



Energy efficient lighting shunting areas

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ProRail

Improving light at shunting areas ProRail

Measures are:

- LED-light, not on traditional poles, but also on wires. Advantage is, it's avoiding shadows from trains, direct light above the footpath and maintenance area.
- Techniques to dim the light.
- Switching off light automatic when no one is present.
- Altogether we gain 50% energy efficiency.





Virtual reality as an aid for engineering efficient light solutions in shunting areas

- Tauw Consulting and ProRail have developed a VR-tool, to show and feel the impact of different solutions, rather than rely on light calculations only.
- This is done because ProRail is renewing the installations on a large number of shunting areas, to ensure a better visibility for the maintenance crews and train drivers, to lower life cycle costs and energy consumption.



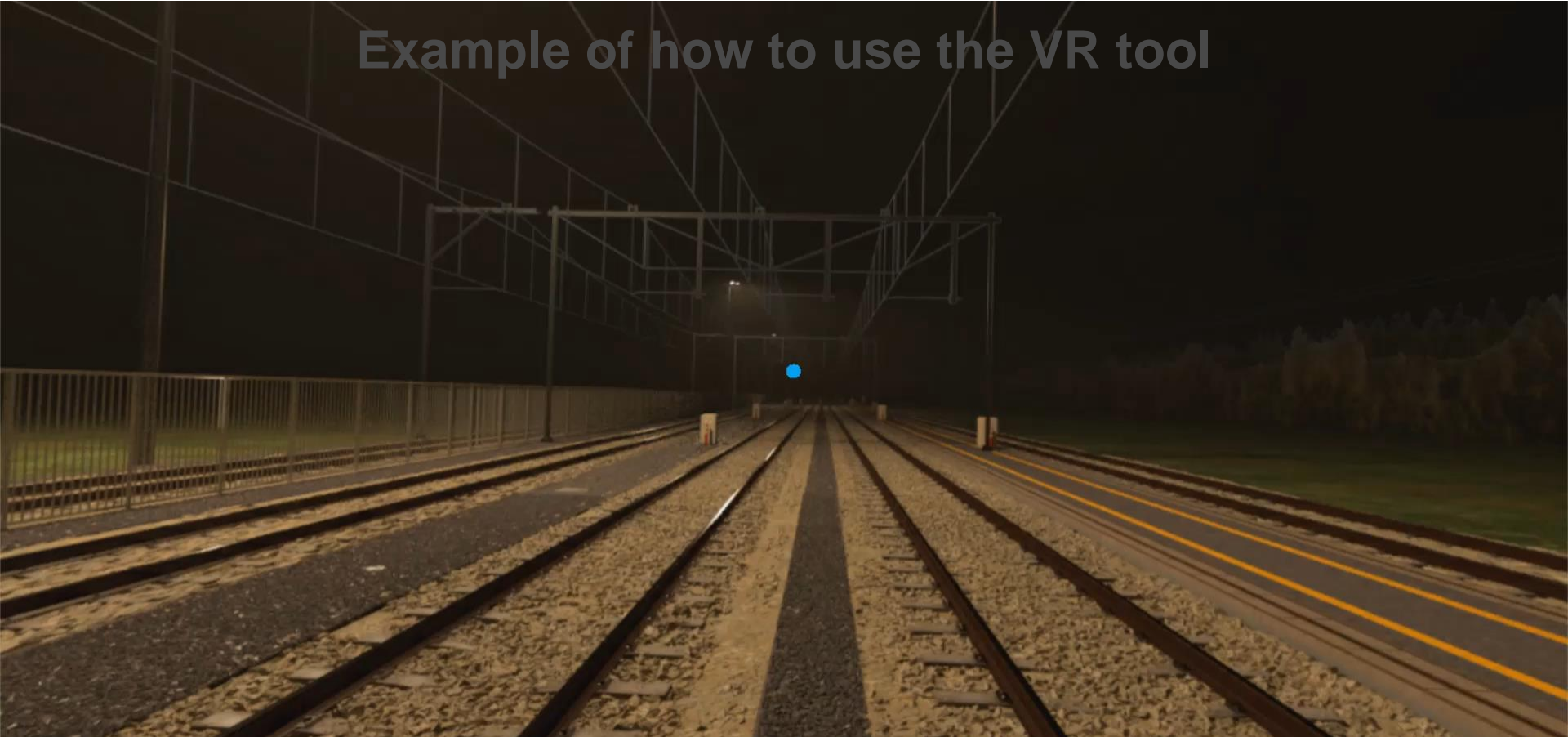
How to use VR as a engineering tool?



Trying the VR-tool in the workshop.
We use it for:

- Convincing stakeholders
 - Optimizing solution
 - Testing new solutions.
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- Have a look with the VR-glasses we've brought along.
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- Are there advantages in using these techniques?

Example of how to use the VR tool



Discussion

What are the experiences in other organizations with LED and sensors?

Have a look with the VR-glasses we've brought along.

Are there advantages in using these techniques?



Thank you for your
contribution

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