

SatCoder

A SATURN Network Editing Tool

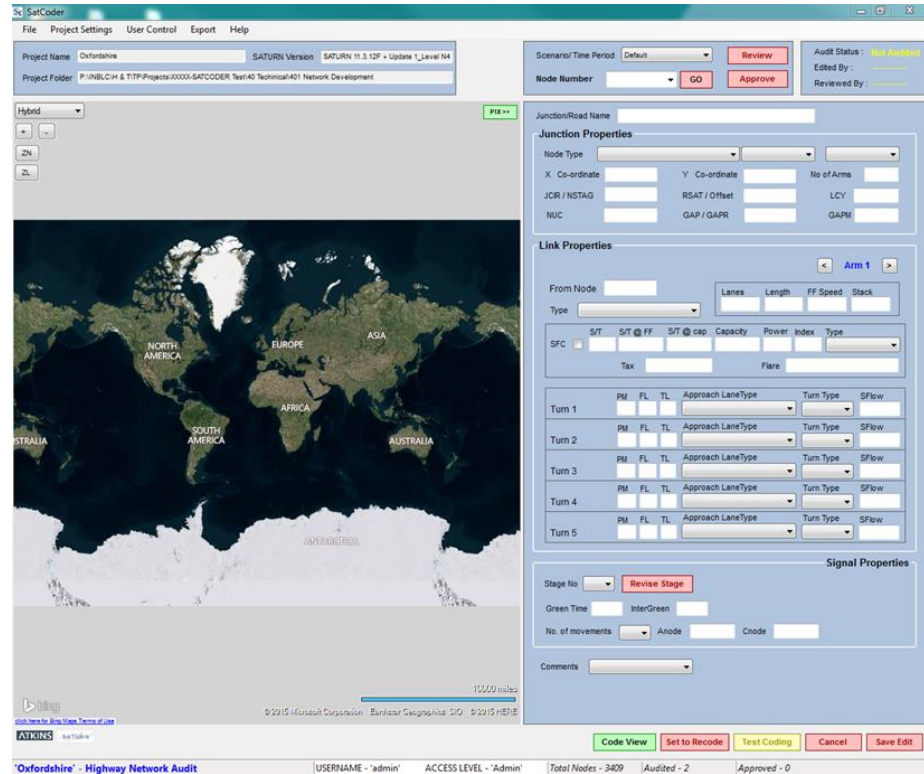


Background

- Tool created by Atkins as a part of SATURNnext programme
 - to edit simulation coding of SATURN Network file in a controlled way
 - carry out the simulation coding in a consistent way by multiple users at the same time seamlessly
- Build upon user feed backs on coding experience
- Developed and tested in-house

SatCoder V0.xx

- First release - V0.3 in September 2015
- Latest version – V0.5
- Currently used by HERTM consultants



Key Features

- Windows executable application
- User friendly interface
- Linked with SATURN for testing the code
- Multiple users to work simultaneously
- Template controlled network coding to assure consistency
- Option to add user comments for future reference
- Option to export and import edited node coding
- Quality assurance
- Option for backup

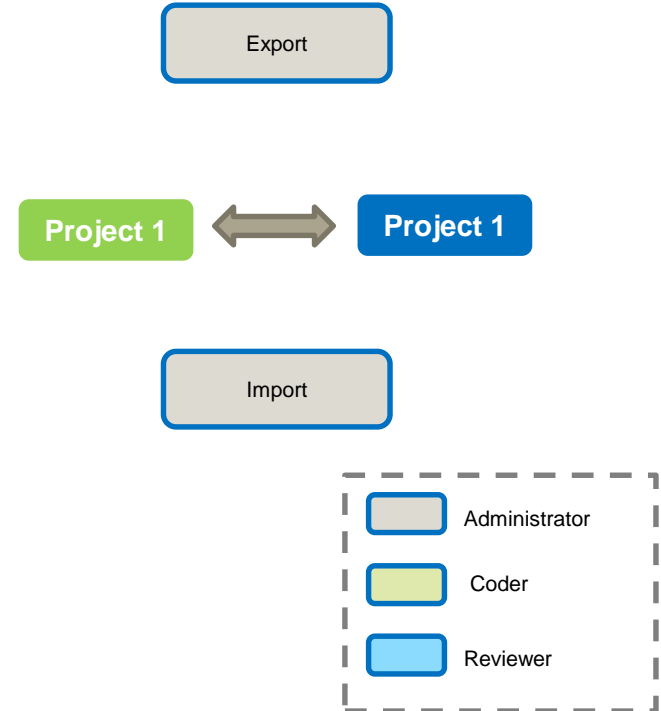
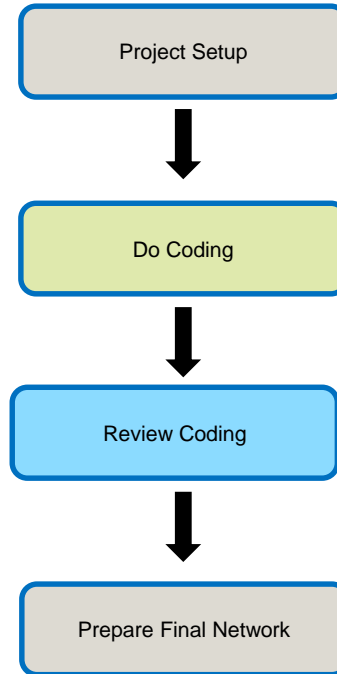
Process

