

# FOSDEM 2014 GIS Talk - GeoTrellis and the GeoTiff File Format

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## **Abstract**

A short talk about GeoTrellis and the GeoTiff File Format. I was a Google Summer of Code student at GeoTrellis and implemented a GeoTiff reader for the project. I will present what GeoTrellis is, how I implemented the GeoTiff reader and talk a bit about the GeoTiff File Format and which compressions that are associated with it.

## 1 Introduction

This summer I participated in Google Summer of Code for the GeoTrellis open source project. I worked under Eclipse, through Azavea, a Philadelphia based Geospatial IT firm. My assignment was to write a brand new GeoTiff reader in Scala for the project, and this was due to the end of the summer.

I had just finished my bachelors and after the summer I was to begin my master studies in Computer Science. I was very enthusiastic and looking forward to learn more about Scala, since I had never really worked with a functional programming language before. I had also never worked with GIS systems before.

This talk proposal will be a short presentation about how it was for me, new to the Geospatial and Open Source community, to participate in Google Summer of Code and work with the GeoTiff file format. I hope to present the cons and pros with the file format, how to best read it, which compression algorithms to support, and to show some benchmark data about my results. I also want to tell the audience about my pitfalls, what I did learn, and what is important when dealing with potentially large raster files.

## 2 About Me

I'm a Master's student at KTH, The Royal Institute of Technology, in Stockholm, Sweden. My Master's is in computer science. I also work half time at Azavea, on GeoTrellis. My CV can be found here: <https://dl.dropboxusercontent.com/u/42266515/JohanStenbergCV.pdf>.

## 3 Talk Content

The presentation will be conducted as follows:

1. A short introduction of what the talk will be about.
2. A short introduction about me, what I've done and what I'm doing.
3. An introduction to GeoTrellis.
4. An overview of the GeoTiff File Format and the compressions used.
5. How I implemented a reader in Scala.
6. Which pitfalls I had problems with.
7. Here I will present the benchmark results for the reader.
8. The Future of GeoTrellis.