WheresMyBus Database

# Description

My database will represent real-time GPS locations of busses in Albany, OR. The transit system of Albany currently does not have any bus tracking technology. I would like to offer a system that tracks their busses based on GPS data from Android based cell phones. The database would be used by a website that matches the bus positions/colors/routes with overlays on a Google map. Thus answering the question asked by many a waiting patron … “Where’s My Bus!?”

# Entities

* Bus – Each bus has a unique identification number issued by the city.
* Position – comprised of GPS latitude, longitude, timestamp and accuracy of measurement.
* Stop – list of all the stops.
* Driver – First and Last names of each driver and a user submitted driver rating. Also, each driver is assigned a color.

# Relationships

* Any driver can drive any bus but not more than one bus at a time. This is a many-to-many relationship.
* Any bus can be on any route but not more than one route at a time. This is a many-to-many relationship.
* A route is a specific list of stops and a color.
* The route a bus is on determines the color of their marker.
* The accuracy level determines whether the most recent update is used or the old position is left as is.
* The driver rating is assigned to the bus depending on which driver is currently driving it.
* Each driver has a driver rating, this is a one-to-one relationship.