May 6, 2013

The Codebase IS the Deliverable: Collaborative Software Development for Modelers

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Available at: https://works.bepress.com/gregory-erhardt/22/
The Codebase is the Deliverable: Collaborative Software Development for Modelers

Lisa Zorn, Elizabeth Sall, Dan Tischler – SFCTA
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SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
14th TRB National Planning Applications Conference
Columbus, OH    May 5-May 9, 2013
Why is the codebase the deliverable?

Some history...

Fall 2009:
Initial DTA model developed for Doyle Drive ramp closure study
Why is the codebase the deliverable?
Some history...

Summer 2010–2011: DTA Model Expansion for Geary DTA

SF DTA Development:
Current San Francisco DTA Subarea

Now: NW Quadrant
Van Ness / Fulton

Future: Entire City
North of Cesar Chavez

200 Internal Zones
60 External Zones
3,000 Nodes
7,000 Links
240 Signals
83 Transit Lines
Why is the codebase the deliverable?

Some history...
# New Approach

<table>
<thead>
<tr>
<th>Previously</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>owner: consultant</td>
<td>owner: me</td>
</tr>
<tr>
<td>development: 1 consultant</td>
<td>development: 50/50 team</td>
</tr>
<tr>
<td>audience: staff</td>
<td>audience: any interested parties (you?)</td>
</tr>
</tbody>
</table>

CompSci degree not required
## Status Updates for Week of Oct 15

<table>
<thead>
<tr>
<th>Contributor</th>
<th>Previous Week</th>
<th>This Week</th>
<th>Issues For Group</th>
</tr>
</thead>
</table>
| **Elizabeth** | *Reviewed Validation Runs.*  
*Wrote reports.* | *Fix [Issue-149](#): Push Count Dracula to Tehama*  
*Fix [Issue-111](#): Transit Lanes split for right turns*  
*Work on [Issue-132](#): Check CountDracula2 filters vs full set of 3-hour counts*  
*Fix [Issue-135](#): Remove requirement for pylab* | *Fix [Issue-132](#): Check CountDracula2 filters vs full set of 3-hour counts*  
*Work on [Issue-147](#): Final Methodology Report* |
| **Lisa** | *Fix [Issue-111](#): Transit Lanes split for right turns*  
*Work on [Issue-132](#): Check CountDracula2 filters vs full set of 3-hour counts*  
| | *Fix [Issue-135](#): Remove requirement for pylab* |                                                                                 |
| **Greg** | | **Perform additional calibration tests**  
**Update some sections of the documentation.** | |
| **Renee** | *Reviewed results of current tests and perform additional calibration tests.* | | |
| **Dan** | *Reviewed results of both JHC 2012 SF CHAMP scenarios in preparation for DTA Anyway scenario testing runs.* | *Run v18 DTA model with bus lanes.*  
*Prepare final plan for quick implementation of pedestrian friction.* | |
San Francisco Network Development
Git & Google Code
Issue Tracking & Google Code

The image shows a screenshot of an issue tracking system, likely used by the San Francisco County Transportation Authority. The system is accessed through a link to Google Code. The interface displays a list of issues categorized by priority (Critical, High, Medium), each with an associated identifier, a brief description, and a status (New, Started, On-Hold). The issues include tasks such as developing a smarter demand profile, auditing and correcting turn prohibitions, and reviewing free flow speeds. Each issue is attributed to specific individuals, indicating their involvement in the project.
Sphinx for Documentation

```python
def insertVirtualNodeBetweenCentroidsAndRoadNodes(startVirtualNodeId=None, startVirtualLinkId=None, distanceFromCentroid=0):

    In some situations (for example, for a Dynamic network), there need to be intermediate nodes between Centroid Nodes and RoadNode objects.

    Before: Typical for Static Assignment Network
    After: Typical for Dynamic Assignment Network

    If defined, the virtual nodes that will be added will begin from startVirtualNode and the virtual links from startVirtualLink. The new virtual node will be placed along the connector link a distance away from the centroid specified by distanceFromCentroid (in Node.COORDINATE_UNITS), so it will be in the same location if that argument is specified as zero.

    iterCentroids()
    Return an iterator to the Centroid instances in the network.

    iterConnectors()
    Return an iterator to the Connector instances in the network.

    iterLinks()
    Return an iterator to the link collection.

    iterNodes()
    Return an iterator to the node collection.

    iterPlanCollectionInfo()
    Return an iterator to the planinfo objects.

    iterRoadLinks()
    Return an iterator for to the RoadLink instances in the network that are not instances of Connector.

    iterRoadNodes()
    Return an iterator to the RoadNode instances in the network.

    iterVirtualLinks()
```
Questions/Ideas/Suggestions?

http://dta.googlecode.com

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