

Could i-Tree Software Have Helped the Lorax?

Jan Case
Scott Beckett
Jacksonville State University
Joint AMS/MAA 2010



Our Story Begins

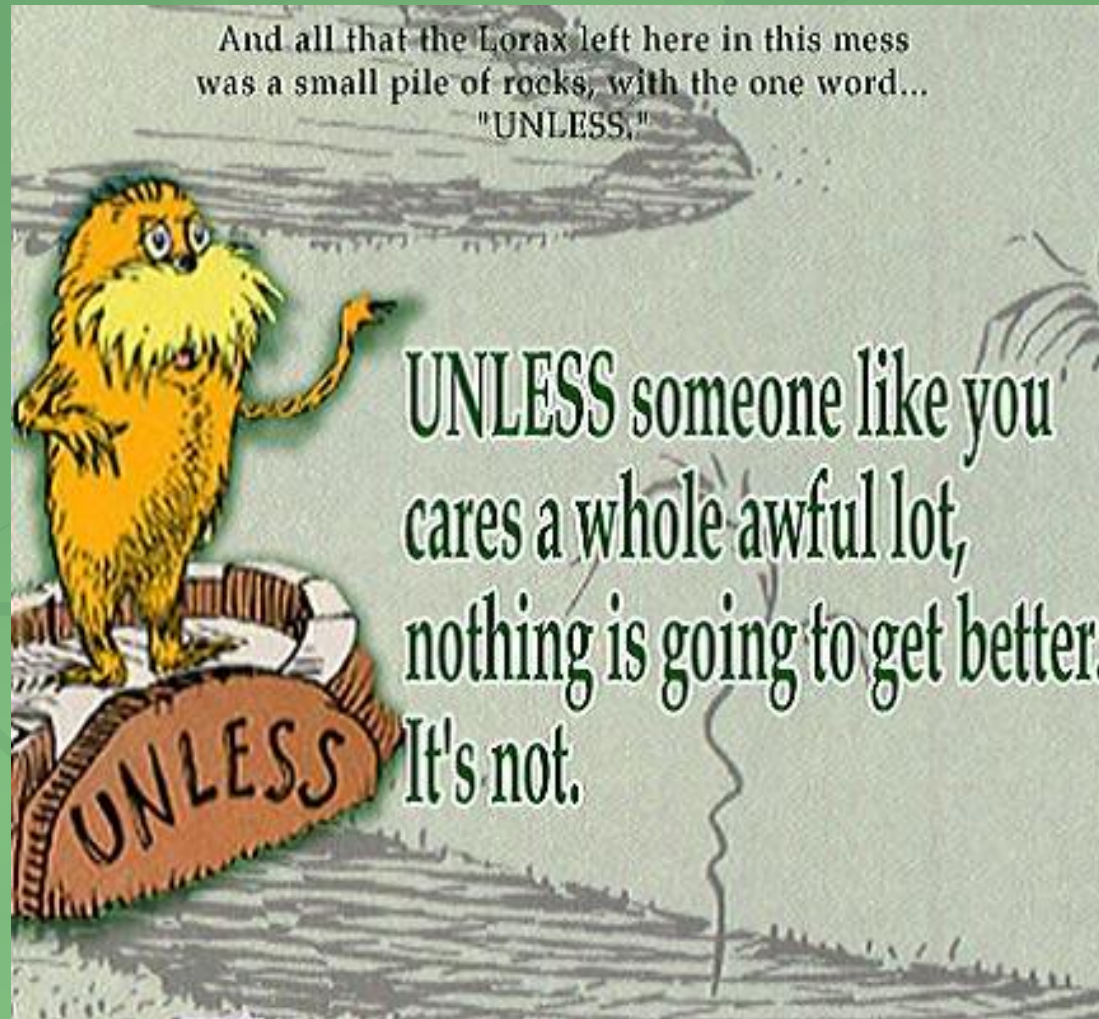


Jacksonville, Alabama

**Trees and power lines just weren't
meant to be together.**



The Alabama Power Company made a decision to cut the trees to the ground.



So....



