Straightpoint Ltd

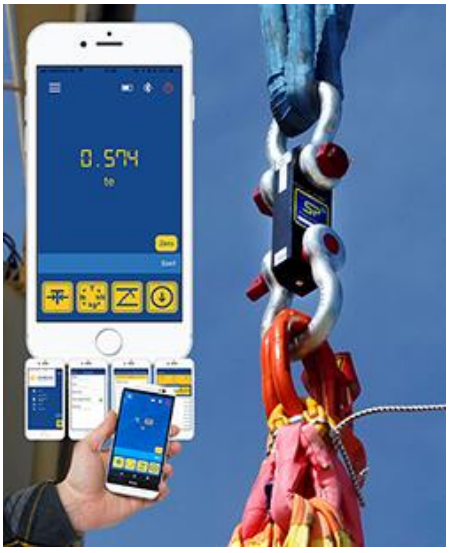
Innovation in Load Monitoring

Load cells check that lifting equipment is working to specified load limits. Straightpoint has been a leader in developing these load monitoring systems since 1978. Straightpoint products help ensure lifting systems are not overloaded, reducing the risks of equipment failure and accidents.

Load cell devices from Straightpoint can be used in conjunction with lifting shackles, beams, cables and other lifting gear. Straightpoint load cell products are also built in to third party supplied lifting equipment to embed safety checks into the crane, hoist or lift itself.

Straightpoint's wide range of devices include both wired and wireless connections for the monitoring that shows load data.

The latest generation of load cell devices from Straightpoint uses Bluetooth technology to link the load cell and the handheld display and control software. To develop the Bluetooth linked application, Straightpoint used CoreRFID's expertise in the development of software applications on mobile devices.



Straightpoint's HHP app in use for load monitoring.

Leadership in Load Monitoring

Straightpoint was founded in 1978 by an Oxford University engineering graduate. It was the first company to offer the lifting industry a robust, reliable, electronic, force measurement device to replace the cumbersome mechanical units that had been in use for many years before. The successors to that product are used today to check the load forces involved in lifting operations on projects around the world. Through their use it is possible to check that lifting equipment is not subjected to loads that might cause failure. With these devices, those involved in lifting operations can improve safety. Straightpoint technology is used in a wide range of load monitoring applications as well as lifting, including testing loads on fixed and running lines.

The company is the world leader in its field with sales on all continents. Their products combine strain gauges allied with high quality yet easy-to-use electronics. Today, Straightpoint manufactures a wide range of products for their own customers and also supply branded products for companies such as Dillon, Tractel and Pfeifer. Their load monitoring products work with loads between 1 tonne and 300 tonnes, measuring the load to within an accuracy of .3% during the course of the lift.

Straightpoint is a global supplier with over 40 distributors across the world. A specialist in the use of technology for testing lifting equipment, Straightpoint has facilities in the USA as well as in the UK. Their headquarters houses the first 350 tonne calibration and universal test machine to be installed in Europe.

The company prides itself on its approach to innovation. It was the first to launch, worldwide, an off-the-shelf wireless centre of gravity system and is the first load cell manufacturer to incorporate RFID tags in all its 'link' load cells as standard, allowing for unique product identification in the field. Other developments include the creation of an ATEX compliant wireless dynamometer.

To create its latest generation of load cell remote monitoring software, Straightpoint turned to CoreRFID and its mobile application development capabilities. The two companies had worked before on developing a Windows-based proof test monitoring application. Together, they were able to create a new generation of software that worked using Bluetooth technology and ran on iOS or Android platforms, making the Straightpoint control application available on a wider range of devices.

"CoreRFID share our passion for innovation. Their development skills in mobile applications have helped us to set a new standard in usability for load testing products."

