.org/10.1117/1.JRS.8.083590>