News for NBC and Fox



Litigation Summary

- Homeowners appealed to the City Council who asked the Alabama Power Company (APC) to postpone removing the trees.
- APC waited 6 weeks, then the Alabama Public Service Commission ruled against the homeowners.
- APC filed a restraining order to prevent homeowners and neighbors from chaining themselves to the trees.
- The matter ended up in the County Circuit Court who ruled temporarily in favor of the homeowners while the matter headed to trial.

How does one justify a tree?

Software calculates value of trees to cities

BY MATT KASPER

Star Staff Writer

JACKSONVILLE — How much is the air you breathe worth? What is the value of the broad pecan tree stretching from the earth?

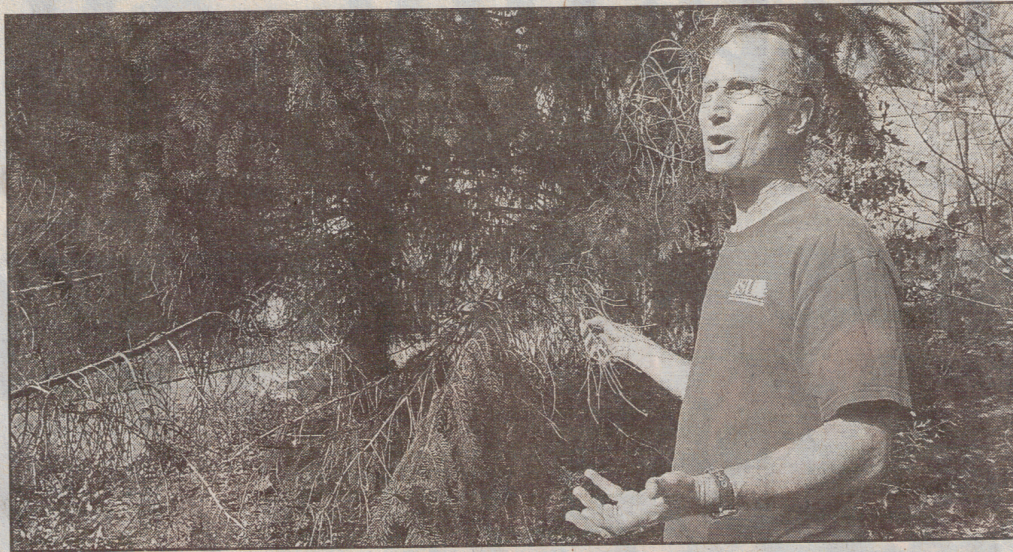
It's not priceless anymore.

In fact, Jacksonville resident Scott W. Beckett, who also serves as an instructor in the learning services department at Jacksonville State University, thinks pricing nature is a new way of understanding the value of the land.

He's not alone in his reliance on a software program developed by the Center for Urban Forest Research which calculates the monetary value to cities of trees and other vegetation.

But his newfangled application of the technology to Jacksonville's tree controversy might raise a few eyebrows. Beckett doesn't seem to have a problem with that — if it leads to the eventual nodding of a few heads.

"This is coming at it at a



Bill Wilson/The Anniston Star

Scott Beckett discusses the monetary value of trees at his home in Jacksonville.

The replacement value over the trees' lifetime would return as much as \$18,327 according to the calculations, which don't account for inflation.

The great thing about the software program, Beckett said, is that anyone can access it on the forestry Web site and get a full explanation of the calculations

people's property. Another idea would be to partner with JSU, he said.

If knowledge is power, it also is wisdom when applied to

the value of resources, Beckett says.

"Cities as a whole can know the dollars and cents (trees) provide."

With a "newfangled application of the technology", of course.

i-Tree

itreetools.org

i-Tree is a free, peer-reviewed software suite from the USDA Forest Service that provides urban forestry analysis and benefits assessment tools.

The software features 5 analyses:

Eco, Streets, Species Selector, Vue,
Storm

i-Tree Eco

i-Tree Eco provides a broad picture of the entire urban forest. It is designed to use field data from randomly located plots throughout a community along with local hourly air pollution and meteorological data to quantify urban forest structure, environmental effects, and value to communities.

i-Tree Streets

i-Tree Streets focuses on the ecosystem services and structure of a municipality's street tree population. It makes use of a sample or complete inventory to quantify and put a dollar value on the trees' annual environmental and aesthetic benefits, including energy conservation, air quality improvement, carbon dioxide reduction, stormwater control, and property value increases.

