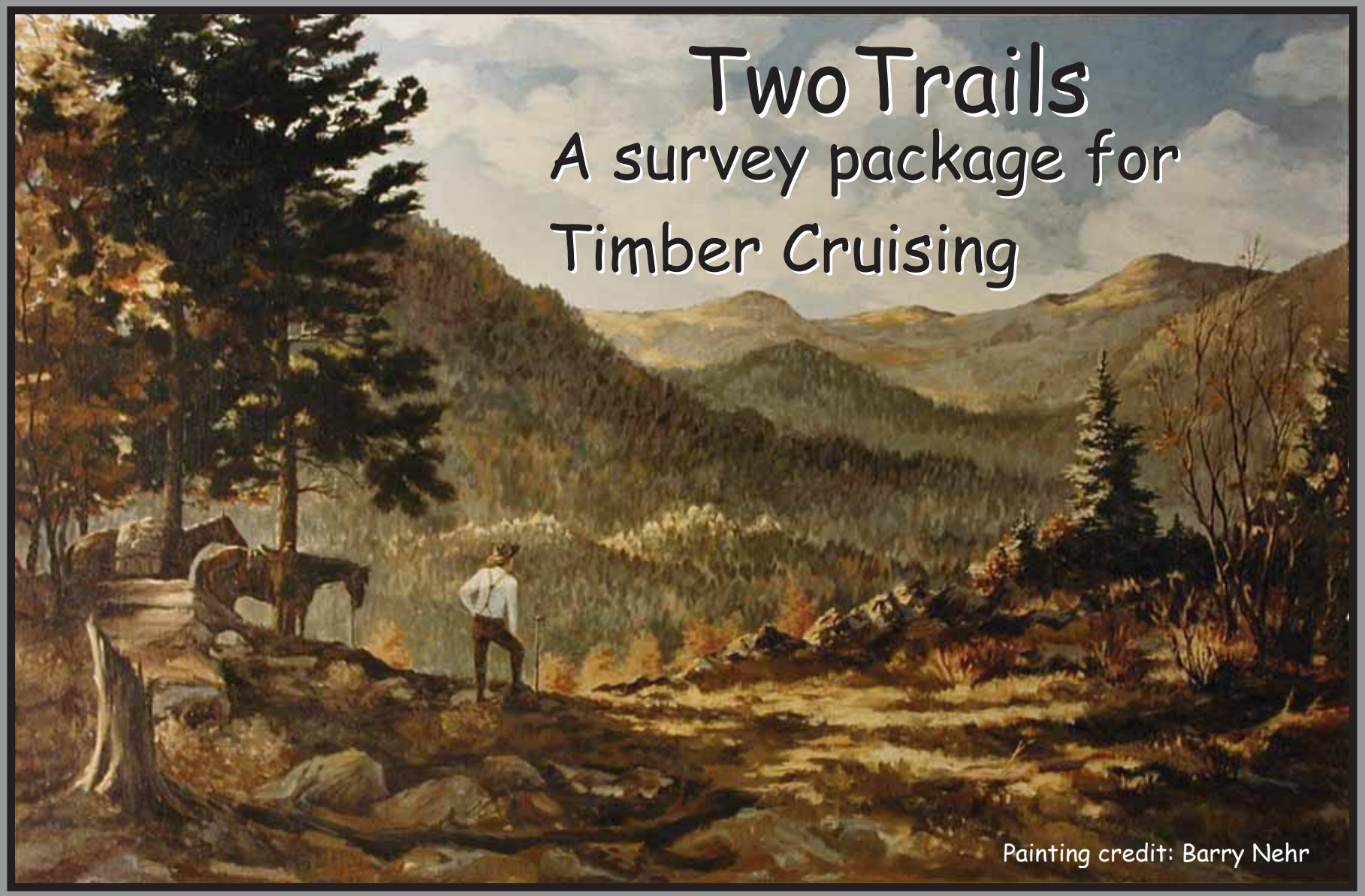
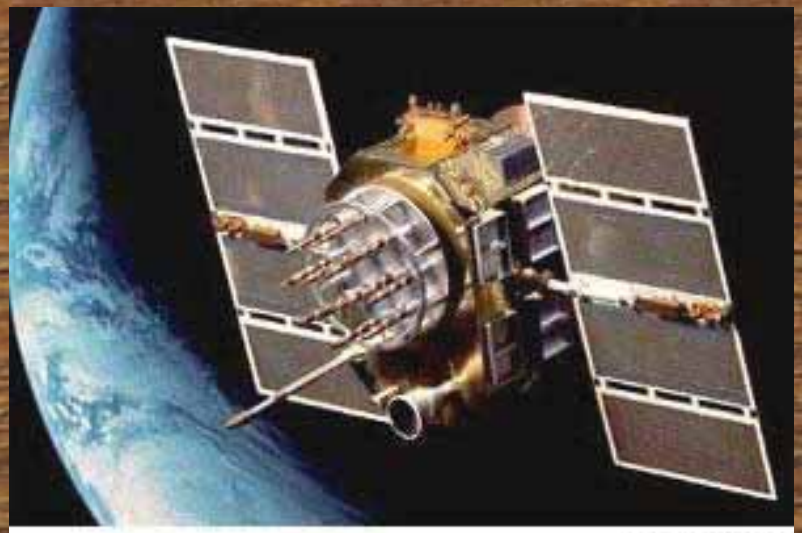


Foresters regularly practice surveying

Today's equipment and technology offer new opportunities to do the job better or easier or both.



