



Dedicated to innovation in aerospace

Distracted ATCOs miss important information

PRODUCTS & SERVICES



When are ATCOs paying attention and what distracts them?

ATCOs are continuously confronted with new technologies in their working positions, possibly leading to the inability of coping with the amounts and variety of information presented simultaneously to them. This may result in missing important cues and increased risk of distraction. It may also lead to overloading or accelerated fatigue. NLR can indicate precisely what the conditions are where a person loses the ability to deal with the information presented.



WHAT YOU NEED

- To determine the impact of changes on the operators division of attention in their working position
- An inventory of advantages and disadvantages of changes
- Advice on mitigating disadvantages of changes

WHAT WE DELIVER

NLR establishes accurate behaviour characteristics of ATCOs to changed working conditions. We deliver detailed reports on the various phenomena occurring during the test, including how attention was divided, whether the operator was distracted, when he stopped processing information or became fatigued or overloaded. This information will be used to identify the cause of a problem, leading to advise on mitigation of that problem.

OUR CAPABILITIES

NLR has got a skilled and experienced team of human factors researchers and a wide variety of equipment including a range of eye trackers available to perform thorough assessments of operator behaviour. With these assets NLR can record eye data in a multitude of environments, both in laboratory settings and in real operational conditions.

To interpret the operator's behaviour, the so called 'methodological triangulation' approach is applied. This solid approach integrates the operator's performance and measurable behaviour such as eye tracker recordings, with his own view on how a situation was handled. With this method an overall view is achieved which allows for proper interpretation of the measurements and drawing of conclusions.

NLR's eye trackers range from room to head mounted. The former being less intrusive for the operator, the latter being able to record everything the operators sees, no matter where he goes. One of our specials is an eye tracker mounted in virtual reality goggles, so that eye scanning behaviour in a totally virtual world can be recorded as well.

The recorded eye data can be processed in numerous ways. For example the amount of time a person looked at a certain area of interest. This might be a display, a person, a distracting element or another source of information. Also how frequently and under which circumstances the operator looked at that particular area of interest can be identified, also in combination with other behaviour. The data can even be processed further to express how loaded or fatigued an operator was.

The sum of these findings allow for proper determination of the impact of various elements influencing the workload of operators. This, combined with the specialist knowledge, will render advice on mitigating disadvantages in changes in working position of ATCOs.

PRODUCTS & FEATURES

- Impact of changes in working position on operator
- Inventory of advantages and disadvantages of changes
- Advice on mitigating disadvantages of changes