(This is the application used for the trial.)

Analysis for Jacksonville Trees

- Increase in property value
\$20,000
- Replacement value
\$18,327
- Annual household energy savings
\$399

No monetary compensation was sought in this case.

i-Tree Species Selector

i-Tree Species Selector is a free-standing utility designed to help urban foresters select the most appropriate tree species based on environmental function and geographic area.

This application was later used to replant trees in another area of town.

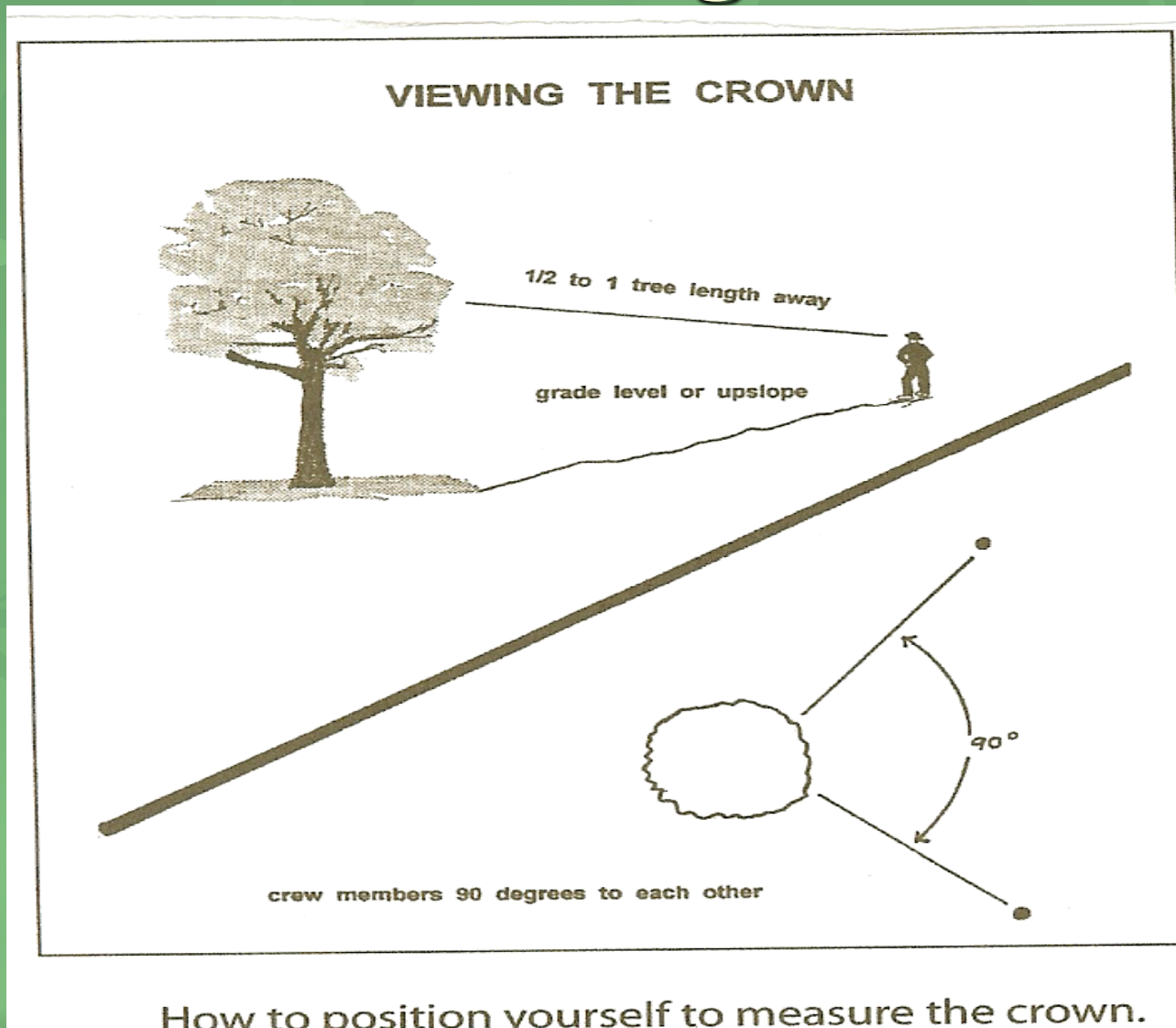
i-Tree Vue

i-Tree Vue (Beta) allows the use of freely available national land cover data maps to assess a community's land cover, including tree canopy, and some of the ecosystem services provided by the current urban forest. The effects of planting scenarios on future benefits can also be modeled.

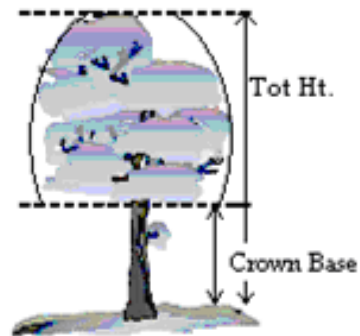