Set up project folders and SATURN Version, create scenarios, add and delegate users - assign nodes, set up coding standards - control file

Edit coding with reference to custom Map background, add comments, test and save to submit the edit when done

Review / audit the edited code, change if required and approve the coding

Once all nodes audited, prepare the final network – for all scenarios

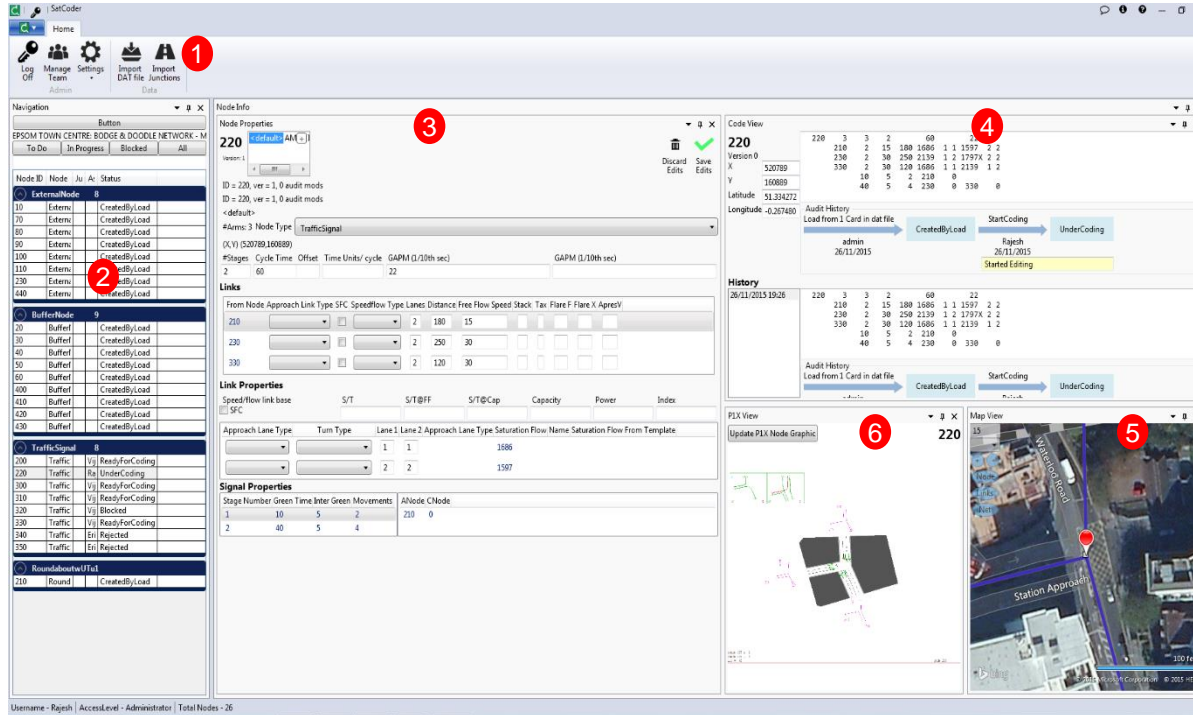


ATKINS



Sneak Preview

Interface



- 1 Ribbon Control
- 2 Navigation Panel
- 3 Node Property Window
- 4 Code View Window
- 5 Map View Window
- 6 P1X View Window

