

Technical note

From: Shane MacLaughlin
Date: 24/02/2011
Re: Reporting lift and slue between two models

This memo gives an example of how to use the lift and slue reporting functionality added in SCC 9.4.1. This involves comparison of a design model with a survey model for left (vertical separation) and slue (lateral separation) on nominated left and right rails. It also computes cant a gauge between left and right rails, and reports any failures to meet tolerance in cant. To demonstrate this functionality, do the following;

1) Import your GENIO files to create a design model, a survey model, and an alignment. for example

- **File / Model / MOSS GENIO file** picking C:\SCC\Lift and Slue\Example1
- **- DESIGN.TXT**
- **File / Save / Design.Model**
- **File / Model / MOSS GENIO file** picking C:\SCC\Lift and Slue\Example1
- **- SURVEY.crd**
- **File / Save / Survey.Model**
- **File / New / SCC Alignment**
- **File / Import / MOSS GENIO geometry strings** picking C:\SCC\Lift and Slue\Example1 - DESIGN.TXT
- Pick MC02 as the alignment string to import
- **File / Save / MC02.Alignment**
-

2) Open your design model, pick **Design / Report rail lift and slue**, select the files you have just created and the design and survey strings to analyse. For example

3) When prompted, pick **Rail lift and slue.rpt** from the reports list. This will produce a report as shown below. The report is broken down into separate sections for lift and slue values between survey and design for left and right rails, cant and gauge between rails with any values outside tolerance highlighted in red, and surveyed 6/10 foot. A full copy of this file is available under <http://www.atlasfiles.com/scc-users/rail%20lift%20and%20slue.pdf>

Created on	07/03/2008	A T L A S	
By	SCC for Windows v9.11.9 (C) 1990 - 2011 Atlas Computers Ltd	C:\SCC\Rail lift and slue.rpt	
Tel: Fax: email: web:			
<h2>Rail lift & slue</h2>			
Alignment:	MC02.Alignment	<u>Model</u>	<u>Left</u> <u>Right</u> <u>Ref Str</u>
From Ch:	147,332.91	Design: Design.Model	ML02 (5) ML02 (5)
To Ch:	149,937.64	Survey: Survey.Model	RU06 (6) RU07 (7) RD01 (1)
Ch int:	10.00		

Lift and slue comparison

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ATLAS
 C:\SCC\Rail lift and slue.rpt

Left rail survey vs design report

<u>Chainage</u>	<u>Survey Elev</u>	<u>Design Elev</u>	<u>Lift</u>	<u>Slue</u>
147,340.000	78.073	78.074	0.001	0.015
147,350.000	78.094	78.096	0.003	0.013
147,360.000	78.124	78.123	-0.001	0.011
147,370.000	78.158	78.154	-0.004	0.011
147,380.000	78.190	78.187	-0.002	0.007
147,390.000	78.224	78.221	-0.003	0.004
147,400.000	78.260	78.255	-0.006	0.003
147,410.000	78.290	78.288	-0.002	0.002
147,420.000	78.320	78.322	0.001	0.004
147,430.000	78.353	78.355	0.002	0.005
147,440.000	78.389	78.389	-0.001	0.008
147,450.000	78.420	78.422	0.002	0.009
147,460.000	78.456	78.456	0.000	0.012
147,470.000	78.491	78.489	-0.001	0.019
147,480.000	78.524	78.523	0.000	0.026
147,490.000	78.561	78.557	-0.004	0.028
147,500.000	78.598	78.590	-0.008	0.029
147,510.000	78.634	78.624	-0.010	0.031
147,520.000	78.666	78.657	-0.009	0.033
147,530.000	78.696	78.691	-0.005	0.038

Cant and gauge checks

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ATLAS
 C:\SCC\Rail lift and slue.rpt

Surveyed gauge and cant

<u>Chainage</u>	<u>Gauge</u>	<u>Cant</u>
Ch 147,340.00	1.435	0.058
Ch 147,350.00	1.434	0.058
Ch 147,360.00	1.433	0.056
Ch 147,370.00	1.434	0.054
Ch 147,380.00	1.435	0.054
Ch 147,390.00	1.434	0.056
Ch 147,400.00	1.435	0.053
Ch 147,410.00	1.435	0.053
Ch 147,420.00	1.436	0.053
Ch 147,430.00	1.435	0.055
Ch 147,440.00	1.435	0.056
Ch 147,450.00	1.434	0.060
Ch 147,460.00	1.432	0.060
Ch 147,470.00	1.437	0.061
Ch 147,480.00	1.435	0.059
Ch 147,490.00	1.434	0.057
Ch 147,500.00	1.434	0.057
Ch 147,510.00	1.434	0.057
Ch 147,520.00	1.433	0.056
Ch 147,530.00	1.433	0.056
Ch 147,540.00	1.438	0.057
Ch 147,550.00	1.440	0.055
Ch 147,560.00	1.442	0.055
Ch 147,570.00	1.439	0.057
Ch 147,580.00	1.436	0.057
Ch 147,590.00	1.436	0.057
Ch 147,600.00	1.437	0.058

Gauge: 1.435
 Tolerance: 0.005

!Gauge > tolerance (1.440)
 !Gauge > tolerance (1.440)

Reference rail checks

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C:\SCC\Rail lift and slue.rpt

Surveyed 6/10 foot

<u>Chainage</u>	<u>Datum Elev</u>	<u>Rail Elev</u>	<u>Elev Diff</u>	<u>6-Foot Dis</u>
147,340.00	78.158	78.073	-0.086	2.000
147,350.00	78.184	78.094	-0.090	2.004
147,360.00	78.211	78.124	-0.087	2.007
147,370.00	78.234	78.158	-0.075	2.015
147,380.00	78.255	78.190	-0.065	2.021
147,390.00	78.276	78.224	-0.052	2.028
147,400.00	78.300	78.260	-0.040	2.033
147,410.00	78.334	78.290	-0.044	2.037
147,420.00	78.368	78.320	-0.047	2.040
147,430.00	78.407	78.353	-0.053	2.043
147,440.00	78.442	78.389	-0.053	2.042
147,450.00	78.467	78.420	-0.047	2.043
147,460.00	78.494	78.456	-0.038	2.042
147,470.00	78.520	78.491	-0.030	2.038
147,480.00	78.547	78.524	-0.024	2.035
147,490.00	78.582	78.561	-0.021	2.032
147,500.00	78.621	78.598	-0.023	2.028
147,510.00	78.655	78.634	-0.021	2.021