i-Tree Storm

i-Tree Storm helps assess widespread community damage in a simple, credible, and efficient manner immediately after a severe storm. It is adaptable to various community types and sizes and provides information on the time and funds needed to mitigate storm damage.

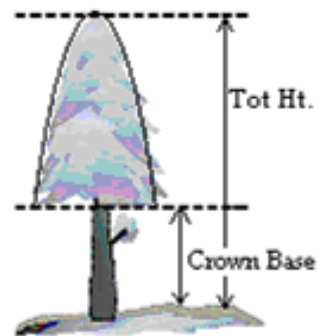
Measuring Trees



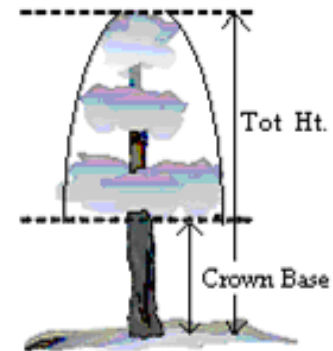
Measuring Trees



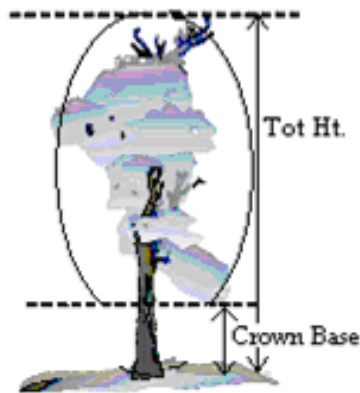
10% Canopy Missing



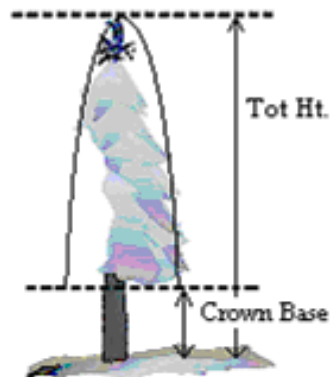
0% Canopy Missing



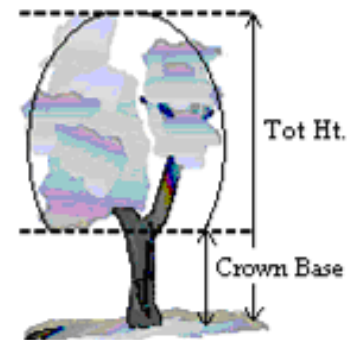
25% Canopy Missing



40% Canopy Missing



30% Canopy Missing



15% Canopy Missing

Doing the Math



Litigation, continued

- A non-jury trial determined that Alabama Power could trim but not remove the trees.
- APC appealed.
- Before a judge could rule on the appeal, APC dropped the motion with the explanation that, “It’s over.”

