

Dept. of Electrical Engineering

#### IIT BOMBAY

#### Dual Degree Project Stage 1

# Cognitive Radio using OpenBTS

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September 19, 2013

#### Abstract

Our goal is to set up an OpenBTS system with cognitive capabilities. We have a predefined frequency band to run our cognitive OpenBTS system in. First we sense the presence of primary users in that particular frequency band by detecting the presence of ongoing calls. If it turns out that the calls made by primary users end, then we start our secondary OpenBTS system thus allowing secondary users to make calls.

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### Chapter 1

# A cognitive base station using GnuRadio and OpenBTS

1.1 Motivation

LOL

## Chapter 2

## GnuRadio

#### 2.1 Introduction

GnuRadio is a software blah blah blah!