ATR
Advanced Technology and Research, Inc.

Transit Authority Case Study for a Major Metro Transit System : Atlanta, Ga.

Providing universal access to information has never been more important. Rapid response, communication is a key logistic requirement for customers and transit. Existing web and database initiatives are imported with ease into multimodal solutions whose presence and capability believe their maturity as a new technology. Skyrocketing accuracy, coupled with inexpensive hardware and implementations, provide exciting opportunities for speech to become the information workhorse of the new millennium.

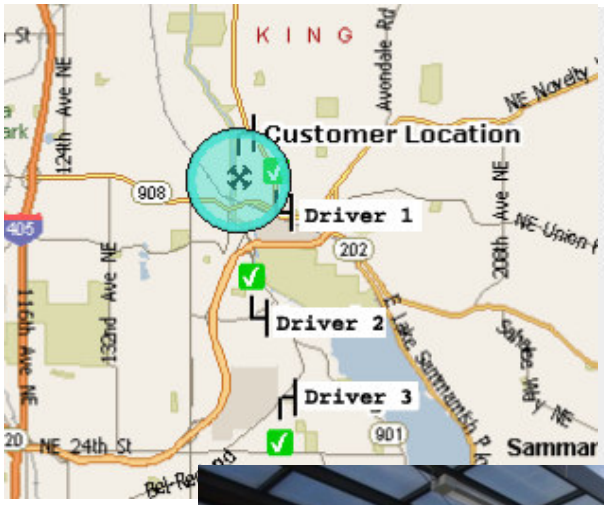
mPath Rider Alert System

mPath is a rich Voice, GIS and Multimodal interface will provide reminder to the passenger as well as Staff via web and through phone. The user will have capability to GeoFence the location as well as the interval to provide reminder.

Many times there are changes, delays due to traffic and other situations. The passengers have to wait at the bus stop during cold winter or hot summers. MARTA provides shaded areas to sit down but they are limited and that does not avoid the cold winter, wind, rain, hot summer etc.

Using the location information and the location of the Geofence, the system will send Alert to the user based on the interval specified by the user. Once the bus is at a particular distance with few feet errors, the system will generate notification to the registered users about the arrival of the bus. This will help the passengers to avoid the difficulties while waiting at the bus stop.
The system will also provide Bus Schedule, rates and other Marta's Transit related information.

Using the web or voice interface the caller will register their phone number, the bus number, the stop, the time interval to be notified and the period for number of days the notification will be sent. Once the bus approaches the geofence coordinate, the system will generate a notification.




```
//Define the geofence (the radius of your region).
double radius = 0.5;
ArrayList lls = new ArrayList();
LatLong ll;
double a;
double fudge = Math.Cos(pnt.Latitude * (Math.PI / 180));
// Create an ArrayList of LatLong coordinates that represents th
// points of your circle that you want to draw.
for (int a = 15; a <= 360; a += 15)
{
 double radians;
 radians = a * (Math.PI / 180);
 ll = new LatLong();
 ll.Latitude = pnt.Latitude + (Math.Sin(radians) * radius);
 ll.Longitude = pnt.Longitude + ((Math.Cos
 lls.Add(ll);
}
```

ATR™ mPath Transit brings together route, schedule and fare information for transit services. Whether you are a newcomer to a place or have lived here for years, mPath Transit will provide information that makes it easier to get around. Look up a schedule, plan a transit trip, check where a route goes, get information about a transit provider - you can do all this in a single easy to use multimodal portal. Using the system, you can build a transit itinerary that gets you where you want to go, when you want to go - on transit. If you are not familiar with where you want to go, interactive maps can help find your destinations.

Geofence Demo -
http://latitude.atrwireless.com/geofence/