

CHC Navigation Ltd

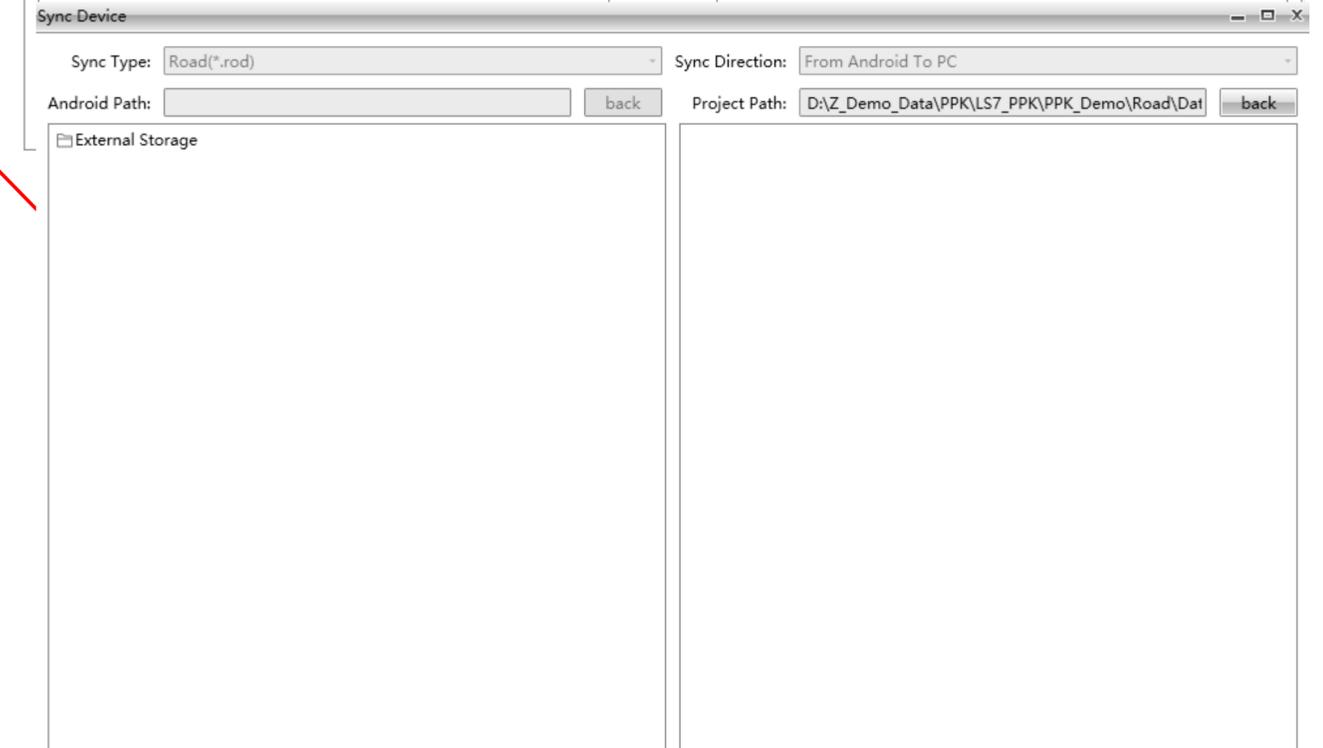