All the windows can be moved and resized as per user requirements

Navigation Panel

- Quickly view all the nodes with their status by type.
- Apply filters
- Assign nodes for coding/reviewing to the team
- Change the status of the node
- Export junction log for reporting

Navigation
EPSOM TOWN CENTRE: BODGE & DOODLE NETWORK - MAR14

To Do In Progress Blocked All

Node.ID	Node Type	Junction	Assigned To	Status
ExternalNode 8				
10	ExternalNode			CreatedByLoad
70	ExternalNode			CreatedByLoad
80	ExternalNode			CreatedByLoad
90	ExternalNode			CreatedByLoad
100	ExternalNode			CreatedByLoad
110	ExternalNode			CreatedByLoad
230	ExternalNode			CreatedByLoad
440	ExternalNode			CreatedByLoad
TrafficSignal 8				
200	TrafficSignal		Coder	UnderCoding
220	TrafficSignal		Coder	ReadyForCoding
300	TrafficSignal		Coder	ReadyForCoding
310	TrafficSignal		Coder	ReadyForCoding
320	TrafficSignal		Coder	ReadyForCoding
330	TrafficSignal		Coder	ReadyForCoding
340	TrafficSignal		Coder	ReadyForCoding
350	TrafficSignal		Coder	ReadyForCoding
RoundaboutwUTu1				
210	RoundaboutwUTurns			CreatedByLoad
BufferNode 9				
20	BufferNode			CreatedByLoad
30	BufferNode			CreatedByLoad
40	BufferNode			CreatedByLoad
50	BufferNode			CreatedByLoad
60	BufferNode			CreatedByLoad
400	BufferNode			CreatedByLoad
410	BufferNode			CreatedByLoad
420	BufferNode			CreatedByLoad
430	BufferNode			CreatedByLoad

Node Property Window

- Window to view and edit the node properties.
- Switch between scenarios/Time period
- Different templates based on Node type
- Options to change node type
- User friendly signal coding interface

Node Info

Node Properties
200
<default> AM PM
Version: 0

Edit Submit Block Review Approve Reject

#Arms: 3 Node Type: TrafficSignal
(X,Y) (520500,1607)

#Stages: 3 Offset Time Units/ cycle GAP (1/10th sec) GAPM (1/10th sec)

Links

From Node	Classification	SFC	Lanes	Distance	Free Flow Speed	Stack	Tax	Flare F	Flare X	ApresV
10		<input type="checkbox"/>	1	150	30					
210		<input type="checkbox"/>	0							
310		<input type="checkbox"/>	1	100	30					FX 2

Link Properties

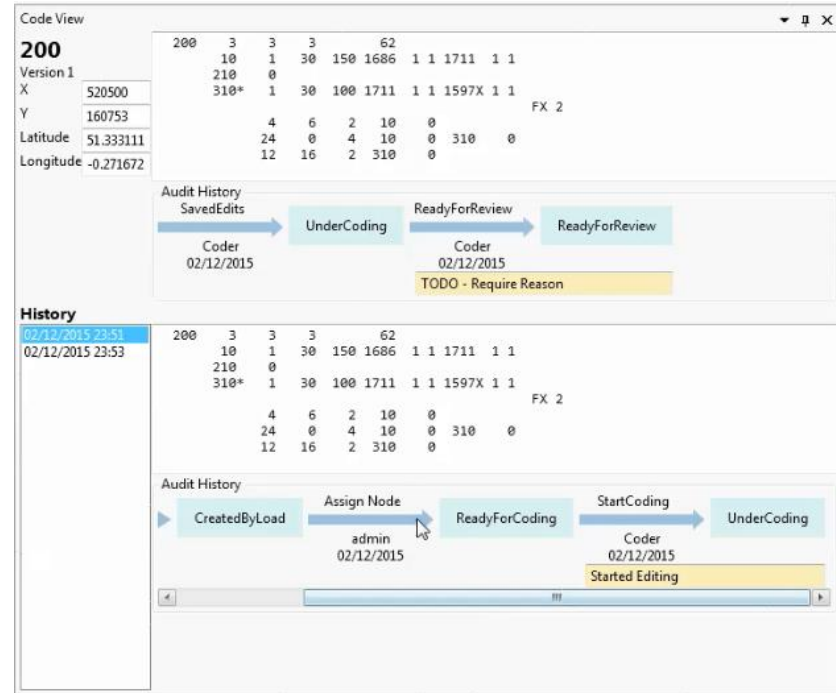
	Template	S/T	S/T@FF	S/T@Cap	Capacity	Power	Index
<input type="checkbox"/> SFC							
To Node	Approach	Lane Type	Turn Type	Turn Type Flow	Lane 1	Lane 2	Saturation Flow
210					1	1	1686
310					1	1	1711

