

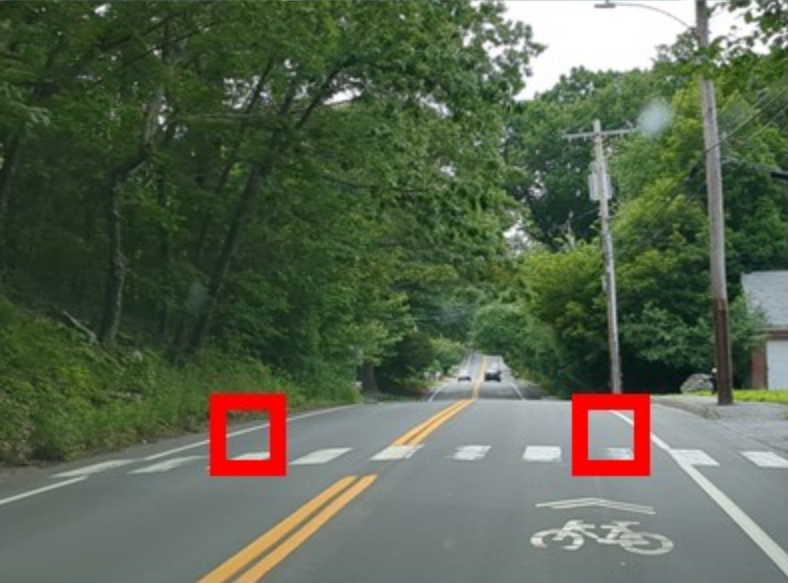
SCREENING TECHNOLOGY FOR THE ROAD MARKING.



Manufactured by MIYAGAWA KOGYO CO., LTD.

RMAD

ROAD MARKING ASSESSMENT DEVICE



RMAD ROAD MARKING ASSESSMENT DEVICE

AI (Artificial Intelligence) powered application



2023.3
Received the 2022 InfraDX Award

2022.3 **NETIS**
Registration : CG-190014-VE

2021.12
Received the 5th Infrastructure
Maintenance Award

Screening technology for the road marking.

You can easily diagnose the state of the **R**oad **M**arking by using the phone in the car

RAMD Component

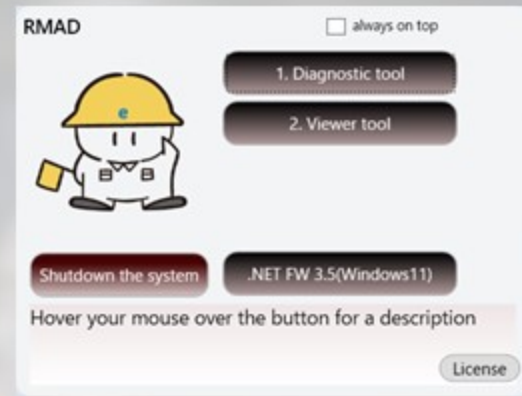
① Survey Module



② Diagnostics Module



③ Viewer Module



1. Improving safety and equalization of the work

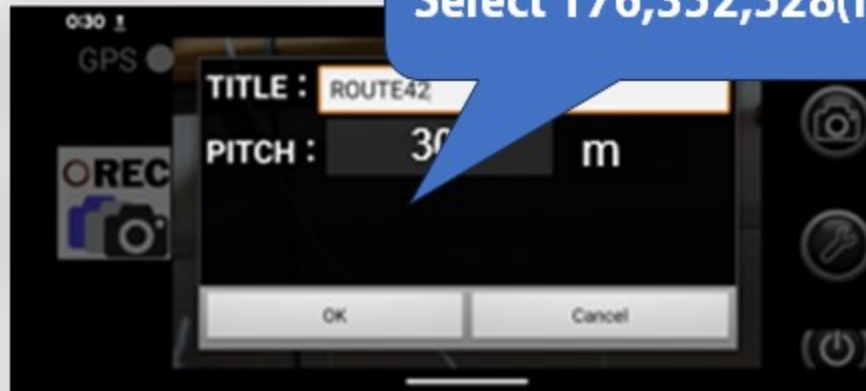


Select 10/20/30 (m)
Select 176,352,528 (ft)

- Just set the phone in the car and press the start shooting button to automatically take pictures at a set interval.