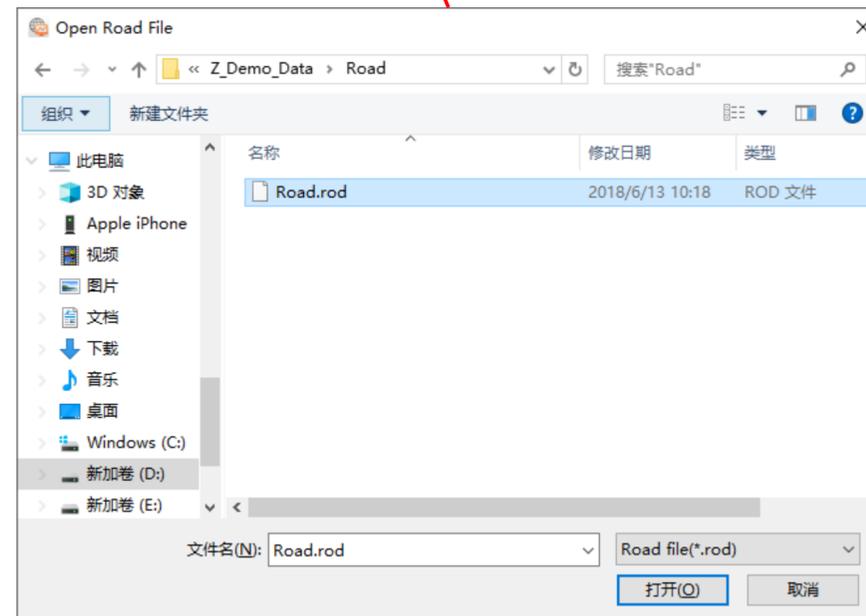
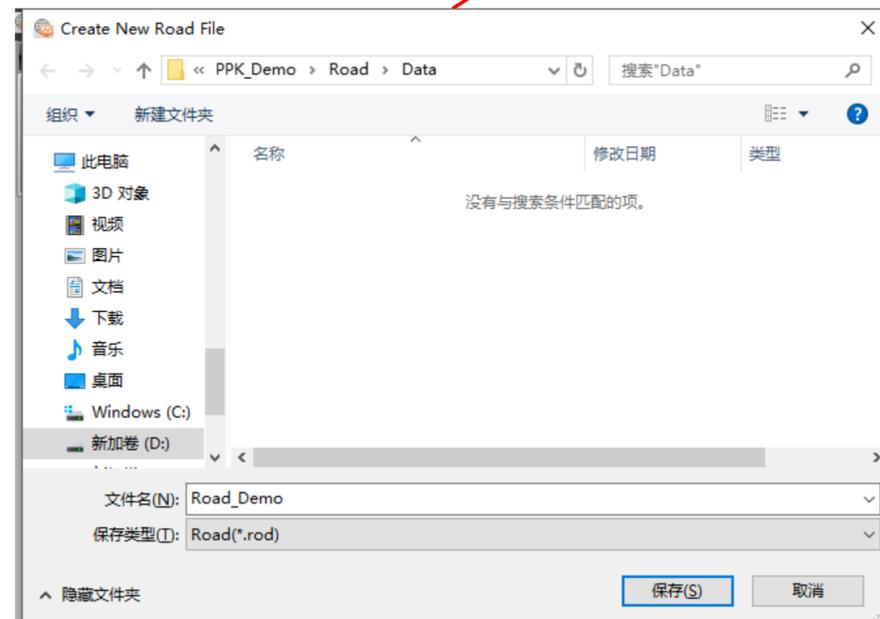
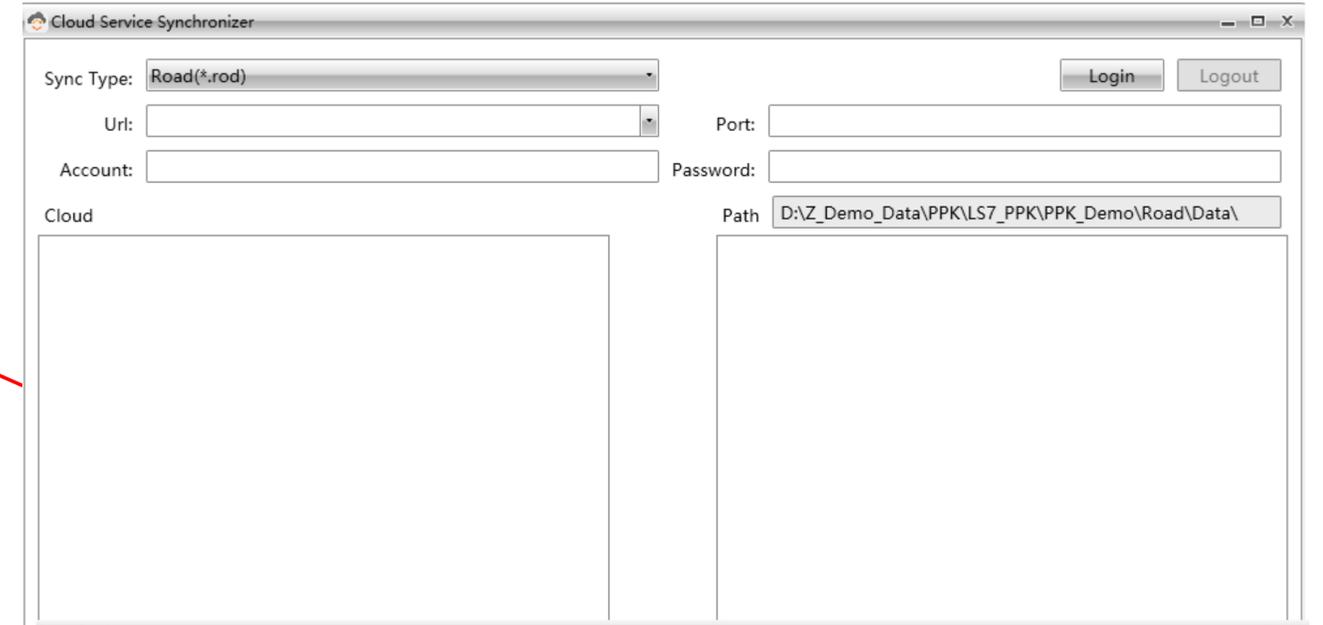
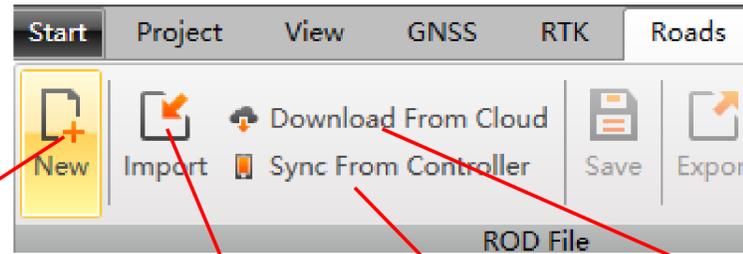
CGO2 Work Flow – Road

