

Camera monitor system issues in Korea

2019. 10. 8

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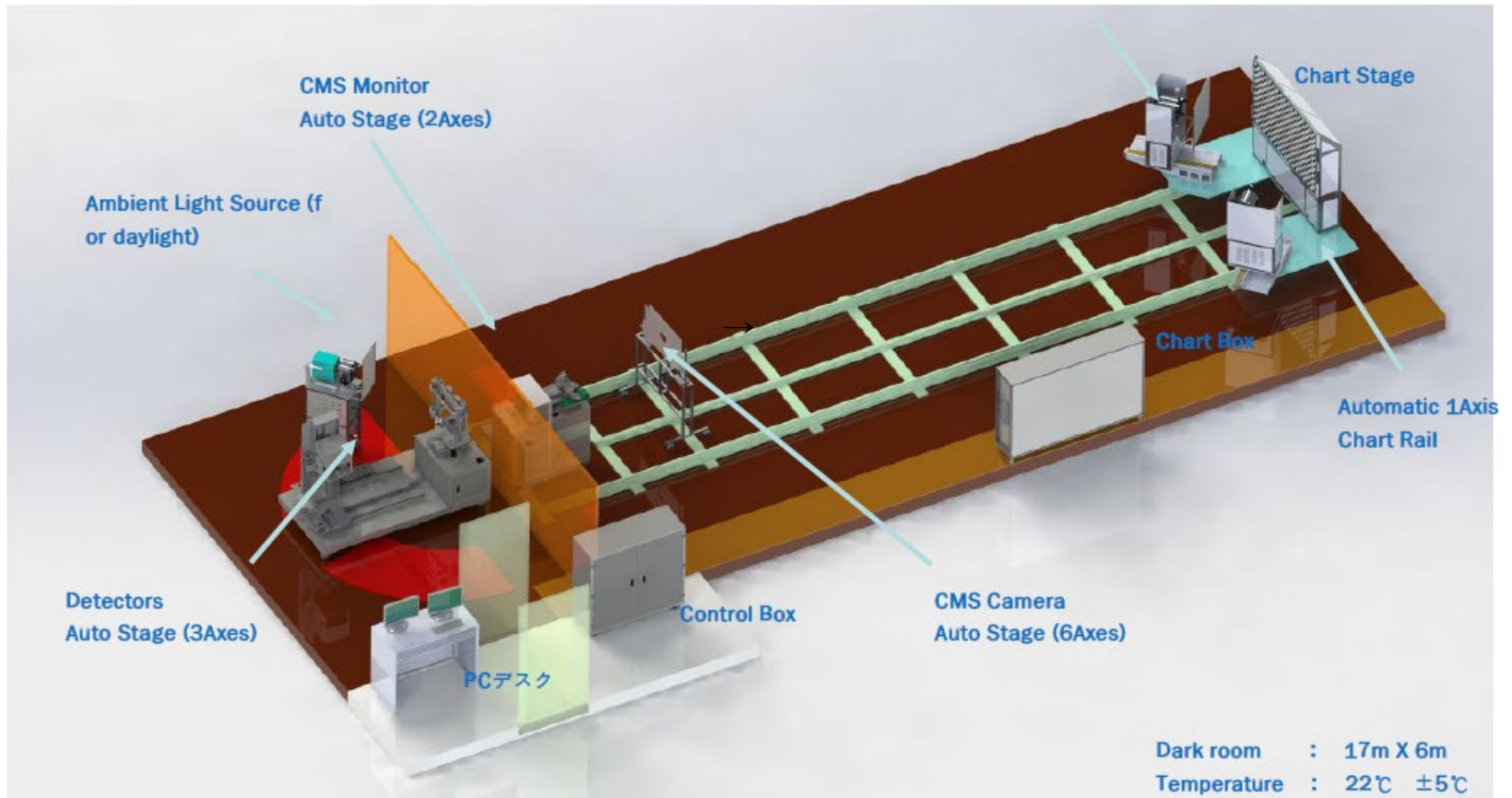
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Current situation

- (2016.06.18) Camera monitor system regulation released in R46
- (2017.01.09) Camera monitor system is added to KMVSS 50
- (2017.10.10) Test procedure for Camera monitor system completed
 - (There was no test facility)
- (recent) Considering for installation of test facility for CMS
 - Completely installed in July 2020
- Main issues
 - CMS test facility installation
 - Is vehicle level test for CMS needed or not?

