# Analysis and Simulation of Vertical Handover

## Project Team Members

Our team is made up of two members: Brad Fach and Shawn Wallace.

## Overview

The focus of this project will be to research different approaches and techniques for vertical handover between a mobile system and wireless networks. An example would be handover between a GSM network and 802.11 (WIFI). Another goal will be to demonstrate the concepts of handover via simulation as an illustrative tool for use during the final presentation.

## Rationale

A common problem in today’s wireless handset industry is determining when to perform a vertical handover. The purpose of this project is to identify what algorithms/ideas exist today to combat this topic. In addition to research we wish to find and develop new techniques to optimize handover, thereby alleviating this technically limitation.

## Methodology

The first step in this project will be extensive research of the topic to understand the research work already done in this area. Once a firm understanding of the subject is established, new approaches and strategies will be brainstormed and experimented with against the same user load and conditions to gauge the effectiveness. The metrics that will be used to gauge this effectiveness are: user experience, cost, speed and reliability.

## Expected Results

During the course of this research topic it is expected that a firm understanding of the area will be developed through both research and experimentation. The results of the experiment will illustrate what techniques/approaches yielded better results and which did not. These results will help demonstrate the challenges of handover and our understanding of how to overcome them.