Step1: Create one new project

Please Refer to: [CGO2 Work flow - Projects](#)

Step2: Create/Import road data

The demo data can be found in **CGO2 Training PPT – Road** folder



Compilation – Horizontal POI



#	Mileage(m)	North(m)	East(m)	In Spiral Length(m)	Radius(m)	Out Spiral Length(m)	Be
1	K60+700.0000	3003312.76400	432385.97300				
2	K62+112.0199	3002345.14200	433414.32500		2500.0000		
3	K63+203.4675	3001452.38400	434045.14500		3000.0000		
4	K64+418.2487	3000384.65998	434625.35401	100.0000	460.0000	100.0000	
5	K65+654.6013	3000009.97398	435823.80008	100.0000	550.0000	100.0000	
6	K66+622.2130	2998846.17499	435338.23100	80.0000	400.0000	80.0000	
7	K67+208.1096	2998416.17000	434937.74900	100.0000	800.0000	100.0000	
8	K67+711.0341	2997907.01697	434850.11100	70.0000	255.5770	70.0000	
9	K67+798.6304	2997832.63100	434800.36600				
10							

Compilation – Stations Equations

#	Before Station(m)	End Station(m)	Description
1	K26+572.336	K26+574.000	Short equation length 1.664

Compilation – Vertical Alignment

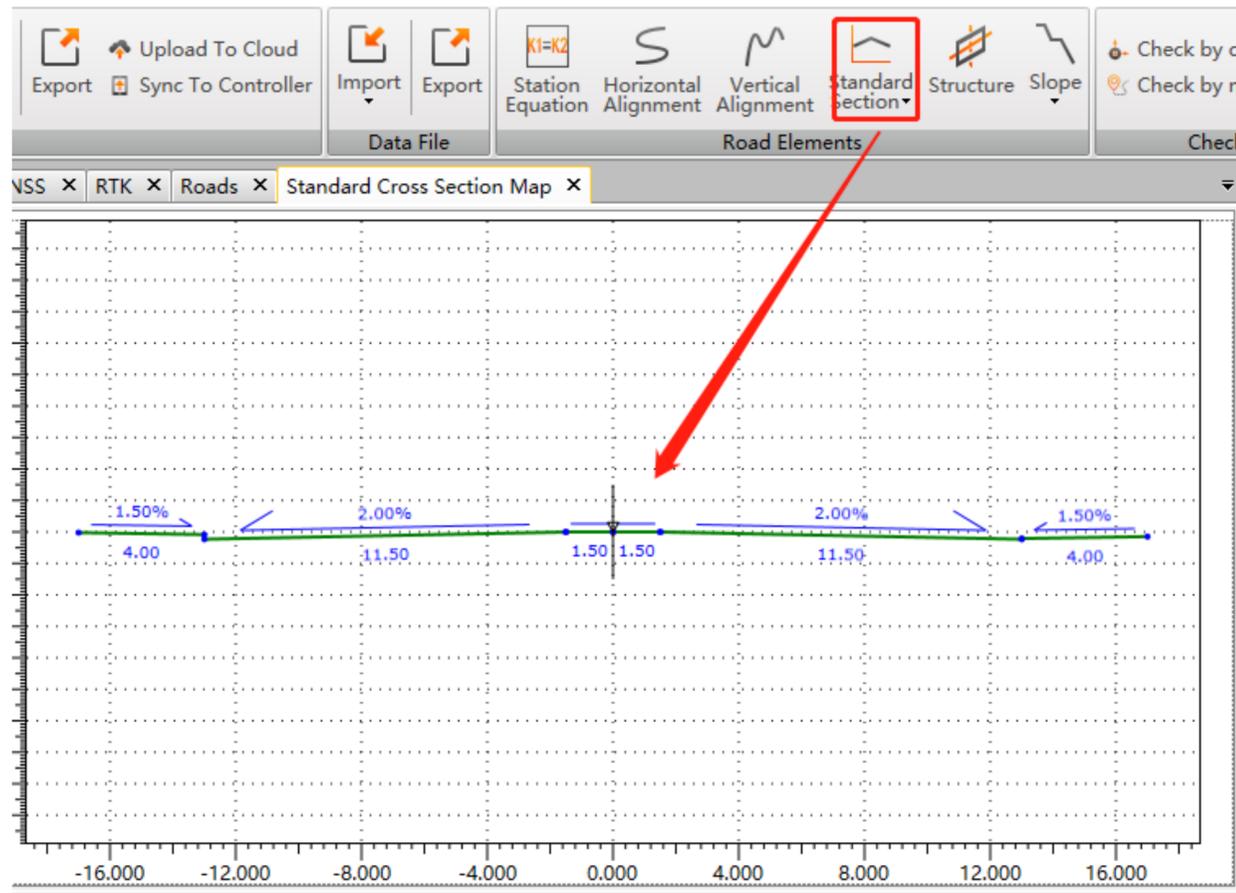
The screenshot displays the CHCNAV software interface for vertical alignment. On the left, a graph shows the vertical alignment curve with stationing on the x-axis (61000.000 to 68000.000) and elevation on the y-axis (874.000 to 914.000). Key points are labeled with stationing values such as K60+81.6640, K61+081.6640, K61+856.6640, K62+401.6640, K63+211.6640, K63+601.6640, K64+361.6640, K64+771.6640, K65+201.6640, K65+726.6640, K66+626.6640, K67+081.6640, K67+396.6640, and K67+800.2960.