Test facility

- Basic concept for installation(keep discussing)



Test facility

○ Information of instruments(summary)

- Environment : Darkroom(brightness adjustable space)
- Detector
 - Checking luminance value(point or area)
 - In case of area detecting, software will be used
- Light sources for testing
 - For monitor(uniformity), chart and point light sources
- Goniometer
- Software(Image analysis and calculation)

CMS test on vehicle

- Reason for why CMS test on vehicle is needed
 - Limitation(monitor, driver's eye position... not considered)
 - Efficiency of test(UN R 46 including rearward visibility)
 - There can be different test result(no one knows)

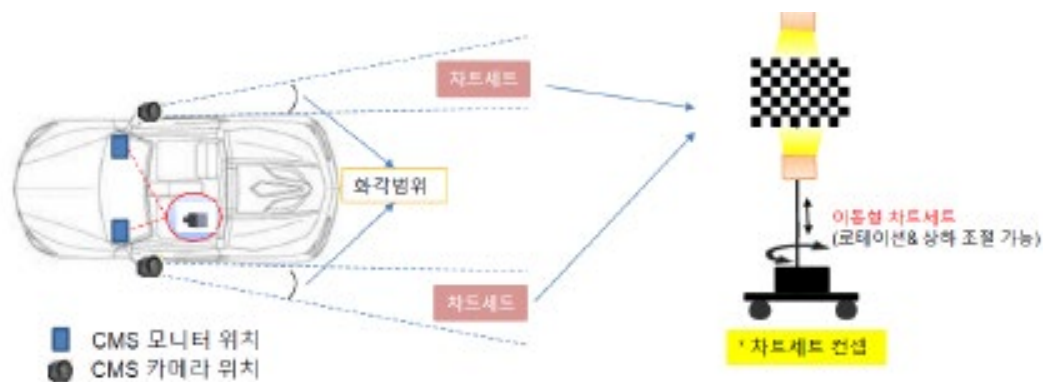


CMS test on vehicle

○ Test for comparison for vehicle test

– Basic concepts

- ① All x, y, z coordinates are needed for positioning
- ② Portable light source and testing charts
- ③ Sensor position : E points(originated on R-point)



CMS test on vehicle

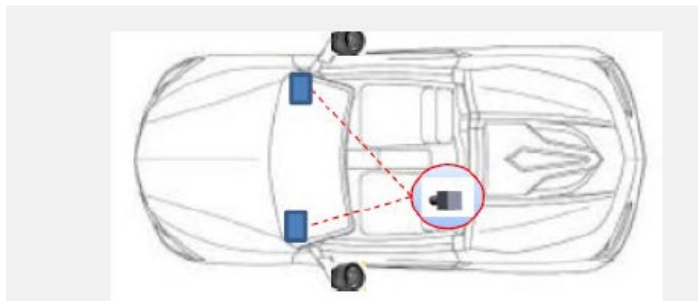
○ Test for comparison for vehicle test

– Test procedure

① Put detector on driver's eye point(R-point proving)

② Adjust detector's angle by rotating(after checking monitor angle)

③ CMS performance test



Conclusion

- Limitations
 - Portable light source for monitor test is needed(positioned in vehicle)
 - Flicker, Frame late, Image formation time, System latency
 - Those tests must be confirmed possible or not on the vehicle
- After installation, you can visit KATRI and see the facility
- Comparison test for CMS will be discussed
 - CMS test(on the vehicle vs only component)
 - Test result comparison between KATRI and other institute(same model)

Q & A

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