Featured as a Grassroots Story by the Sierra Club



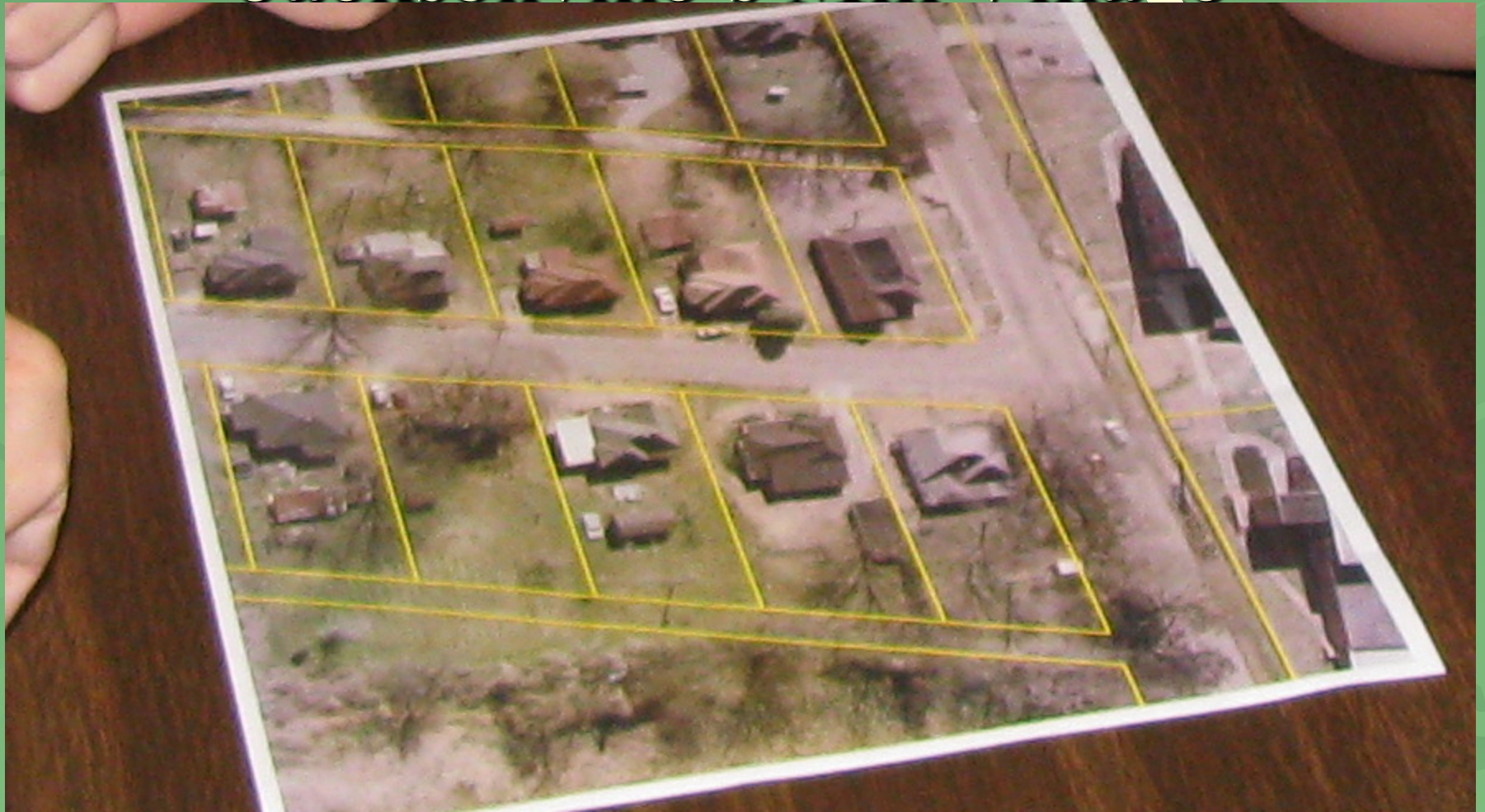
“Score One for the Trees”



Ripple Effects

- Jacksonville has a Tree Commission whose focus is to educate the public concerning the value of trees.
- The City Council is in the process of passing a tree ordinance to specify guidelines for the proper planting and maintenance of trees.

Trees were replanted in Jacksonville's Mill Village



A street widening project years ago removed all the trees that once lined the way.

Locals pitched in to help



And we all lived happily ever after

Well..... at least until tropical depression Fay

