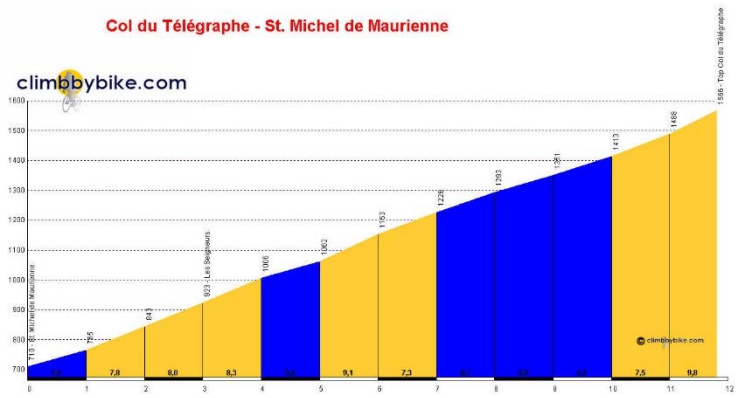
REVISION HISTORY			
Revision	Date	Changes/Comments	Author
1.0	9/15/2015	Initial version	Andrew Hsu

What is Telegraphe?

The Col du Telegraphe is a 1,566m (5,138 ft) mountain pass located in the French Alps. From the north approach (at Saint-Michel-de-Maurienne), the climb is about 11.8 km with an 856 m vertical gain (2,808 ft), averaging a 7.3% grade and a maximum gradient of 9.8%. It has been used in numerous Tour de France races, with its more recent appearance in 2011.



Overview and Setup

Welcome to the Synaptics "Telegraphe" Hackathon development kit. Now that you know a bit about the mountain pass which this kit is named after, let's discuss the purpose and capabilities of this development kit.

The main purpose of this development kit is to provide developers an integrated hardware and software platform to receive capacitive-based touch imaging data from a touch sensor. This image data is in real-time and can arrive at up to 68 frames/sec. A sample web client is included that lets you visualize this image data at about 30 frames/sec, but we're sure you've got the skills to write a client that can read all 68 frames/sec.

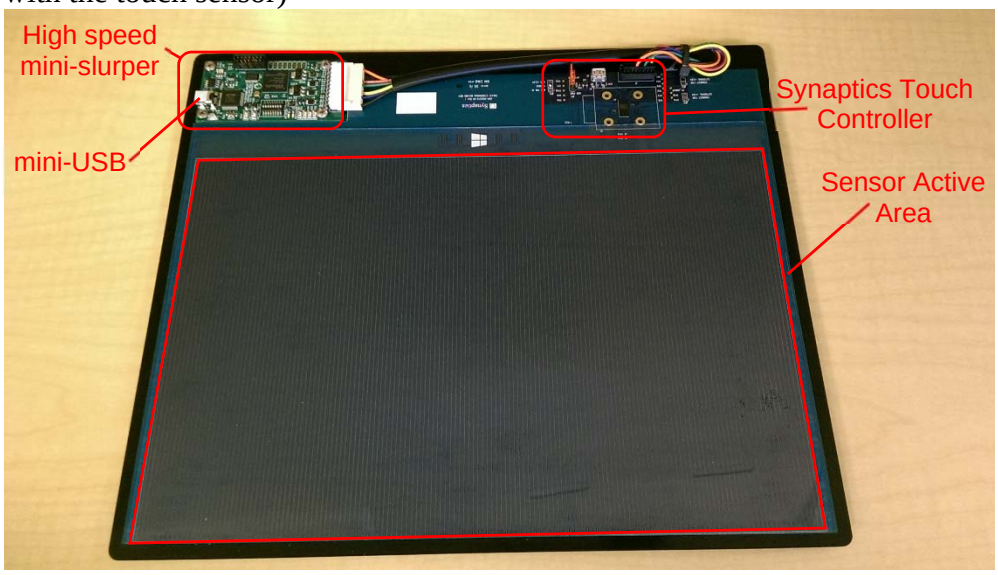
Best of all, this "raw" image data has already been cleaned up using Synaptics's arsenal of noise mitigation algorithms and techniques to ensure that you get the industry's cleanest touch sensing data. So all you need to do is to develop your image processing algorithms to process the image frames to create the next generation of advanced user interface control gestures or other novel software that makes use of the Synaptics touch sensor. Good luck!

Development Kit Contents

A complete development kit contains the following:

- Release Notes (README_FIRST file), that is, this document
- Development hardware module (picture below) consisting of :
  - 15.6" diagonal FR4-based PCB touch sensor (with 1.0 mm plastic cover lens)
  - Synaptics "Stockholm" S7817 (TH2421), 165BGA (118 Tx/Rx channels) touch controller and circuit (on same PCB as touch sensor)

- Synaptics high-speed mini-slurper circuit board and cable (already connecting slurper with the touch sensor)



- Mini-USB cable
- USB Flash drive with software and documentation

To connect to your host compute device (not supplied), plug the supplied mini-USB cable into the slurper PC board (it's the only mini-USB connector on the development hardware module; ignore the micro-USB connector on the main PCB) and into your host computer. The development kit supports the following host environments…

Host Device Requirements and Setup

The Telegraphe development kit can work with the following host compute environments:

- Windows (tested on Win7, 64-bit) using Python 2.7 and 3.4 (tested on 32-bit versions only)
- Mac OS X (tested on 10.10) using Python 2.7.6
- Linux (Ubuntu 15.04 amd64) with Python 2.7 and 3.4

In addition to the versions of Python listed, you will also need the respective FTDI D2XX driver for your host device. For your convenience, the tested versions of Python and FTDI for each host platform has been included in the USB drive (in their respective directory).

But, before doing anything else, please take a look at the README file in the *syna_sensor* subdirectory of the USB drive. More specific installation instructions for each compute environment, including FTDI driver installation, can be found in this file.