Signal Properties
Cycle Time: 62

Stage 1	Stage 2	Stage 3
0		
4	6 24	0 12 16
10 -> 0	10 -> 0	310 -> 0
	310 -> 0	

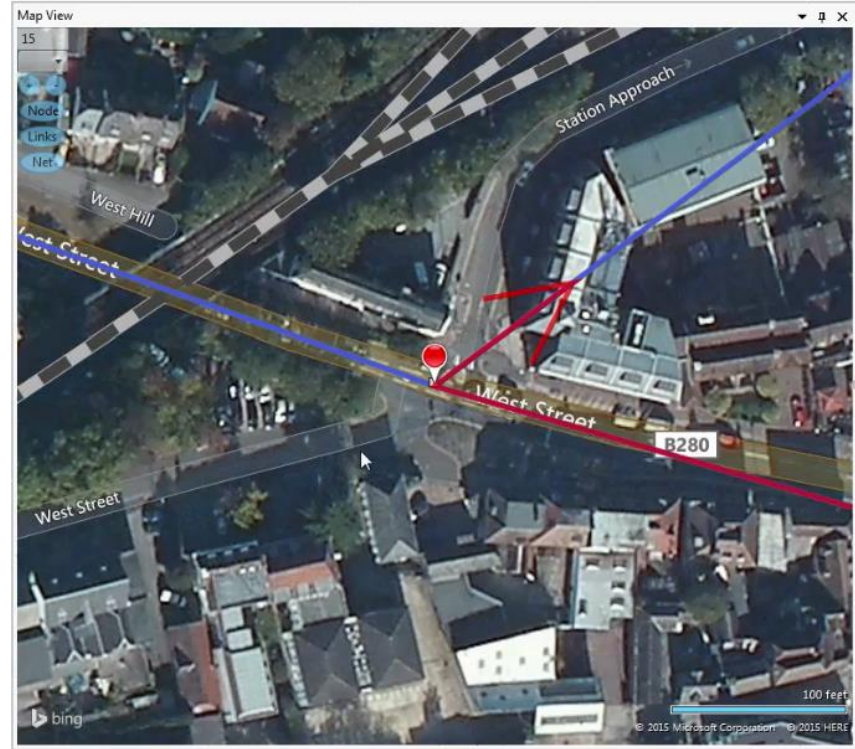
Code View Window

- Panel to view the coding similar to the SATURN dat file format.
- Track changes carried out by coders/ reviewers
- Easy comparison between different versions / time period / scenario
- History with comments