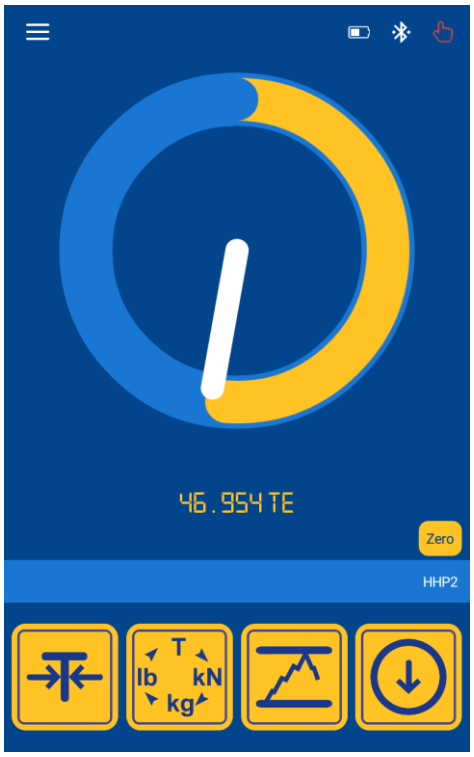
David Ayling, CEO, Straightpoint (UK) Ltd.

HHP Load Test Application

CoreRFID developed the HHP ("Hand Held Plus") Load Test Application for Straightpoint. As the aim was to have the HHP application available on a range of mobile devices, CoreRFID worked to deploy it on iOS and Android platforms with an interface suitable for mobile phone and tablet type devices. CoreRFID had previously worked with Straightpoint to develop Proof Test Plus (PTP), an application designed just for the Windows platform, which also allowed for production of test certificates.

The HHP application was built to include support of Straightpoint's latest product features and also to add features requested by Straightpoint users.

It allows users to remotely monitor the level of force being measured by a Straightpoint load cell in real-time. Once the app has been installed on to a smart phone or tablet it can be connected wirelessly to any Bluetooth enabled Straightpoint product. The Bluetooth link allows connection from up to 50m distance, allowing users to be a safe distance from the load carrying device.



CoreRFID engineered the HHP app with a clear, simple interface for use in the field.

Easy-To-Use HHP Features

A key feature of the HPP application is the easy-to-use interface, engineered by CoreRFID using the same principles developed for their CheckedOK inspection and certification application. The interface is tuned to the needs of Straightpoint's users, providing the most commonly used features under single buttons on the main screen of the application. A clear read out of the current reading from the load cell dominates the display.

The application allows for up to four different measurement units to choose from, depending on the user's preferences. A 'Peak Hold' button allows for a one-touch selection to only display the highest measurement from the connected device. Associated with this is the option to set an audible alarm to alert the user when a new high or low measurement value is detected. The application can also be set to record values from the Straightpoint device at predetermined intervals or whenever the user presses the "record" button on the application. Logging can be restricted to periods when the load cell is either over-loaded or under-loaded. An additional feature allows users to work in "simulation mode" so that they can practice with the application before using it in the real world.

The development also included a 'record and log' feature so that specific measurements can be reviewed later. Once logged, the HPP application supports export of the logged measurement details to the mobile device itself or via an email in a spreadsheet format.

CoreRFID arranged the necessary approvals to make the application available via Apple's App Store digital distribution platform, so that it was easily available for users of Apple devices. Ease of availability and the App Store platform has meant that Straightpoint could make their HHP app available free of charge.

CoreRFID continues to work with Straightpoint on enhancements to the HHP application. New features added since the start of the project include providing an alternative speedometer-style load display (shown above), recording the GPS coordinates of where readings are taken, adding the ability to set a load as a tare value and adding support for different language versions for Straightpoint's global business.

Benefits

CoreRFID's development approach provides:

- Development capabilities for multiple deployment platforms: iOS, Android & Windows
- Expertise in applications needing simple interfaces
- Managed deployment via App Store application approval.
- Collaborative development with the client

CoreRFID Ltd. West Lancashire Investment Centre, Skelmersdale, UK, WN8 9TG
T: +44 (0) 845 071 0985 F: +44 (0) 845 071 0989 E: info@corerfid.com