Navstar GPS

There are places where GPS is not available or it is inaccurate.


El Yunque (Karsky)


Tongass


Rogue - Walt Right, Steve Scoggins


Red Woods (Rasher)

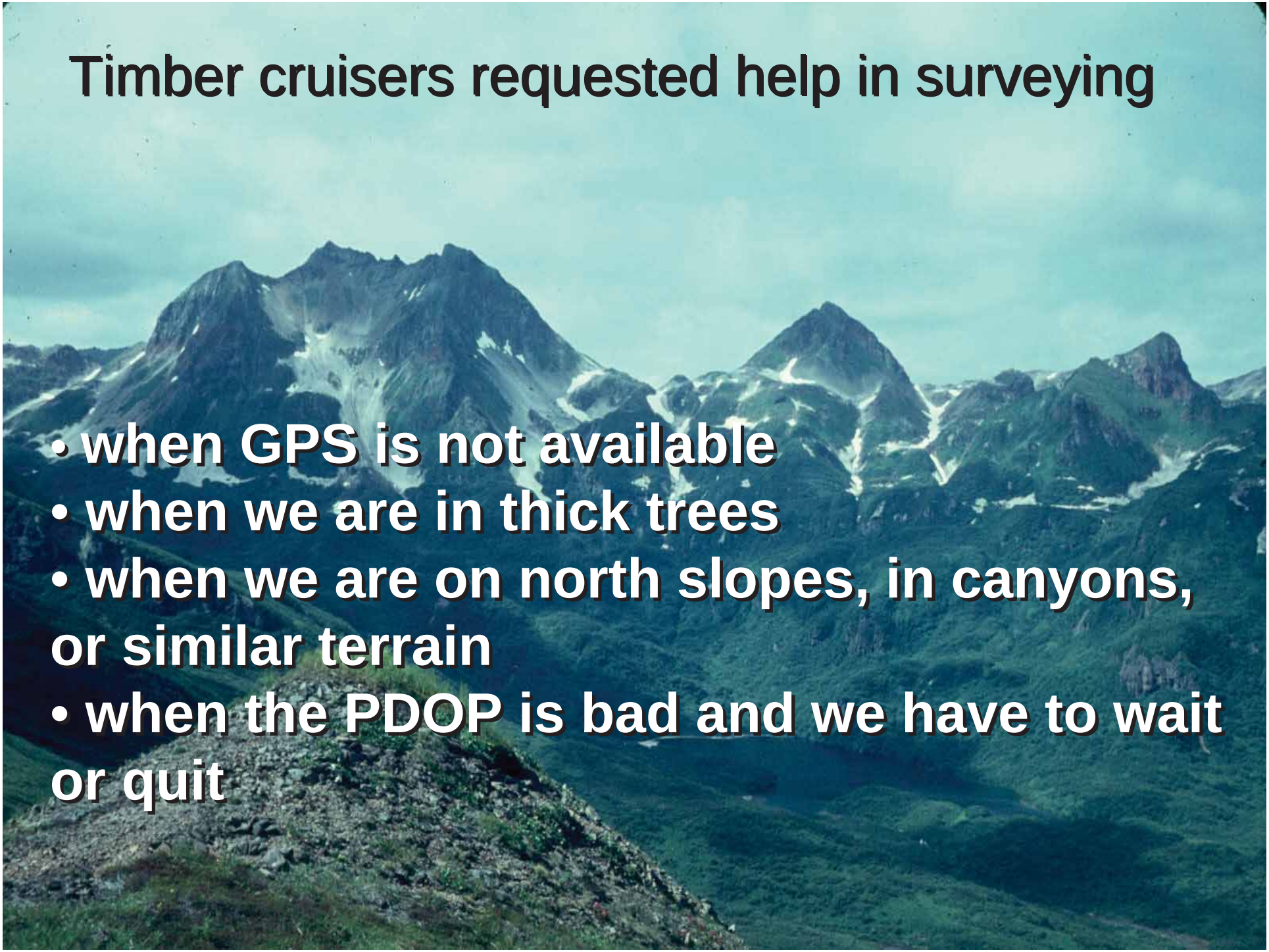

Siuslaw (Barnes, Boyack, Johnston)


Hoosier(Karsky)