- Can be surveyed in the same speed zone as other traveling vehicles

- **No specialized knowledge or expensive, complicated equipment is required.**



2. Simplification of Inspection, Measurement and Labor Saving



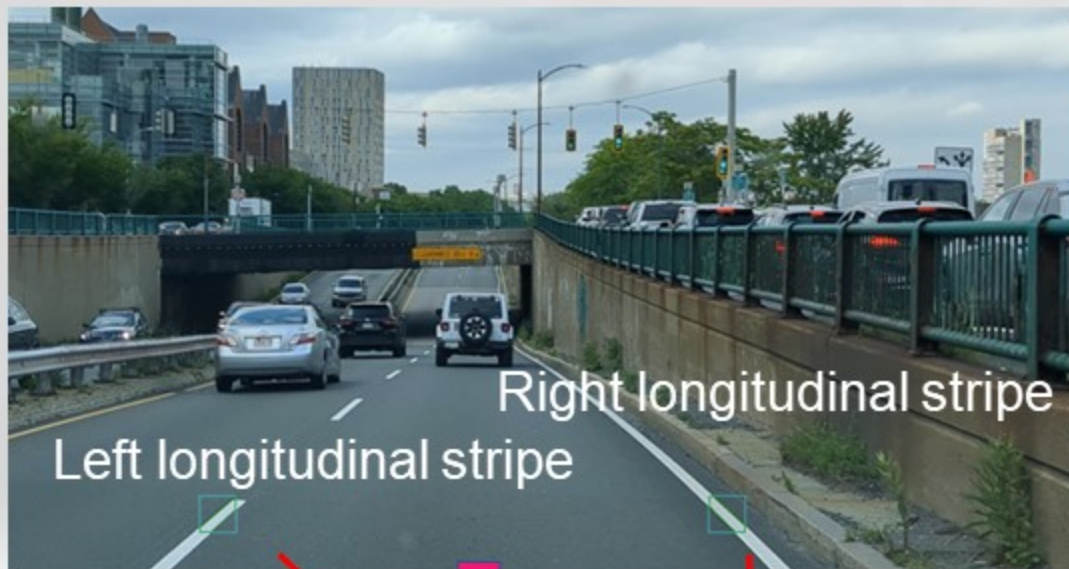
Missing Areas

- Focusing on percent missing rate and presence rate
- Quantification of the presence rate and evaluation judgment.

Applies to : Left longitudinal stripe, Right longitudinal stripe, dashed lines, colors in white and yellow.
Exceptions : In tunnels

3. AI-Powered Quantification

AI (Artificial Intelligence) powered application



Cropping target images
(Coloring degraded areas)

