Bosch Case Study

How Bosch used dynabook's dynaEdge to offer a hands-free support tool for their technical team.

Business Challenge

The technical department of Robert Bosch České Budějovice republic support their workers during repairs and maintenance of various production equipment, especially where onsite specialist software or deep engineering knowledge is not readily available.

Bosch Czechia have explored differing ways of using voice and video transfer using mobile phones and other types of devices. The use of a mobile phone works to a certain extent but it makes it very difficult to see what the onsite operative is trying to show as the phone camera is not line-of-sight, highlighting areas of particular interest is not easy, audio can be a limiting factor, and of course the operative is not hands-free. In addition there is no lasting record of the call and the capturing photographic and video evidence is difficult.

Technologies such as Microsoft HoloLens and other Smart Glass solutions were tried and many had a similar problem: some were well suited for remote support but given the corporate environment at Bosch the integration to the systems and networks was found to be a limiting factor. Adding devices to the corporate network to benefit from security policies is a business requirement.

"We truly believe that the DynaEdge AR Smart Glass solution with VisionDE provides a solution that will help our colleagues significantly enhance the productivity and effectiveness of their work."

JIŘÍ MASOPUST - Project Leader

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dynaEdge - the solution

Windows10 functionality -
Bosch Czechia could install their corporate Windows build including Skype for Business, their comms solution of choice.

dynabook VisionDE software suite -
An interface to Skype for business that fits perfectly the resolution of the AR-100 itself. The software provides the ability to distribute documents, and files to the dynaEdge devices globally, even when not on the corporate network, with immediate back up to the management server.

Long lasting battery -
The battery on the dynaEdge is sufficient for several hours of use, with usage increased when connected to a docking station to allow easy battery swaps.

Traditional PC usage -
Via a docking station the dynaEdge can also be connected to a monitor and input devices and can then be used as a traditional PC.

dynaEdge - within the Bosch environment

The glasses functions are managed using a graphical user interface positioned into operator's field of view. This display can be rotated away from the field of vision when not required and brought back into view when needed.

The dynaEdge offers a variety of methods for input and navigation: directional buttons on the computer body or touch-sensitive swipe pad and programmable buttons on the glasses can control the user interface, while advanced software options within VisionDE and Windows10 enable voice and gesture capabilities.

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dynaEdge - within the Bosch environment

dynaEdge allows the caller in another location to open schematics or drawings on their computer and enable presentation mode to allow the worker onsite to see it displayed in the glasses.
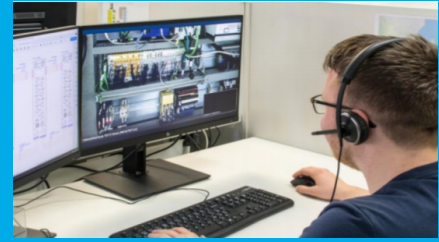
Another functionality is to shoot movies and photos without the use of Skype. The user can record whole maintenance or repair processes and use this record later as a knowledge base for other workers or documentary evidence of the work carried out. There is also an option to draw remotely over captured images and send it back to the glasses. These images remain on the dynaEdge and accessible so even when the support call is ended the onsite worker still has access to the discussed solution to their problem.

The document viewer also has an integrated zoom function so there is no problem reading documents even if they contain small fonts. All devices in the field can be managed using a Management Console Portal, which is a part of installation package.

Case summary

Bosch Czechia has deployed devices across their plants with a planned roll out to other sites globally. The first devices were provided to electricians for use in maintenance support during afternoon and night shifts. Should an issue with the production equipment arise during their shift, the user now has the ability to engage with a programmer or process expert to solve the issue in the fastest possible time.

The Robert Bosch České Budějovice team benefit from the device mobility, utilising it remotely across multiple sites to provide on-site support. Additionally, the team see the device being used for remote support in the lead-plant scenario.

In both cases the glasses are proving a business asset and Robert Bosch České Budějovice are now investigating other usage scenarios.

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