Five Points: An Open-Source Framework for Transit System Simulation and Visualization

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Project Background

• Started in 2004; At Time, No Online Transit Trip Planning Utilities for Atlanta Area
• Sponsored by Local Transit Advocacy Group, Citizens for Progressive Transit (CfPT); Launched “A-Train” Site in November 2007
• Summer 2008: Code Released under GPL
• Spring-Summer 2009: Migration to PostGIS / GeoServer
• Summer-Fall 2009: Support for GTFS
The Trip Planner

Planning a Transit Trip
Planning a Bike Trip

Changing the Bike Factors
OpenLayers & Custom Tilesets

The Administration Client
Importing Network for a New City

Editing the Network
Editing a Transit Route

http://www.youtube.com/watch?v=Lkf64d3G40w

Working with Scenarios

Local Transit Advocates' “World-Class Transit Vision” for Atlanta (see cfpt.org)
Before...

http://www.youtube.com/watch?v=zDCPFASQaLw

..and After
Plan Trips on the Future System

The Server Component
Any Machine Can Be a Server

• No Proprietary Software Needed:
  – Optimized for Linux (but tested on Windows)
  – PostgreSQL/PostGIS Database Platform
  – GeoServer (for serving custom tiles)
  – Apache Tomcat for Servlets
  – OpenLayers-based Client Interface In Development (Google Maps also supported)

• Stable Internet Connection and Static IP Required

Current Project Direction

• OpenTripPlanner (OTP) Project Launched in Summer 2009

• Development of Five Points Routing Engine Lower Priority in Light of OTP Work

• Current Areas of Focus:
  – GTFS Import/Export Support
  – User Interface, Especially for Scenario-Based Network Editing
  – System Animation
  – Diagrammatic Mapping
Preview: GTFS Import

http://www.youtube.com/watch?v=YbGJceBH6oE

Preview: System Animation

http://www.youtube.com/watch?v=sPEM3DzsJIo
Preview: Diagrammatic Mapping

http://www.youtube.com/watch?v=hBG3E02dK8s

A Possible Direction..

London’s “Spider Maps”
Thank You

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For Code Access & Project Updates, Visit:
www.fpdev.org