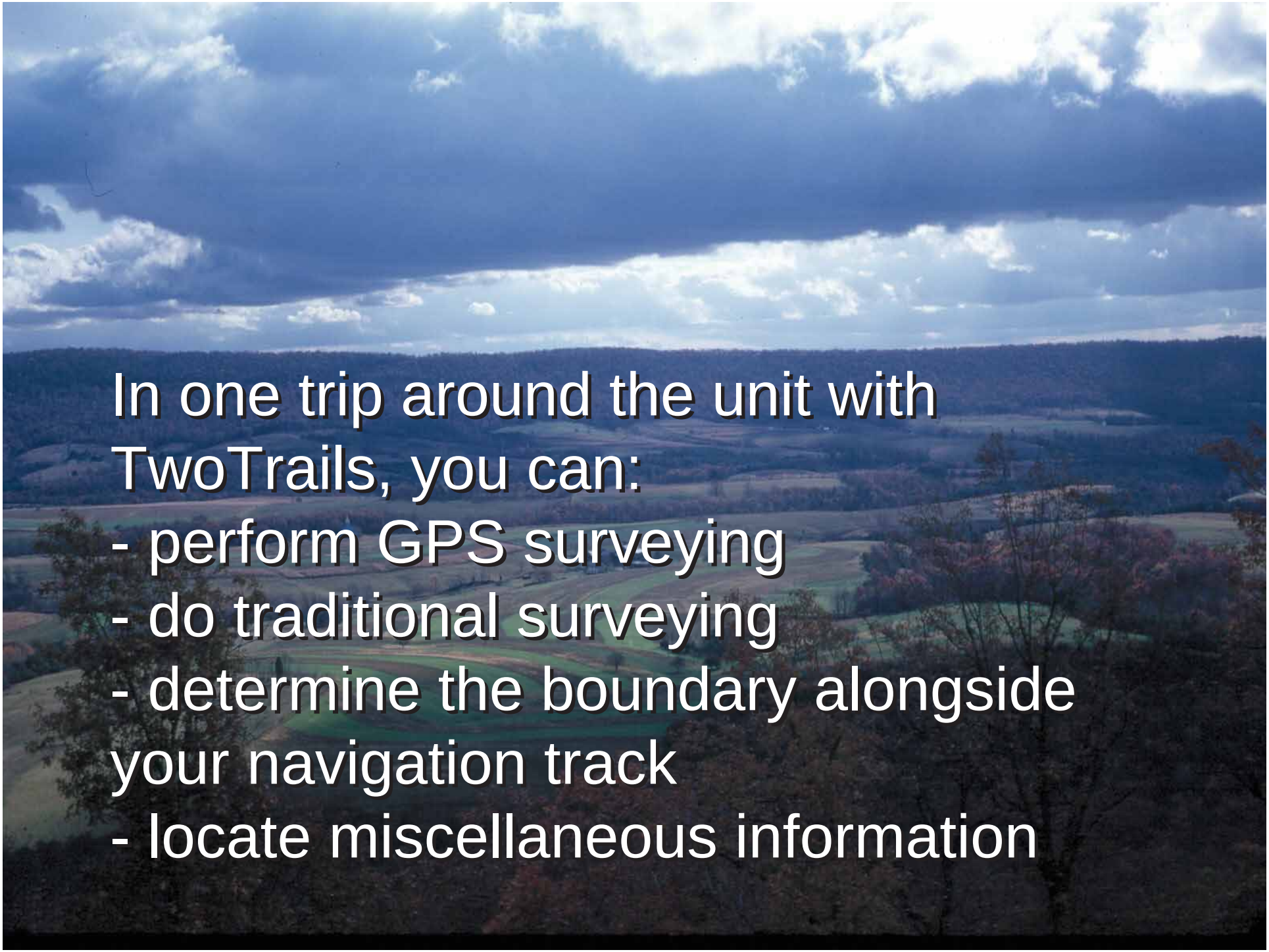

Mt. Hood

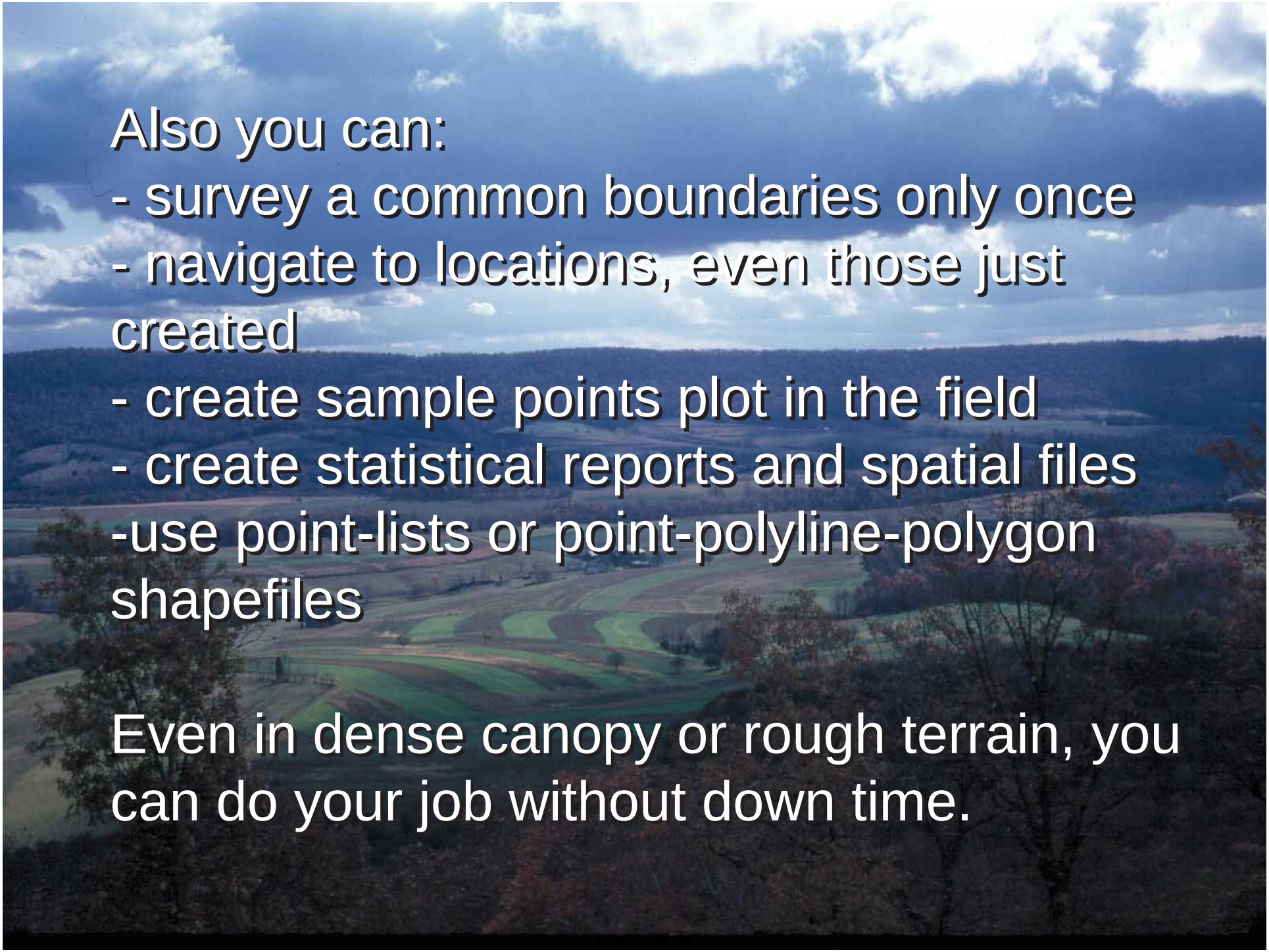
Matt Oberle and Gary Boyack mix traversing with GPS using TwoTrails

Timber cruisers requested help in surveying



