

Building a failsafe document system improves rail safety in remote regions

The beautiful, but remote, Pilbara region of north Western Australia is home to some of the largest freight trains in the world, which are used to haul massive quantities of iron ore from the mines to ports for export to the world.



These privately owned rail networks are a key part of the major iron ore miners' integrated production operations. The isolation of this region and the enormous scale of these trains necessitate that every facet of their operation is tightly controlled to ensure that safety is not compromised and the trains operate as required.

Business challenge

These iron ore rail networks are remotely controlled by the mining companies. Highly sophisticated systems plan and predict events, and record actual data from each train journey. Before venturing onto the network, all train drivers and track maintenance crews must read a report that details track conditions and all speed restrictions in operation at any time.

The *Track Condition Report*, is a critical safety document that is continuously updated 24 hours-a-day to inform drivers and crews of the latest information. Previously, the report had been published in hard copy and faxed to every person who relied on this information. Many of those people were seldom at desks and often had limited access to computers, so faxes were deemed to be the most reliable means of reaching them.

But given the frequency of updates and the remoteness of many of the work locations, it was often impossible to determine if every worker who needed the information had a copy of the latest version. This uncertainty was a major safety concern.

The challenge for the mining company was to ensure that the latest version of the track condition report could reach the hands of train drivers and maintenance crews at numerous locations throughout the rail network without using a computer to retrieve and read the document.

Challenge

- The mining company needed to ensure the latest version of the track condition report reached all train drivers and maintenance crew at numerous locations throughout the rail network. This needed to be done without accessing a computer and had to be straightforward to implement, robust to ensure reliability, yet easy to support.

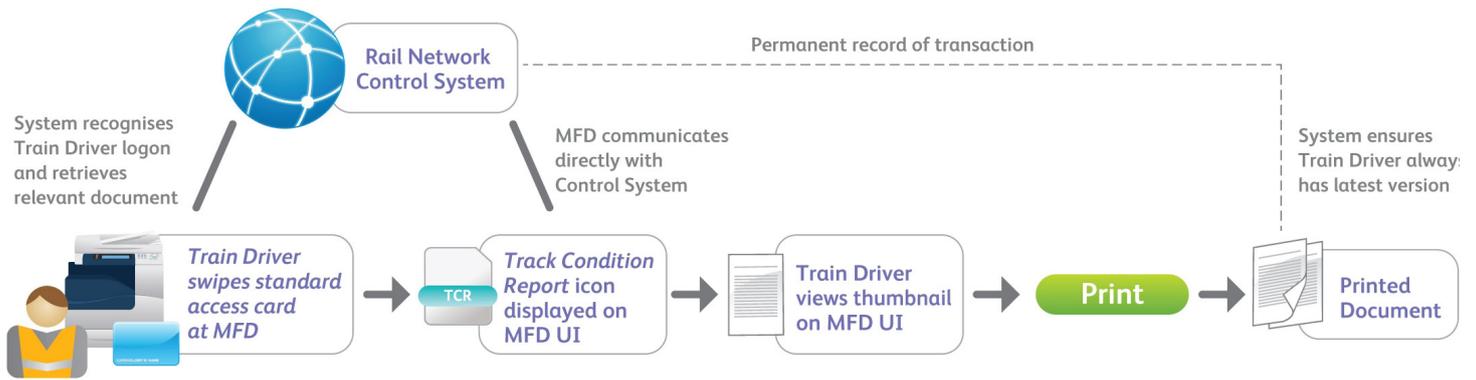
Solution

- A customised solution utilising Image Gateway for Apeos interfaces with the rail network control systems, enabling the Fuji Xerox ApeosPort multifunction devices to access the latest version of the track condition report.
- The document resides in a designated folder within the control system with new versions automatically updated and made available for printing via the company's standard access cards.

Benefits

- Information is up-to-date with guaranteed version control.
- Ease of access to documents via staff access cards and the local multifunction device.
- A full audit trail is now guaranteed.
- Provides a platform that can be adapted for other processes in the future.

The Document Process



Solution

Due to the remoteness of these iron ore rail networks, the most appropriate solution to this problem needed to be very straightforward to implement, robust to ensure reliability, yet easy to support. The means of retrieving the track condition report would have to be simple and intuitive for train drivers and maintenance crews, most of whom would have minimal training and limited experience with this kind of technology.

The mining company approached Fuji Xerox Australia to develop a means of providing current reports in such a demanding situation.

Fuji Xerox Australia proposed an innovative solution using ApeosPort multifunction devices at each location and an Image Gateway for Apeos (IGA) software platform. This solution interfaces with the mining company's rail network control systems, which provides instant access to the latest version of the track condition report. The document is published in PDF format to a designated folder on the system and automatically replaces any previous versions, so that only the latest version is available for printing by the ApeosPort multifunction device.

Train drivers and track maintenance crew simply have to swipe their standard access card and press three buttons at any one of seven multifunction devices on the rail network to retrieve and print an up-to-date version of the track condition report. A thumbnail preview is displayed on the screen of the MFD, which is then printed by simply hitting the 'green button'. This clever workflow removes any need for a computer to retrieve and print the document.

Benefits

This solution communicates directly with the mining company's control system, ensuring that the information contained in the track condition report is always up-to-date. By following a simple process that takes just a few seconds, rail network staff can be confident that they have the latest version of this critical document.

The same staff access card that controls access to company premises is used to retrieve the report at the multifunction device, so no computers are required, and workers in remote locations are not dependent on them.

As well as ensuring complete accuracy of the reports, this system also maintains a permanent record of all activity, including a complete history of who retrieved and printed the track condition report, and the date and time of every transaction. The mining company enjoys total confidence in the system's security, and is assured that the correct up-to-date information has reached its intended audience.

This simple yet ingenious concept can be adapted by the company to provide access to a broad range of documentation. For instance, incident response crews could access maintenance manuals or process documentation in the event of an emergency.

Improving access to critical information offers huge potential for the future. This platform can be integrated with many electronic document management systems, effectively providing a touch-screen 'kiosk' for document retrieval and printing at any multifunction device on the corporate network.

About Fuji Xerox Australia

Fuji Xerox Australia is a world leading enterprise for business and document management services. Through its broad portfolio of document technology, services, software and supplies, Fuji Xerox Australia provides essential back-office support that clears the way for customers to focus on their core business. With awards from the United Nations and the Banksia Environmental Foundation, Fuji Xerox Australia is well recognised for its commitment to sustainability. For more information, visit www.fujixerox.com.au or www.fxasustainability.com.au

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