

Wireless Applications

Cattle Scale

March 8, 2002

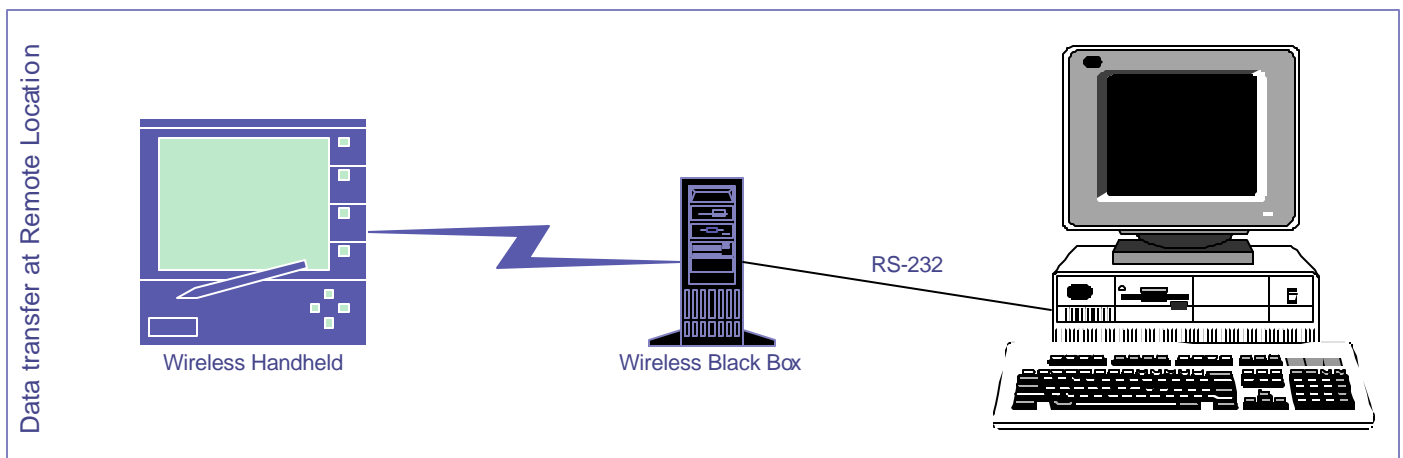
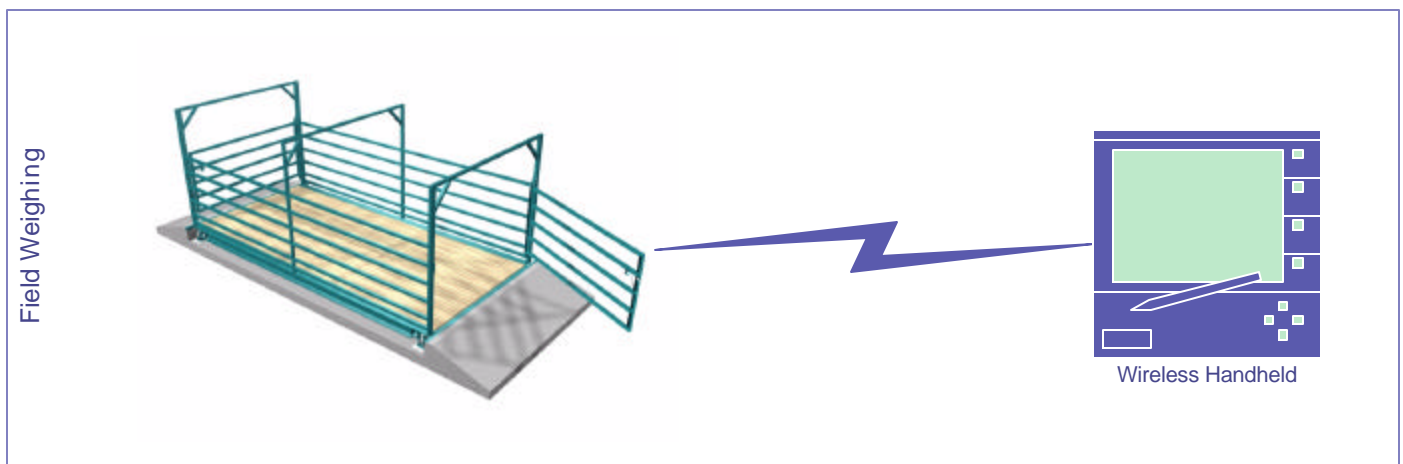
Description:

Use a wireless handheld unit to gather weight from a cattle scale. This weight is then stored in memory along with any specific tags about the animals being weighed in the handheld unit until a later time. When all of the weighing is done, the operator can then take the wireless handheld unit and download the information to a computer through another wireless unit that is attached to the computer.