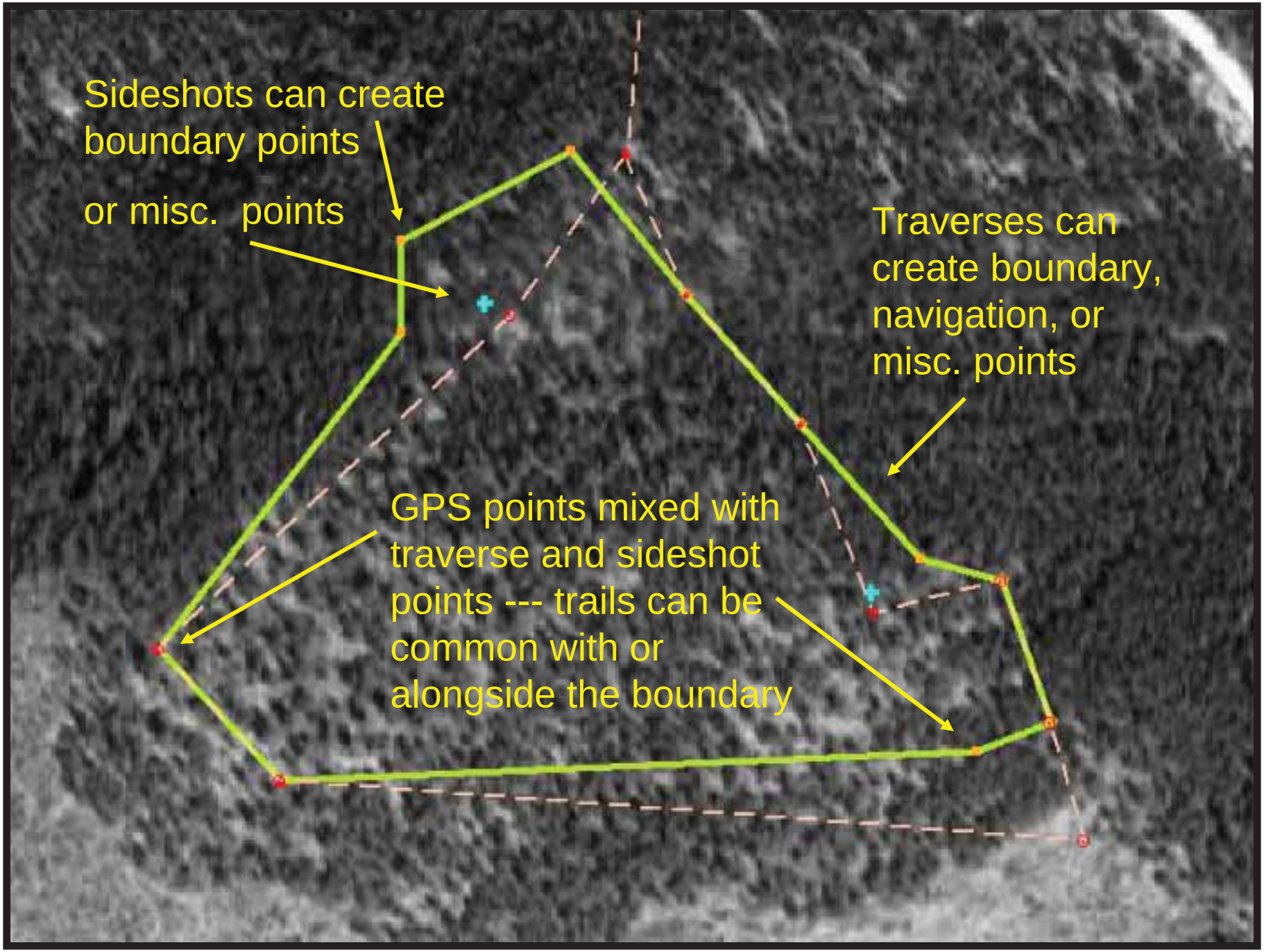
- when GPS is not available
- when we are in thick trees
- when we are on north slopes, in canyons, or similar terrain
- when the PDOP is bad and we have to wait or quit


