

Mr. Bob Montoya
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November 5, 2015

Dear Mr. Bob Montoya,

I am writing to you to express my deep appreciation for the funding received from the HFES Europe Chapter Grant Programme for a short-term research exchange this year, as well as briefly discuss the products of this visit. The funding granted by the HFES Europe Chapter allowed me to travel to Sweden to perform interviews with timber drivers, where I would not otherwise have gained funding to participate in an international research project. These interviews, assisted by the cognitive ergonomics team at Scania AB, enabled us to capture deep insights into the training, learning, and operational practices of timber drivers with over 300 years of combined experience. In fact, this visit has become the foundation of a true exchange, with members of Scania AB later visiting the United Kingdom two times for further driver interviews and international collaboration.

This work aimed to take an innovative approach to timber vehicle design in the heavy vehicle industry by the application and development of a set of methods called Cognitive Work Analysis. Phase I of the work involved building a picture of drivers' work systems by constructing a Work Domain Analysis which modelled the functionality of a 'whole' rather than individually designed parts in isolation (as can easily be the case in large organisations with many departments).

In Work Phase II, our goal was to develop a means of prioritising which types of timber haulage activities should be focused on first to most effectively design future vehicles, under tight industry time constraints. Rather than focus exclusively on high-frequency situations, our team discussed the value of considering rarely occurring (low-frequency) situations, as well as the drivers' own ratings of effort for each situation. Drivers' own ratings of the importance of safety and efficiency for each function was also considered. Discussions led to the development of a prioritisation method which honed in on high-effort low-frequency situations, high-effort high-frequency situations, and functions with highly-rated impacts on safety and efficiency. By way of this method, the highest priority activities included: driving the vehicle gently, safely and efficiently on slippery terrain (such as mud or ice); performing precision manoeuvres at timber pick-up points, and; dealing with another vehicle suddenly driving closely to the front of the timber vehicle.

Work Phase III involved a preliminary Strategies Analysis, focused by the Control Task Analysis prioritisation method. This stage classified and described strategy types in greater detail to gain an in-depth understanding of timber drivers' ways of working, which supported the development of more specific design features in future timber vehicles.

Our hope is that this industry-focused work to develop more effective timber vehicles may now be translated into academic publication(s), and this would not have been possible without the generous help of the HFES Grant Scheme. This funding was deeply appreciated - thank you once again for your support!

Kind regards,
Melissa Bedinger