

Press release

Elmia AB

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A world-first at Elmia Wood 2013: Fighter aircraft technology in forest machines

Will fighter aircraft technology make its way into the forest to enable more efficient operation of forestry machines? The Swedish-Norwegian company Optea is ready to present its pioneering The Forest Falcon to the world's gaze at Elmia Wood. A 'head-up display' (HUD) featuring all the necessary information projected directly into the air within the operator's field of view so he has no need to move his gaze could take the operation of forest machines to new heights.

"Our images appear as if you have a transparent screen hanging on a fishing rod five metres in front of you, exactly where you look when you're working in the forest," explains Esteban Arboix, CEO of Optea AB. "Because you get the information right there and right away, you can also work faster and more efficiently."

Arboix has a solid background in working with projectors for conference rooms, and this is the technology he has brought with him out into the forest to use in a new way. When he approached the Swedish forest industry's research institute Skogforsk with his idea, the doors opened up to doing practical trials in the forest together with the industry's leading players.

HUD has been on the wish list of the forest industry for many years. As early as 1999 at Skogforsk's seminar of the future during SkogsElmia the idea was proposed to use fighter aircraft technology in forest machines. However, the technology proved to be too expensive and difficult. No one was able to take the concept and develop it into a good functioning application until Optea now launches its own HUD named The Forest Falcon.

As well as increasing the efficiency of felling operations, the new HUD technology will also be a big leap forward for a better work environment. The operator can keep his eyes focused on the same point during all stages of his work. He can select trees and operate the boom while at the same time the screen display that is hanging in mid-air in front of him gives him all the necessary information.

"There's no strain on the eyes, and because the operator doesn't have to bend and turn his head, his working position is better," Arboix says.

The core of the technology is based on a small DLP (digital light processing) chip with just over a million small mirrors within a surface area of about one square centimetre. This 100-percent digital technology was developed by the American company Texas Instruments. With the aid of a strong

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light source, the image is projected from the chip either directly onto the windscreens – depending on what cab is being used and how the windscreens are angled – or onto the transparent extra screen, called a ‘combiner’, that the operator sees in front of him. The result is a film that is projected right across the operator’s field of vision – a design for which Optea has received design protection.

The information is shown in pink – the colour determined by a SkogForsk study to be the most visible in a forest environment.

“These optics are really high-tech – the result is a kind of hologram,” Arboix says.

So far the company’s HUD has only been tested on a small scale. This autumn a larger one-year study will begin of the technology and its useability in the forest.

Optea will demonstrate its HUD at Elmia Wood either in a forest machine cab or in a demo frame so that visitors to the fair can experience that ‘piloting an aircraft’ feeling.

“It will be really exciting but a bit scary too – after all, it’s our ‘little baby’ who’s going out into the big wide world,” concludes Esteban Arboix.

For more information on The Forest Falcon, contact Optea AB, CEO Esteban Arboix, tel: +46 768 58 30 70 or +47 466 53 096

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