HUDs - the Latest in Driver Distractions?

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HUDs are transparent displays of data that allow users to keep their heads in an upright position instead of looking downwards at an instrument panel. They have their origins in the pre-World War 2 era; a continually evolving technology developed for military fighter aircraft. These systems were integral in successful air battles that took place in the dead of night and allowed the fighter pilot to fly the aircraft by using the radar display which was projected onto the windscreen.

The 1970â€™s saw HUDs become part and parcel of civilian and commercial aircraft and in 1988 the Oldsmobile Cutlass Supreme was fitted with the first version for vehicles. These offered speedometer, tachometer and navigation systems, all on one display. They since progressed to be included on motorcycle helmets.

When speaking about first, second and third generation mobile phones, the same terminology is used when discussing â€˜heads-up displaysâ€™. First generation HUDs, which are in the majority, use a CRT to generate images on a phosphor screen. These degrade over time and some discerning buyers would opt for a second generation LED screen (liquid crystal display). Commercial aircraft use this particular system.

You may ask why the common GPS receiver should be replaced by an HUD. Normally, the satnav is a small screen built into the dashboard or clumsily positioned wherever there is a little space. By looking at this screen, the driver generally has to look away from the road. HUDs come into play in a bid to get drivers efficiently from A to B, whilst keeping their hands on the wheel and eyes on the road. Fog conditions and other potential problems would alert the HUD, in turn allowing the driver to react in a safe manner, avoiding potential collisions or other accidents.

HUDs are developing at a very fast rate and, instead of a virtual map on a small corner by the windscreen wipers, 3D projector technologies flash the display across the length and breadth of the front window. The European Satellite Navigation Competition in Munich, Germany was recently won by True3D, a Californian-based company. They have managed to create a 3-dimensional landscape layered over the actual surroundings, which provides information in such a way as to eliminate driver distraction. This is a work in progress, but promises to assist drivers by presenting a toolkit that was previously exclusively enjoyed by fighter pilots.

Your windshield should be in perfect condition in order to optimise the efficiency of your HUD. Police departments are adopting these systems as well as experimental applications in swimming goggles, skiing goggle and diving masks. Science fiction movies show information projected onto the actorsâ€™ retinas and this low-powered laser display is now an actual experiment.

Who knows? It may not be very long before all vehicles come with an HUD as standard, and it is perhaps a good idea to acquaint ourselves with these new technologies in order to become accustomed to the way of the future.

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Jesse Wallace writes for a digital marketing agency. This article on a windshield has been commissioned by a client of said agency. This article is not designed to promote, but should be considered professional content.

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