My name is Sean Healey and I work for the Inventory and Monitoring program

of the Forest Service's Rocky Mountain Research Station.

I'm the co-lead of a project called "The Landscape Change Monitoring System."

So our goal is to map forest disturbances; that is harvest, fires,

insect outbreaks across the United States since 1984.

Disturbances are really important because they threaten a lot of things: human life, property,

resources like clean water, carbon storage, timber.

The main tool that we are using is the USGS NASA Landsat program,

which has been acquiring imagery over the whole world including our forest since 1972.

There are lots of ways to use the archive of this imagery to map where

and when forest disturbances have occurred.

So our approach has been to work with some of the best developers in this field to find a way

to run each of these approaches in parallel and then to combine the strengths of each of them

to produce a best available integrated map.

We have tested this approach in six different places across the country,

and seen that this integrated approach gives us better results than any of the individual maps.

The drawback with this approach is that it is computationally intensive.

If you had a single desktop machine running 24 hours a day it would take it about 15 years

to do all the processing needed to make this map.

Fortunately we've had a really productive collaboration with Google

and they've provided a lot of computing capacity.

I'm really excited about this project because there are already a lot of clients out there

who want the product, and we think the product will be the best record of forest disturbances

in this country that's ever been produced.