On the right, a table provides detailed data for each stationing point:

#	Mileage(m)	Height(m)	Radius(m)	In Slope	Out Slope	In Tangent(m)	Out Tangent(m)
1	K60+701.6640	913.00000		0.00%	-2.00%	0.0000	0.0000
2	K60+851.6640	910.00000	13000.0000	-2.00%	-3.00%	65.0000	65.0000
3	K61+081.6640	903.10000	8000.0000	-3.00%	-0.31%	107.7686	107.7686
4	K61+856.6640	900.73018	10000.0000	-0.31%	-3.00%	134.7124	134.7124
5	K62+401.6640	884.38000	20000.0000	-3.00%	-1.20%	180.0032	180.0032
6	K63+211.6640	874.66000	10400.0000	-1.20%	2.00%	166.4000	166.4000
7	K63+601.6640	882.46000	20000.0000	2.00%	3.00%	100.0000	100.0000
8	K64+361.6640	905.26000	4600.0000	3.00%	-4.68%	176.5951	176.5951
9	K64+771.6640	886.08000	4613.7440	-4.68%	0.50%	119.4510	119.4510
10	K65+201.6640	888.23000	15800.0000	0.50%	3.00%	197.5000	197.5000
11	K65+726.6640	903.98000	22000.0000	3.00%	0.50%	275.0000	275.0000
12	K66+626.6640	908.48000	3900.0000	0.50%	-4.94%	106.0959	106.0959
13	K67+081.6640	885.99930	4500.0000	-4.94%	-0.70%	95.4183	95.4183
14	K67+396.6640	883.79430	11000.0000	-0.70%	0.50%	66.0000	66.0000

The software interface also shows a toolbar with various road design tools, including 'Vertical Alignment', 'Horizontal POI', 'Horizontal Element', 'Standard Cross Section', 'Widening', and 'Superelevation'. A message bar at the bottom indicates '0 Errors', '2 Warnings', and '34 Notes'.

Compilation – Standard Section



#	Mileage(m)	Method	人行道-L(m)	机动车道-L(m)
1	K60+800.0000	Linear	3.0000	

Map GNSS X RTK X Roads X Standard Cross Section Map X

Elevation Design Level: Plan

Offset(m): 0

Left Side

#	Type	Width(m)	Slope (%)	Delta Height
1		1.5000	0.00	0.0000
2		11.5000	-2.00	0.0000
3		4.0000	1.50	0.1500

Right Side

#	Name	Width(m)	Slope (%)	Delta Height
1		1.5000	0.00	0.0000
2		11.5000	-2.00	0.0000
3		4.0000	1.50	0.0230

Buttons: Add, Insert, Delete, Apply

#	Mileage(m)	Method	人行道-L	机动车道-L	中央分隔带-L	中央分隔带-R	机动车道-R	人行道-R
1	K64+213.1600	Linear					-2.00	
2	K64+269.1600	Linear	-2.00					
3	K64+283.1600	Linear	-3.00				3.00	
4	K64+537.3670	Linear	-3.00				3.00	
5	K64+551.3670	Linear	-2.00					
6	K64+607.3670	Linear					-2.00	
7	K64+932.2160	Linear	-2.00					
8	K64+988.2160	Linear					-2.00	
9	K65+002.2160	Linear	3.00				-3.00	
10	K66+512.1000	Linear	-2.00					
11	K66+576.1000	Linear					-2.00	
12	K66+592.1000	Linear	3.00				-3.00	
13	K66+653.9390	Linear	3.00				-3.00	
14	K66+669.9390	Linear					-2.00	

Compilation - Structure

The screenshot displays the 'Structure' compilation interface in CHCNAV. The left panel shows a map view with a green structure line and a blue boundary line. The right panel shows a data table with the following columns: #, Mileage(m), Type, Build Type, cross angle, Forward Width(m), and Backward Width(m). The 'Structure' menu item is highlighted in orange, and a red arrow points from it to the 'cross angle' cell in the table, which contains the value '90°00'00.0000000\".