In one trip around the unit with TwoTrails, you can:
- perform GPS surveying
- do traditional surveying
- determine the boundary alongside your navigation track
- locate miscellaneous information

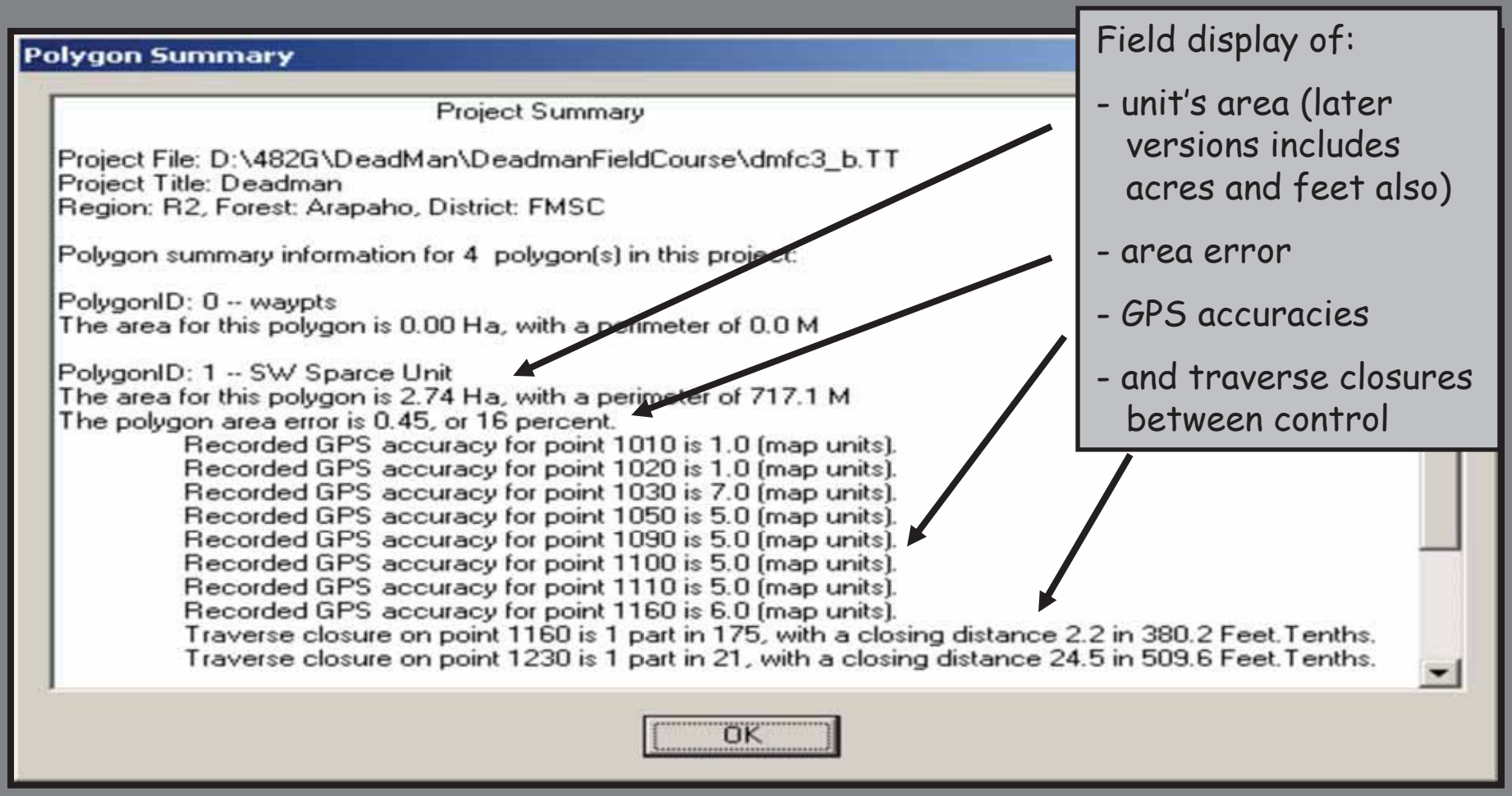


Also you can:
- survey a common boundaries only once
- navigate to locations, even those just created
- create sample points plot in the field
- create statistical reports and spatial files
-use point-lists or point-polyline-polygon shapefiles

