Wearable Devices – The New Era of Hands Free Computing

Suresh Subramanian, Principal Consultant-Aviation of Ramco explains how wearable devices will contribute towards a connected Aviation IT world.
In a world increasingly driven by technology, the aviation industry is witnessing a paradigm shift in ways of working, and we believe that a move to these new devices will serve to be a useful tool for aircraft mechanics, helping them to be more productive. Most of our line maintenance functions are now made available on wearable devices, helping the line maintenance manager and engineer check the inventory at the touch of their Google Glass, plus, perform other line maintenance functions (see below). However, before we go any further into this subject, we need to address a current and misplaced concern regarding one of the devices themselves.

‘GOOGLE PLANS TO DISCONTINUE SALE OF GOOGLE GLASS’

This headline from an article in the Deccan Chronicle, dated 18th January, might seem an odd way to open a white paper on the subject of wearable technology. However, as that or something similar, may well be the latest headline that readers have seen on the subject, it makes sense to deal with it right away. It’s true as far as it goes, but the story it introduces is a lot less apocalyptic and a lot more positive when it continues to explain that while, ‘Google has announced that it will no longer sell its experimental first version of Glass… the Glass project would not be scrapped, with development continuing… [and] Although Google Glass won’t be available to individuals after January 19th, businesses and developers will still be able to purchase the product. Google Glass is a type of wearable technology with an optical head-mounted display (OHMD).’

In a similarly balanced vein, Seamus Condron writing on the PC Mag website on 20th January explained that, while in the consumer market, “It was nearly impossible to accept any benefits of such a device, simply because the mere appearance of it was so polarizing. “ In the workplace, “Google Glass proved to be a much more worthy tool in specialized industries such as medicine, where doctors used it during surgical procedures. It’s also been a hit in warehouse environments, dramatically improving how workers can access information while keeping both hands free…” That sounds like a familiar environment for anybody engaged in aircraft MRO. Wearable technology is here to stay… and to use And, of course, the headsets with the funny little prism in front of the eye are not the only form of wearable technology available. People have been wearing Bluetooth earpieces for their mobile phones for some time and, from smart watches to wristband pedometers, audio headsets, smart materials and RFID fitted anything, as well as OHMDs, wearable technology is already in and here to stay. So, while some might wish to stand on the sidelines mocking a small (in the scheme of things) setback for Google Glass, others are already thinking, not just about how wearable technology will change the way we do things in the future, but also how the wearable technology of today can be applied right now. It was from this positive approach that we have taken our cue at Ramco in developing wearable device related solutions, as a part of the wider connected workplace.

Recent developments will create a paradigm shift in the way users interact with information and, while
in theory, the wearable market consists of a range of devices (see above). Ramco based its initial developments on Smart Watches. The ability of these devices to seamlessly connect to other devices, such as mobile phones and iPads, platforms in which MRO IT solutions already run, acted as the prime mover towards investing in the wearable device revolution. Let’s look at an example of how a wearable device, such as a smart watch, can prove handy while an organization attempts to improve the productivity of its workforce, a perennial challenge in Aviation MRO, today.

**USING A SMART WATCH SOLUTION TO HELP WITH SCHEDULES AND APPROVALS**

One routine activity for every mechanic, working in a hangar environment, is the need to accurately record and track his attendance and time spent, working on the tasks assigned to him. Currently, this is done using a system in which multiple employees log-in and log-out of tasks, a laborious process if there are limited systems available for access in a hangar, if the system is kept some way away from the aircraft or, worse still, if the whole process has to be done on paper. The end result is a laborious process if there are limited systems available for access in a hangar, if the system is kept some way away from the aircraft or, worse still, if the whole process has to be done on paper. The end result is the need to purchase the product. “In November 2014, we launched our ERP (Enterprise Resource Planning) tool on Google Glass as well as smart watches, like the Pebble (see above).”

The thinking behind this development is to enable ground engineers in global airlines, to ensure faster turnaround of large aircraft, like the all-digital Boeing 787 Dreamliner. For every flight, the airplane crew – pilots, engineers, ground staff and cabin crew – has to document data, which runs into almost 500 pages. This data dynamically changes for every flight. At the end of a flight, the pilot provides a real-time report of snags, issues and possible problem areas for the next flight. The turnaround time for the aircraft directly depends on how quickly the engineering staff is able to address the issues raised by the pilot.

The idea of this development is to equip airline engineering crew with Google Glass devices and smart watches. As the airplane is entering its parking bay, the crew gets a list of to-do items that need to be completed before the next flight. Using this information and even before passengers have disembarked, replacement parts or software upgrades can be quickly ready to be installed.

**NOW, ERP ON GOOGLE GLASS**

Now, returning to the reports on the future of Google Glass. “Although Google Glass won’t be available to individuals after January 19th, businesses and developers will still be able to purchase the product.”

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