#	Mileage(m)	Type	Build Type	cross angle	Forward Width(m)	Backward Width(m)
1	K60+800.0000	Slab Culvert	Skew as Orthotropic	90°00'00.0000000"	4.0000	4.0000

Compilation – Solpe/Slope Library

The screenshot displays the CHCNAV software interface. On the left, a cross-section plot shows a vertical axis from 2.000 to 9.000 and a horizontal axis from -4.000 to 16.000. A red arrow points from the 'Slope' icon in the top toolbar to the 'Slope Section' icon in the 'Slope Section Library' panel. The plot shows a slope with a 1:1.5 ratio and a height of 10.00. The 'Slope Section Library' panel is open, showing two tables: 'Left Side Slope' and 'Right Side Slope'. The 'Left Side Slope' table contains one entry:

#	Name	StartStation(m)	StartTe
1	1	Left - Slope	

The 'Right Side Slope' table is currently empty. The 'Slope Section Library' panel also includes icons for Vertical Alignment, Standard Cross Section, Widening, Superelevation, and Structure. At the bottom of the library panel are 'Add' and 'Delete' buttons for each table, and a 'Save' button at the very bottom right.

Tools – Data checking

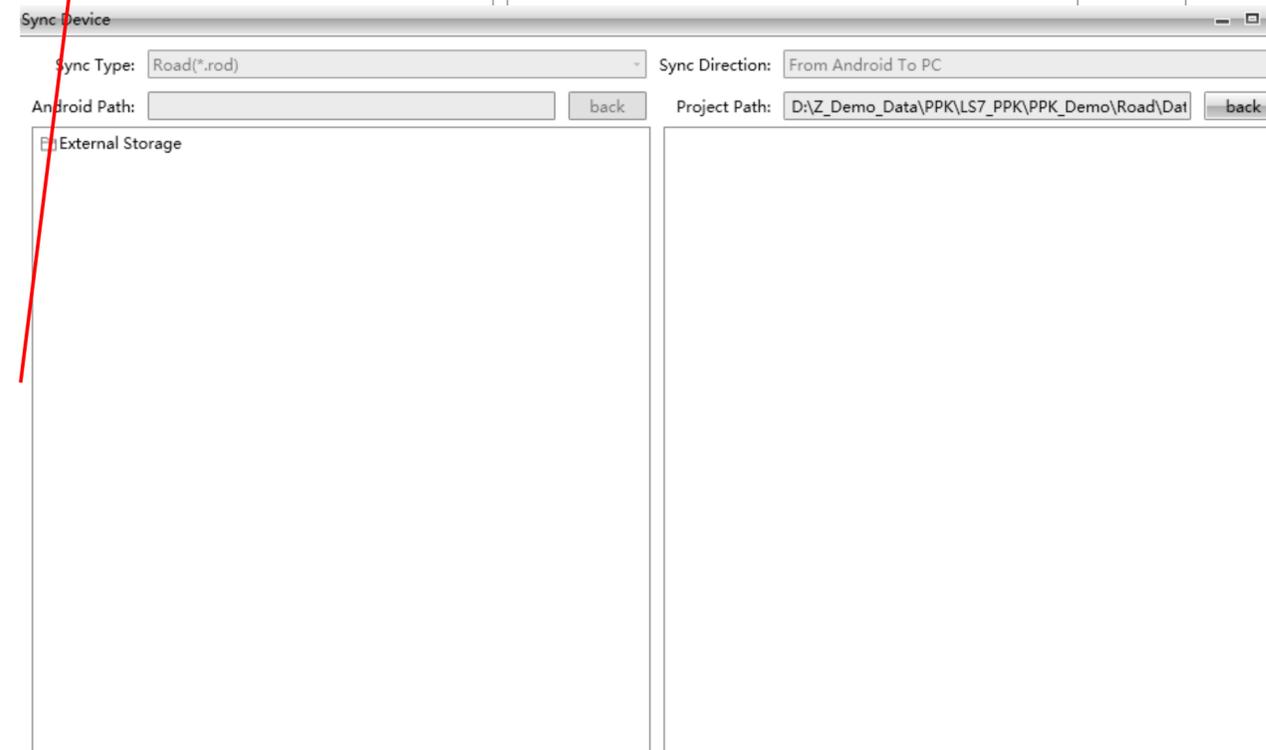
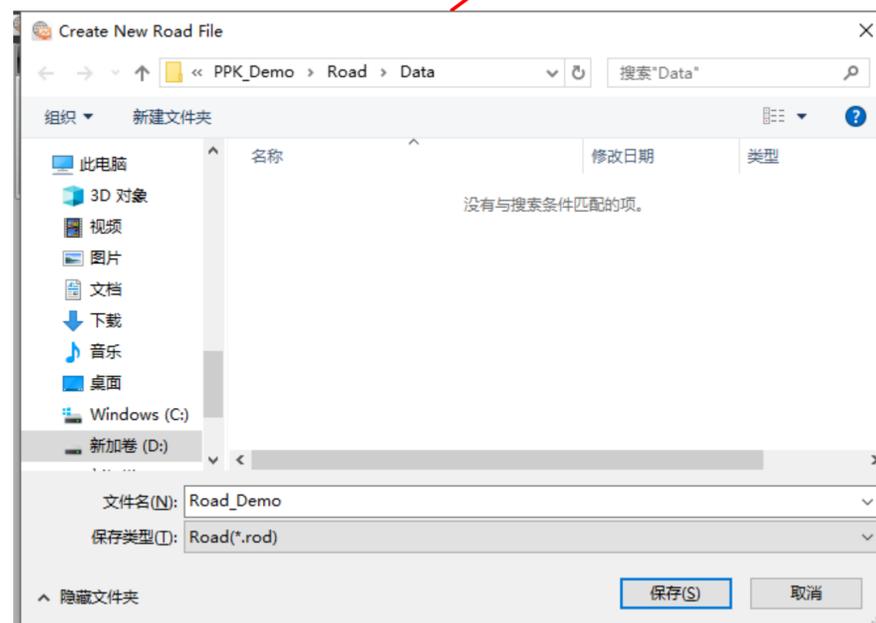
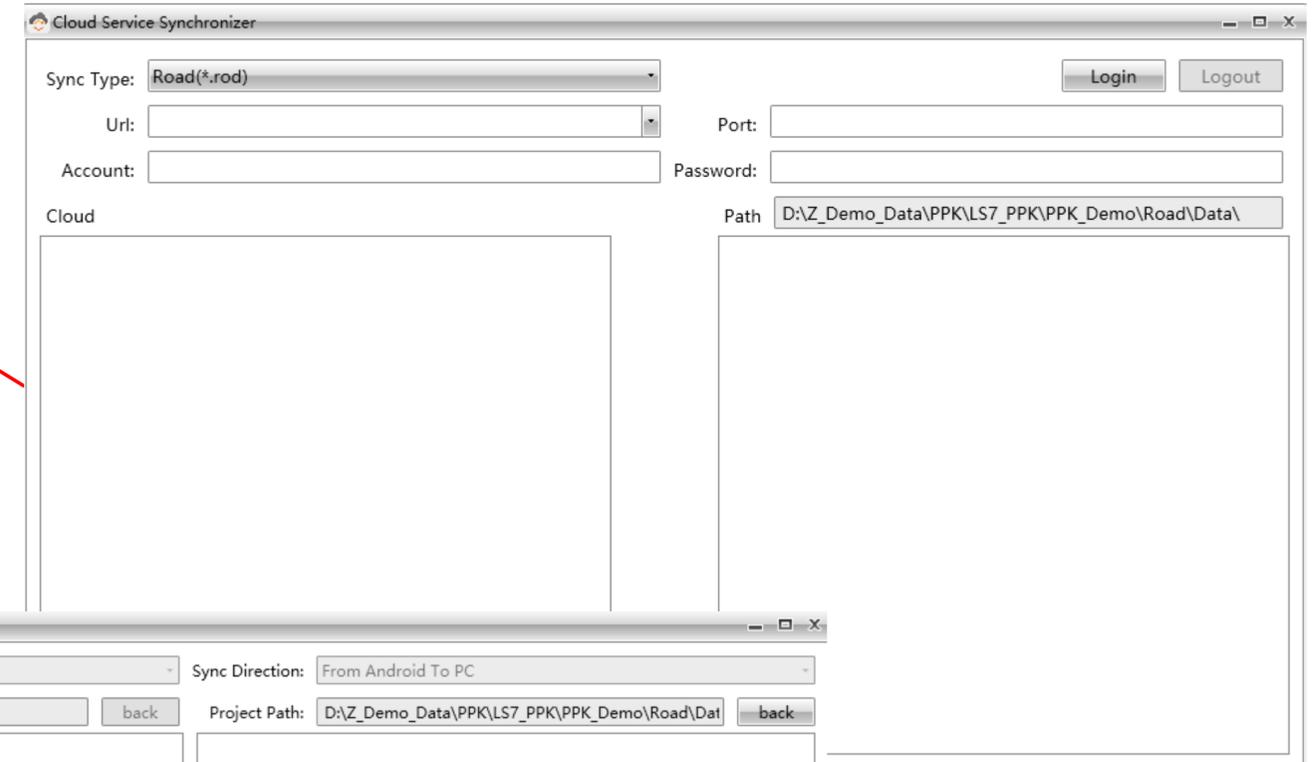
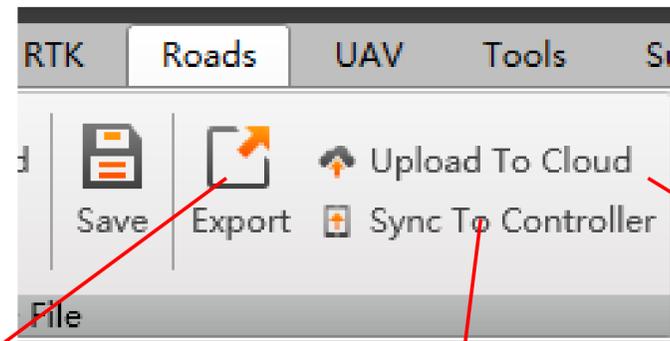
The screenshot displays the CHCNAV software interface for data checking. On the left, the 'Coordinate Checker' dialog is open, showing input fields for North(m) and East(m), both set to 0, and a 'Calculate' button. Below these are several empty fields for calculated values: Mileage(m), North(stake)(m), East(stake)(m), Height(stake)(m), North(calc.)(m), East(calc.)(m), Height(calc.)(m), Offset(m), and Azimuth.

The main interface features a toolbar with icons for Station Equation, Horizontal Alignment, Vertical Alignment, Standard Section, Structure, and Slope. Two options are highlighted with red boxes: 'Check by coordinate' and 'Check by mileage'. Below the toolbar, a 'Check' button is visible.

Two tables of coordinate data are shown. The first table, titled 'Check by coordinate', has columns for #, Name, North(m), East(m), and Height(m). The second table, titled 'Check by mileage', has columns for #, Name, North(m), East(m), and Height(m). Both tables contain 5 rows of data.

At the bottom, a profile graph shows elevation (Y-axis, 906.000 to 916.000) versus distance. The graph displays a horizontal line with several segments and labels: L4, L1, O, R1, R2, R3, R4. Slope percentages are indicated above the line: 1.50%, 2.00%, 2.00%, and 1.50%. A red arrow points from the 'Check by coordinate' button to the graph area.

Tools – Data sharing



In the United States, contact

iGage Mapping Corporation
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www.igage.com/cgo2

For demos, pricing and additional information.

30-day fully functional demos are available by software code.

THANK YOU

CHCNAV

Make your work more efficient