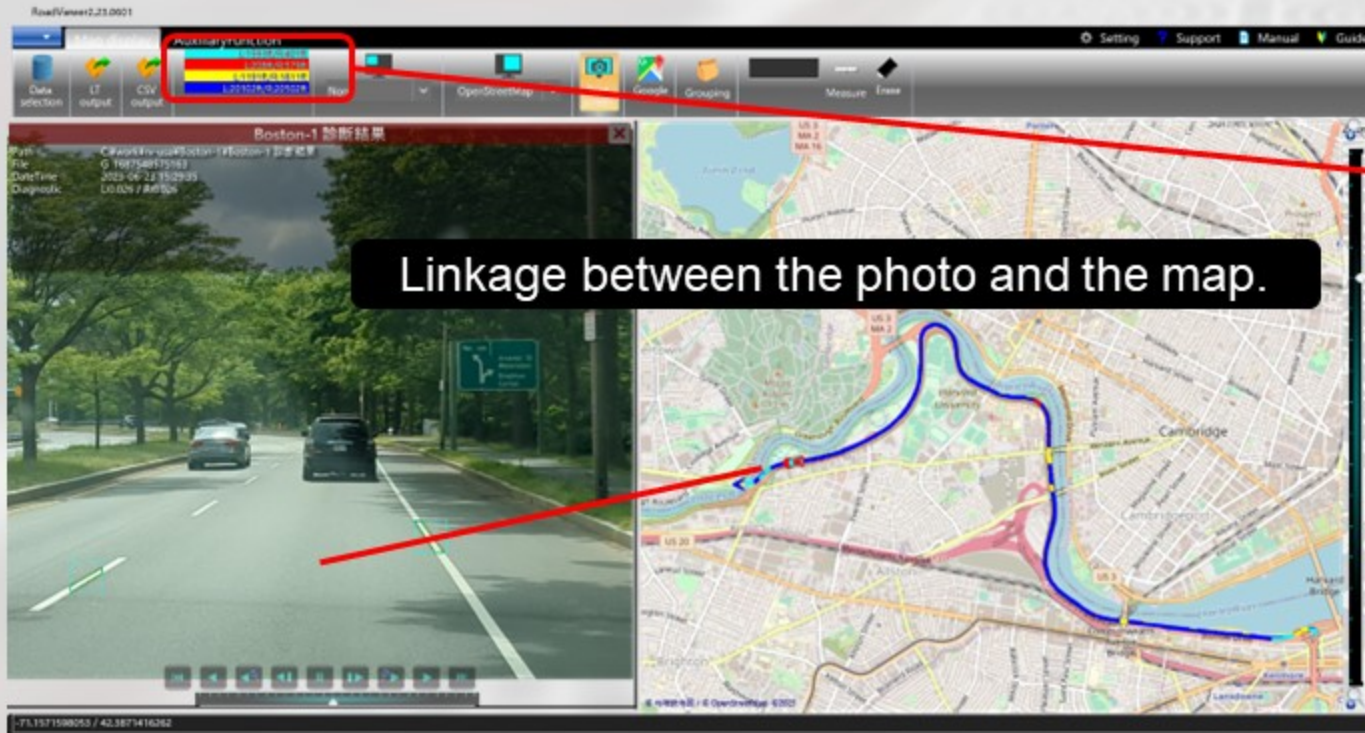
664	<input checked="" type="checkbox"/>	G_1554947009032.jpg	83.9 %
665	<input checked="" type="checkbox"/>	G_1554947071635.jpg	49.0 %
666	<input checked="" type="checkbox"/>	G_1554947071635.jpg	79.1 %
667	<input checked="" type="checkbox"/>	G_1554947073662.jpg	86.6 %
668	<input checked="" type="checkbox"/>	G_1554947073662.jpg	78.8 %
669	<input checked="" type="checkbox"/>	G_1554947075624.jpg	89.5 %
670	<input checked="" type="checkbox"/>	G_1554947075624.jpg	69.7 %
671	<input type="checkbox"/>	G_1554947077630.jpg	55.6 %
672	<input type="checkbox"/>	G_1554947077630.jpg	80.9 %
673	<input type="checkbox"/>	G_1554947079659.jpg	33.8 %
674	<input type="checkbox"/>	G_1554947079659.jpg	74.2 %
675	<input type="checkbox"/>	G_1554947081605.jpg	23.0 %
676	<input type="checkbox"/>	G_1554947081605.jpg	74.4 %
677	<input type="checkbox"/>	G_1554947083608.jpg	9.0 %
678	<input type="checkbox"/>	G_1554947083608.jpg	46.0 %
679	<input type="checkbox"/>	G_1554947085628.jpg	46.4 %

Presence rate
soundness evaluation

Output of Diagnosing results list

- Detection and judgment of left and right, white and yellow longitudinal stripe by AI

