**Vision Document**

For a Track & Field Meet Server

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# Introduction

The purpose of this document is to give a brief overview of the Track & Field Meet Server (TFMS). The TFMS will provide a centralized location for organizers of a track meet to enhance the execution of the track meet for teams, officials, and spectators. This document will provide some high level goals and context for the system as well as providing critical uses cases and requirements. All of these things will act as a guide for guiding the development of the TFMS project.

## Motivation

Organizing a track meet can be extremely complex with the orchestration of athletes, judges, and spectators partaking in a vast spectrum of events. Many modern track meets have had the fortune to use modern computing technologies to aide in the execution of track meet. The TFMS will change all of this by providing a means for small schools, especially rural high schools and middle schools, as well as nonprofit youth athletic associations to host track meets aided by computer technologies.

The TFMS project aims to be a cheap solution to assisting in the efforts of hosting a track meet by providing an open source system that manages the in’s and out’s of the track meet. The TFMS will include a rich API to allow developers to write mobile applications to communicate with the TFMS and provide a portal to TFMS for athletes, officials, and spectators. This product will create a more efficient operation for track meets and will bring new excitement to the sport in exotic places that didn’t have the means to acquire higher end products to assist with track meets.

## Terms and Definition

### Server

A server is an application that has some sort of functional purpose to serve a client which sends requests to the server. The server sends responses to the client based on the requests it receives and the nature of its utility.

### Client

A client is an application that uses a server in some capacity to provide functionality. Clients will send requests to a server and adhere to the server’s published API.

### API

An API is a defined set of rules and messages that describe the behavior and capability of the communication between a server and a client. API’s are often times developed on top of an existing industry standard protocol.

### Socket

A socket is an abstraction that represents a specific line of communication. This line of communication has a specified endpoint and allows programs to communicate with one another. Typically sockets refer to internet sockets which are built on the internet protocol.

### Port

A port is an enumerated value that is used in conjunction to an IP address to specify a specific process that is to be communicated with at the end point.

### Authentication

Authentication is the process of identifying something or someone. In today’s computer systems this is typically done with the use of cryptographic operations using keys to sign data. This is an important process for subverting malicious entities that intend to manipulate data

### Protocol

A protocol is an agreed upon standard way of doing something. In network systems protocols are used in layers to provide mechanisms for different forms of communications. The most fundamental of these protocols in the Internet Protocol (IP). Most commonly the IP is layered with a transport layer of either the Transmission Control Protocol (TCP) or User Datagram Protocol (UDP)

## References

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2. Cooksey, Brian. "Chapter 1: Introduction." - An Introduction to APIs. N.p., n.d. Web. 20 June 2016.

# Project Overview

## Project Goal

## System Context

# Requirements Specification

## Critical Use Cases

### Use Case 1

## Assumptions

## Constraints

## Environment