Even in dense canopy or rough terrain, you can do your job without down time.

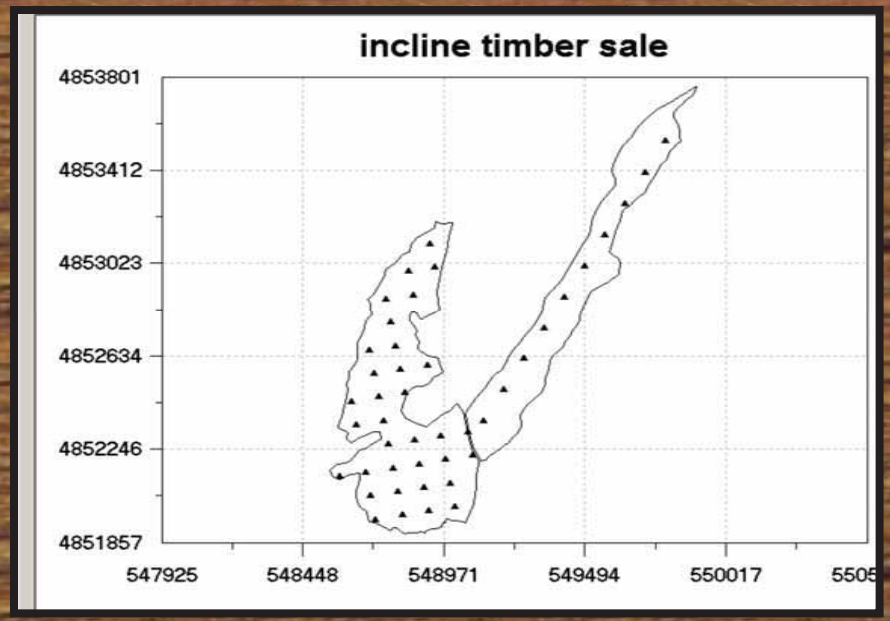

Sideshots can create boundary points
or misc. points
Traverses can create boundary, navigation, or misc. points
GPS points mixed with traverse and sideshot points --- trails can be common with or alongside the boundary

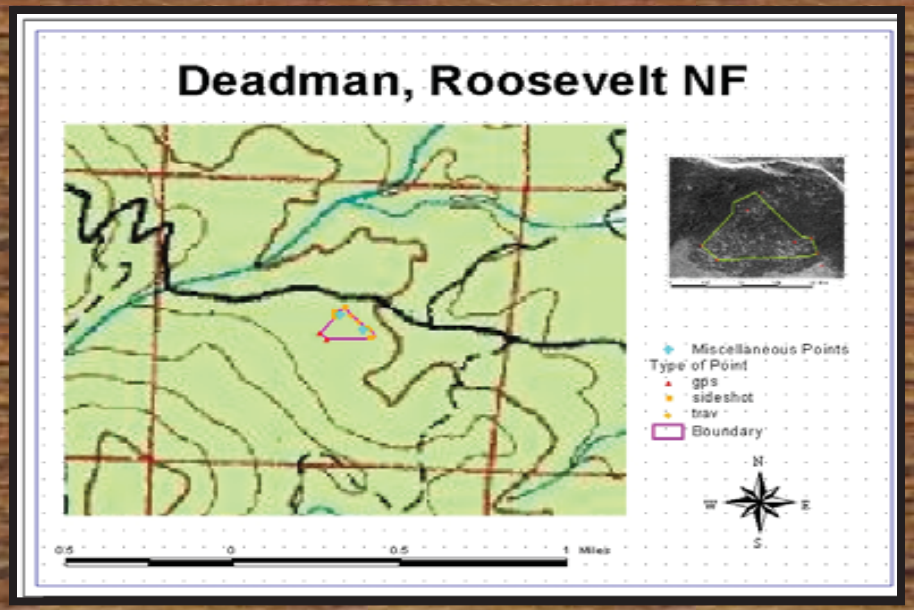
Text reports are made on both the PC and Mobile Units



