

Integrated Documentation and Visuals

Outlined in Powerpoint – but better than Powerpoint

Outline

- Problem statement and solution
- Example of integrated model development
 - Hickory, NC
- Example of application visualization
 - Virginia Beach, VA

The problems

- Models are complicated
 - Hard for lay person to understand results
 - Hard to document for future use
 - Version control is severely lacking
 - “Is this the right highway network?”

The solution

- Fully integrate:
 - Model
 - Documentation
 - Version control
- Create a model built from the ground up to leverage these tools

Hickory Model (under dev)

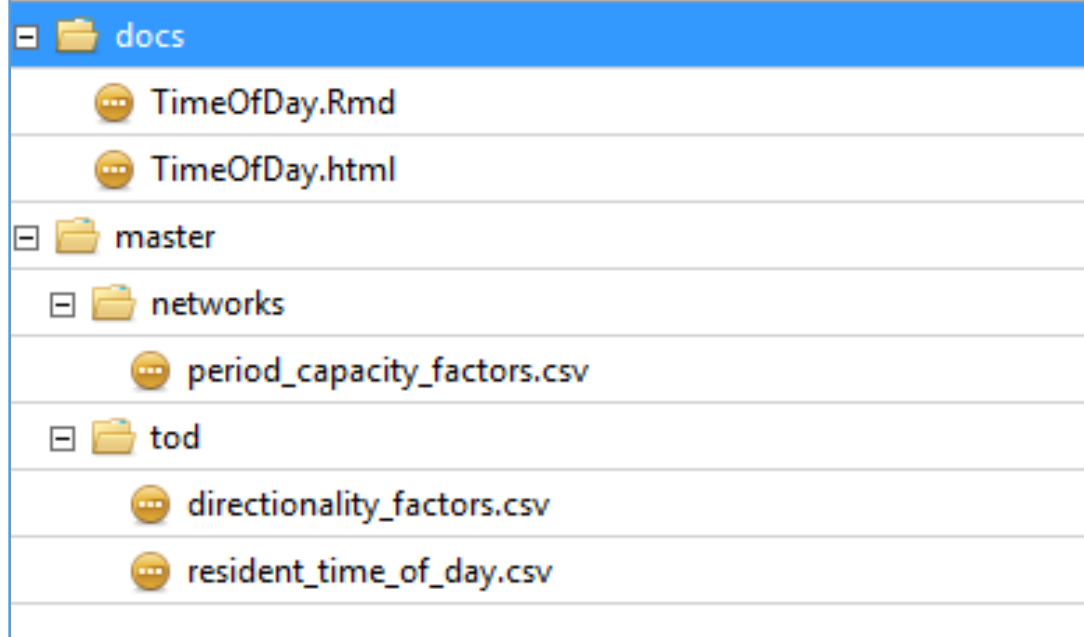
- Powerful development website
 - Seamless estimation and documentation platform
 - Model and Documentation changed at same time
 - E.g. [Time of Day](#) or [Production Rate](#)
- Version control (GitHub)
 - Central place for model
 - Easy to collaborate
 - Never ask if something is the right version again

The commit heard around the ... office

```
Commit: c472f94ca2b5c77cf58e8723a2f647242b07c8a7 [c472f94]
Parents: c1c9c3a81a
Author: Kyle Ward <warddk@pbworld.com>
Date: Thursday, September 01, 2016 1:24:34 PM

Update time of day analysis

Webpage now writes directly to model.
Round off percents to 5 decimals.
```



docs
TimeOfDay.Rmd
TimeOfDay.html
master
networks
period_capacity_factors.csv
tod
directionality_factors.csv
resident_time_of_day.csv

- When the Hickory model became fully integrated
- A single button click created
 - webpage
 - model input tables
- A second button click to commit

Transparency in development

Commits on Oct 17, 2016



Set standard button width for utility buttons

dkyleward committed a day ago ✓



Calculate initial congested speed table

dkyleward committed a day ago



Correct "Perma Join" macro behavior for DBDs ...

dkyleward committed a day ago



Update gplyr version ...

dkyleward committed a day ago



Add utilities for pbars and stopwatches ...

dkyleward committed a day ago

2 src/gisdk/!Main.rsc

		@@ -359,7 +359,7 @@ dBox "Main" location: x, y
359	359	
360	360	Tab Prompt: "Utilities"
361	361	
362		- button 1, 1 Prompt:"Clear Workspace" do
	362	+ button 1, 1, 15 Prompt:"Clear Workspace" do
363	363	RunMacro("Close All")
364	364	RunMacro("Destroy Progress Bars")
365	365	RunMacro("Destroy Stopwatches")

Application Example - VA

- Analysis of Southeast Parkway and Greenbelt
- Model not fully integrated
- Still able to produce powerful products
- Delivered as simple email attachment



Council_Maps.html (Command Line)

Summary

- Stop building models the way its always been done
- The latest tools are amazing for our field
 - Did I mention free?
- Make models fun not frustrating

Thank you!

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