4. Standards of Repainting Visualization



Display approximate length of Road marking by rating rank

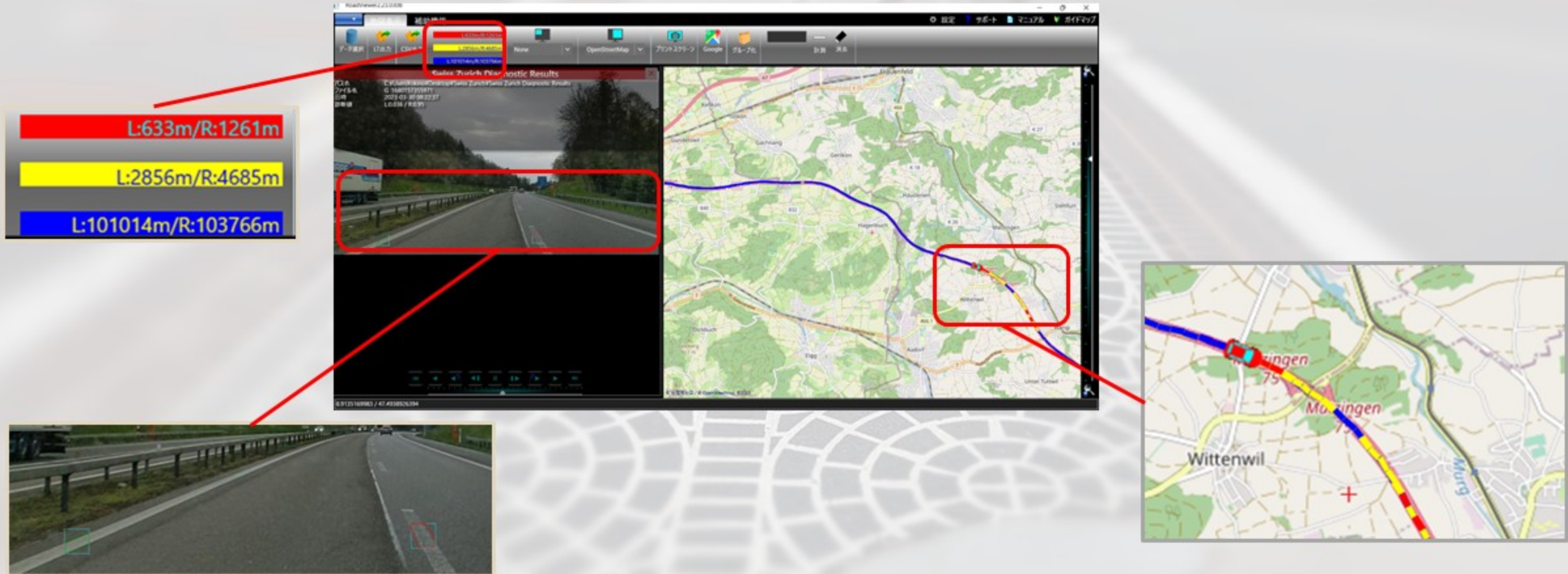
Can be used for work instructions documents of repainting and for maintenance planning

Display evaluation results in 5 colors

RED : Bad、Yellow : Warning、Blue : Good

AI (Artificial Intelligence) powered application

5. Viewer Examples Switzerland (Zurich)



5. Viewer Examples

DENVER

The screenshot displays the RoadViewer2.23.0601 application interface. At the top, the 'AuxiliaryFunction' menu is open, showing a color-coded legend for road marking types: cyan for L:58459ft/R:56586ft, red for L:28607ft/R:36877ft, yellow for L:53511ft/R:54530ft, and blue for L:219189ft/R:211773ft. Below the toolbar, a table titled 'denver-1 診斷結果' (denver-1 diagnosis results) provides details for the assessment:

Path	File	DateTime	Diagnostic
C:\work\ky-usa\denver-1\denver-1	G 1687194121039	2023-06-19 11:02:02	L0.003 / R0.013

The main view is split into two panels. The left panel shows a video feed of a multi-lane highway with a green overhead sign for 'Briargate Pkwy', 'N Academy Blvd', and 'Woodmen Rd'. The right panel shows a map view of the same area, with a red box highlighting the road segment being assessed. A red arrow points from the 'AuxiliaryFunction' legend to the data table, and another red arrow points from the map to the video feed.

5. Viewer Examples

BOSTON

The screenshot displays the RoadViewer2.23.0601 software interface. The top menu bar includes 'Main display', 'Auxiliary function', 'Setting', 'Support', 'Manual', and 'Guide'. The toolbar contains icons for 'Data selection', 'LT input', 'RT output', 'None', 'OpenStreetMap', 'Google', 'Grouping', 'Measure', and 'Erase'. The main window is divided into three sections: a video feed on the left showing a road with green lane markings, a map view on the right showing a street map with a red box highlighting a specific road segment, and a data panel on the left showing the following information:

Color	L (Left)	R (Right)
Cyan	1593ft	1174ft
Red	828ft	795ft
Yellow	1155ft	2995ft
Blue	19718ft	18329ft

The data panel also includes the following information:

- Path: C:\work\ry-usa\Boston-1 - e\Boston-1 - e 診断結果
- File: G_1687548283166
- DateTime: 2023-06-23 15:24:43
- Diagnostic: L:0.044 / R:0.028

The map view shows a street map of Boston with a red box highlighting a specific road segment. The video feed shows a road with green lane markings and a red box highlighting a specific road segment.