“walk” or “static” methods work

Along with many text files for your reports, spatial data are standard output

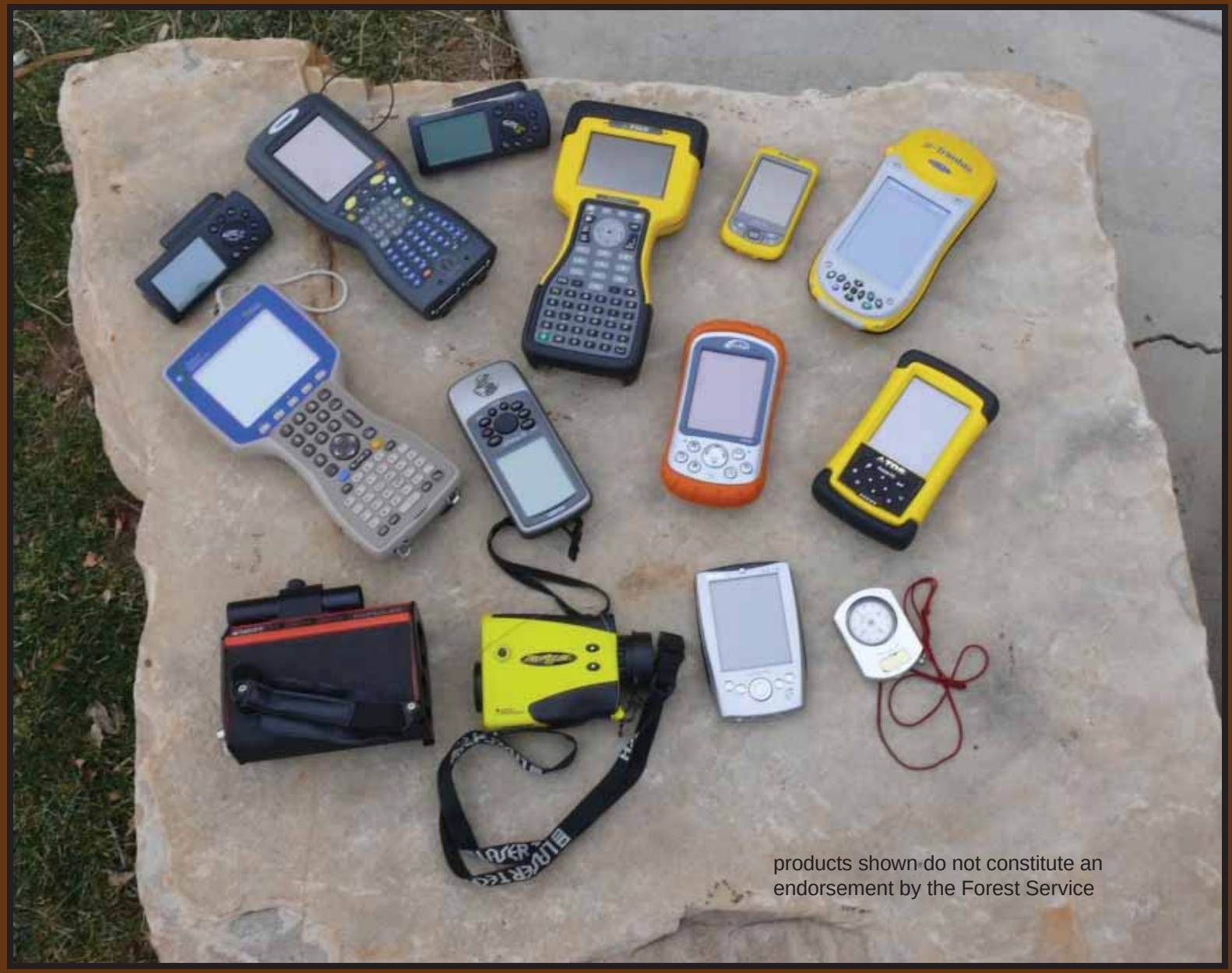




Sample plot centers generated in the field or office, for each unit

Mapping data are ready for GIS

Many different types of equipment can be used



Two Trails

Allows mixed operations of GPS and traditional traverse surveys

Complements and enhances GPS receiver's capabilities-

Creates useful and meaningful cruising information for the field and office

TwoTrails beta version is stable and being used in production on some forests.

However, consult with your regional measurement specialist before using this program in production.

The handbook is being updated to support newer operations, which will support the techniques offered in this program.