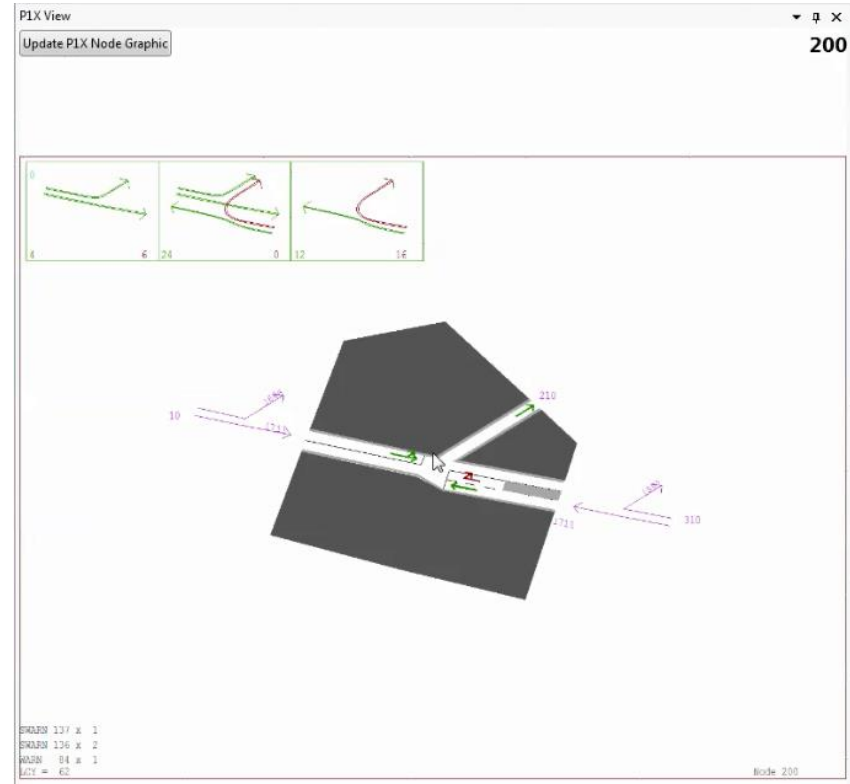
Map View Window

- Connection to online Bing Maps.
- Fully licensed and can be used in reports and analysis
- Switch between different map layers (Aerial, Hybrid, Road)
- Displays node, links and turn selected
- Control the extent of network to be displayed



P1X View Window

- P1X node graphics - most familiar window
- Easy to view coding changes
- Updates on the fly



Manage Project and User Settings

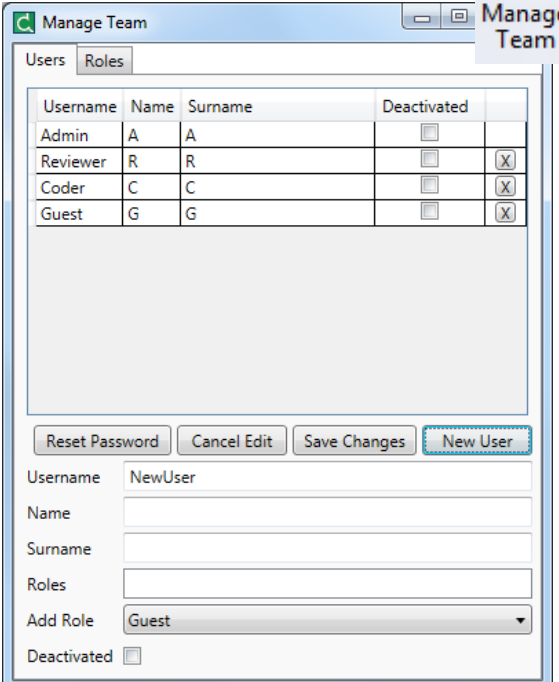


- Project Settings
 - Choose SATURN version
 - Use custom control network template for the project
 - Set Policies
 - Define Time periods / Scenarios
 - Password protected – Admin controlled
- User Settings
 - Set SATURN installation path
 - Manage password

The image displays two overlapping software dialog boxes. The background box is titled 'Project Settings' and contains fields for 'Project Title' (with 'UGM Demo' entered), 'Saturn Version' (a dropdown menu showing '11.3.12U' and 'Level N4 - MULTI-CORE'), and a 'Control File' section with an 'Export Current Control File' button. Below these are sections for 'Policies' (with checkboxes for 'CanAssignNodesToSelf' and 'CanReviewOwnCode') and 'Scenarios' (with a list containing 'AM' and 'PM'). A 'Save' button is at the bottom. The foreground box is titled 'User Settings' and contains a 'Saturn Install Locations' section with a text field showing 'C:\SATWIN' and 'C:\Program Files (x86)\Atkins\SATWIN 11.XX', an 'Add' button, and three password fields labeled 'Current Password', 'New Password', and 'Confirm New Password'. 'Submit' and 'Cancel' buttons are at the bottom.

Manage Team

- Setup team for the project
- Different access levels
 - Administrator
 - Reviewer
 - Coder
 - Guest
- Add, delete users or change access level



The screenshot shows a web application window titled "Manage Team". It has two tabs: "Users" (selected) and "Roles". The "Users" tab displays a table with the following data:

Username	Name	Surname	Deactivated	
Admin	A	A	<input type="checkbox"/>	
Reviewer	R	R	<input type="checkbox"/>	X
Coder	C	C	<input type="checkbox"/>	X
Guest	G	G	<input type="checkbox"/>	X

Below the table are four buttons: "Reset Password", "Cancel Edit", "Save Changes", and "New User" (highlighted with a blue border). Below the buttons are input fields for "Username" (containing "NewUser"), "Name", "Surname", "Roles", "Add Role" (a dropdown menu showing "Guest"), and "Deactivated" (a checkbox).

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Questions?