TwoTrails© is Freeware maintained by FMSC www.fs.fed.us/fmsc/

beta software site: **www.fs.fed.us/fmsc/measure/cruising/twotrails/beta/**

Dave Cawrse
Director

FMSC

Andrea Steiner, Main Prog.
Gary Boyack, Project Lead

-TwoTrails has companion versions for the PC and mobile-CE device which load easily without administrative privileges

- Specialized files are generated on the PC for cruise analysis and GIS portrayal

- Files and drawings are generated on the mobile-CE appropriate for gathering and editing data collection

- Delimited ASCII files are created allowing easy analysis and use with other applications

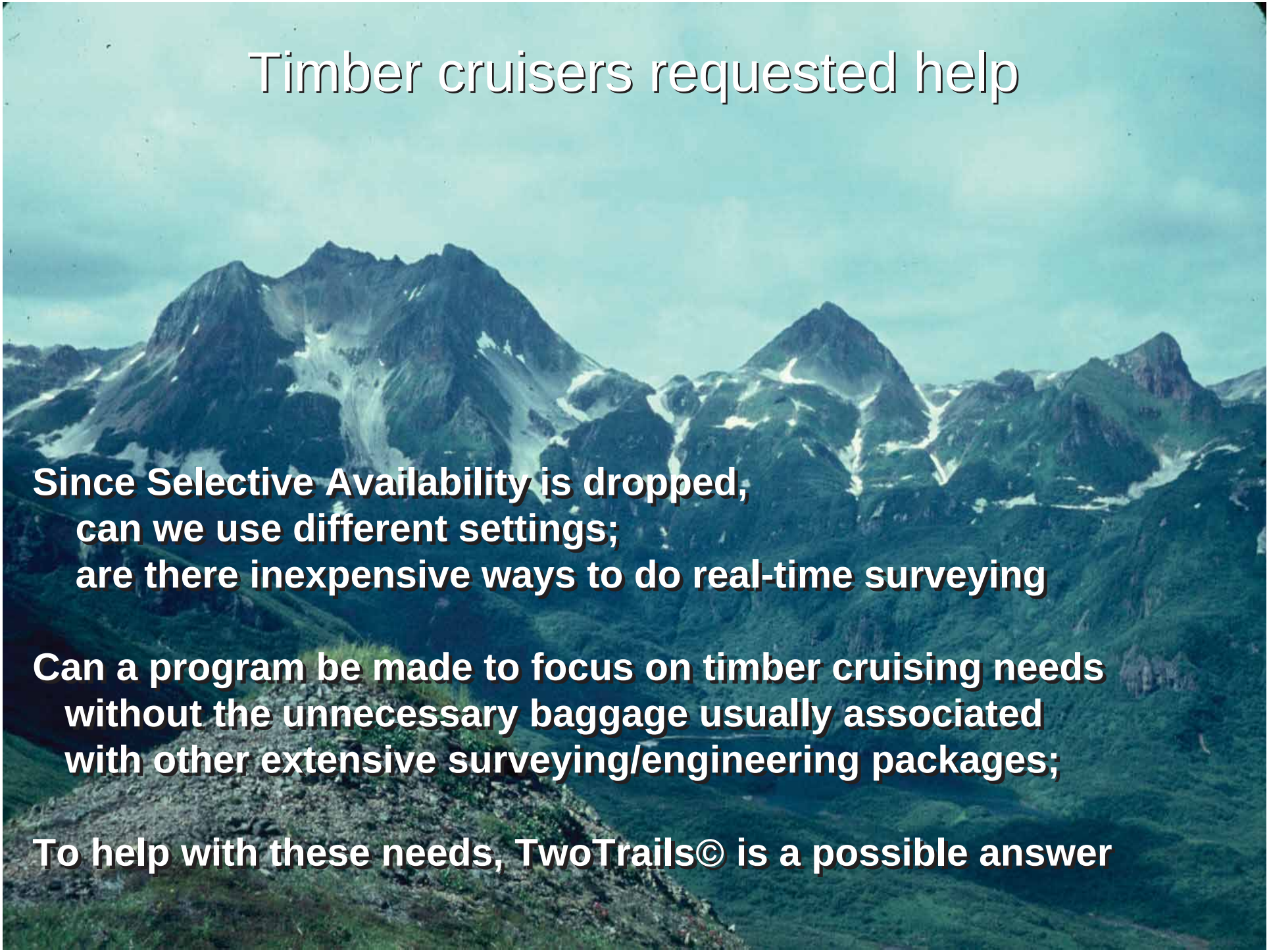
-Spatial files are geo-referenced and ready for input to ArcView or ArcMap

- A GPX file is created

- Metadata is created and properly associated

- The spatial databases are attributed with calculated areas, perimeters and more

- When needed, cruisers now have a tool to mix survey methods



Timber cruisers requested help

Since Selective Availability is dropped,
can we use different settings;
are there inexpensive ways to do real-time surveying

Can a program be made to focus on timber cruising needs without the unnecessary baggage usually associated with other extensive surveying/engineering packages;

To help with these needs, TwoTrails© is a possible answer