Unique Factors:

Low speed data communication between handheld unit and scale as well as computer
Storage of weight and tags in handheld unit
Low power usage required on scale
Low power usage required on handheld unit

Example:



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Weigh Pads

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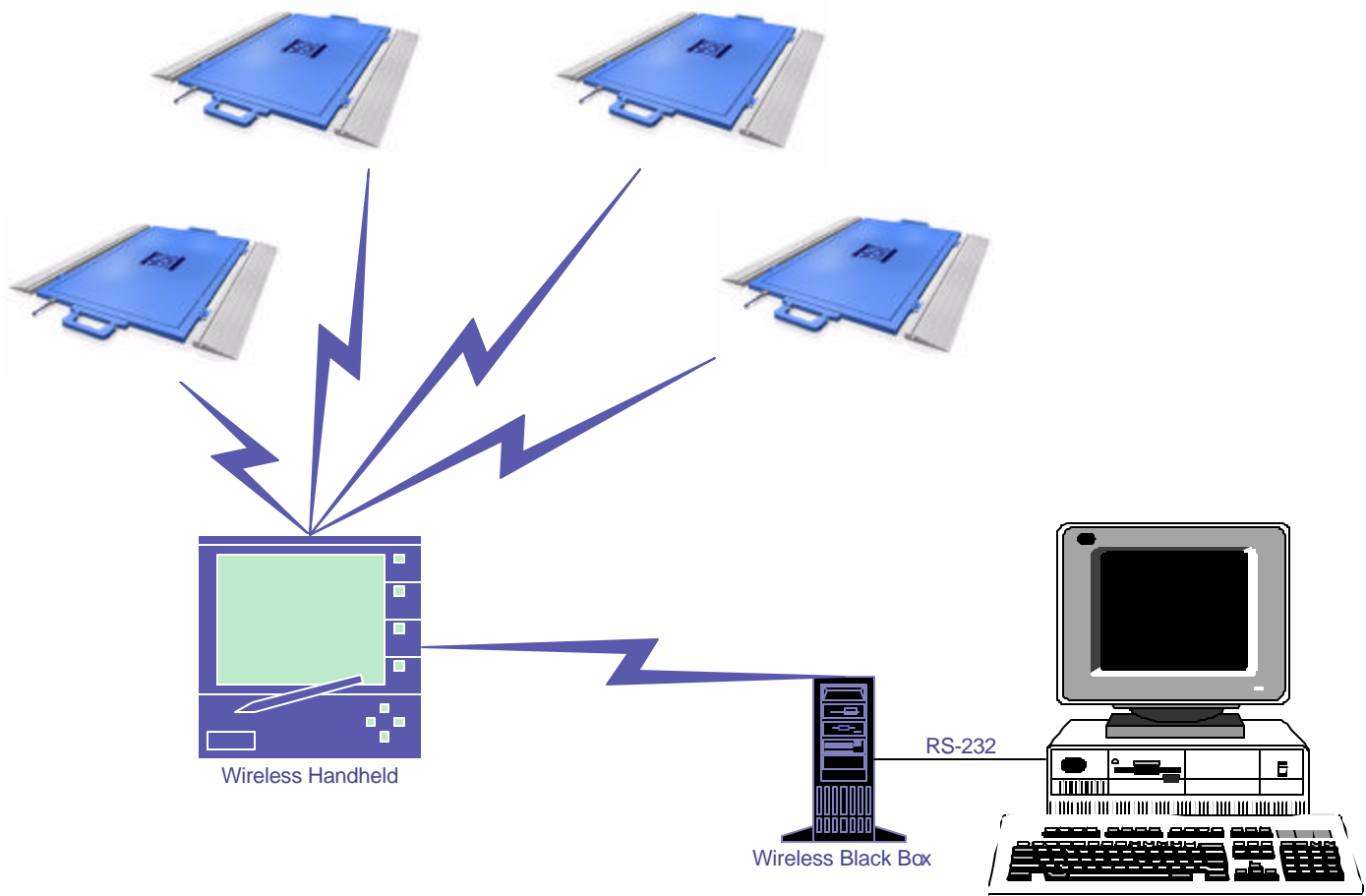
Description:

Use a wireless handheld unit to gather weight from a number of individual weigh pads. A wireless handheld unit displays the weight of each individual pad as well as the total weight on all pads. The scale operator can press a button on the handheld unit and the weight data is sent to another wireless blackbox connected to a PC. When the PC sees that there is data being sent to it, it automatically stores the weight in a database for further processing.

Unique Factors:

Computer records data when a remote signal from the handheld is received
Easy to use data acquisition system
Low speed data communication between handheld, scales, and computer
Low power usage required on scale
Low power usage required on handheld unit

Example:



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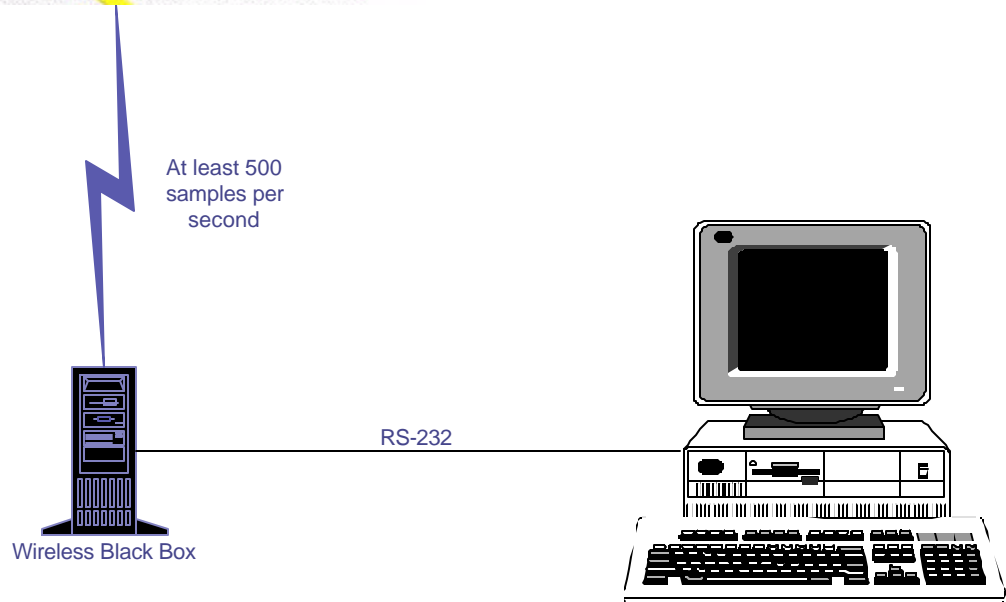
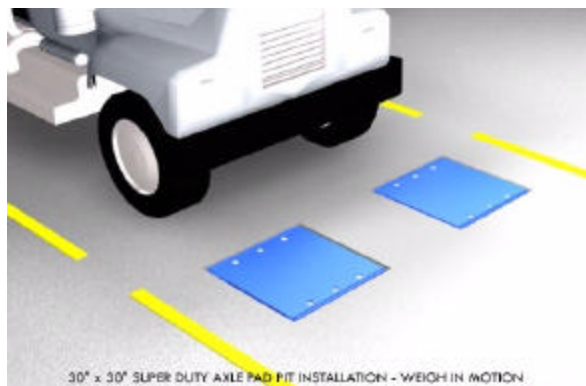
Weigh In Motion

March 8, 2002

Description: Use the wireless link to transfer weight data from the weigh in motion scale to a remote computer.

Unique Factors: Computer listens to a continuous stream of data from the wireless scales
Extremely high sampling rate required

Example:



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Remote Calibration

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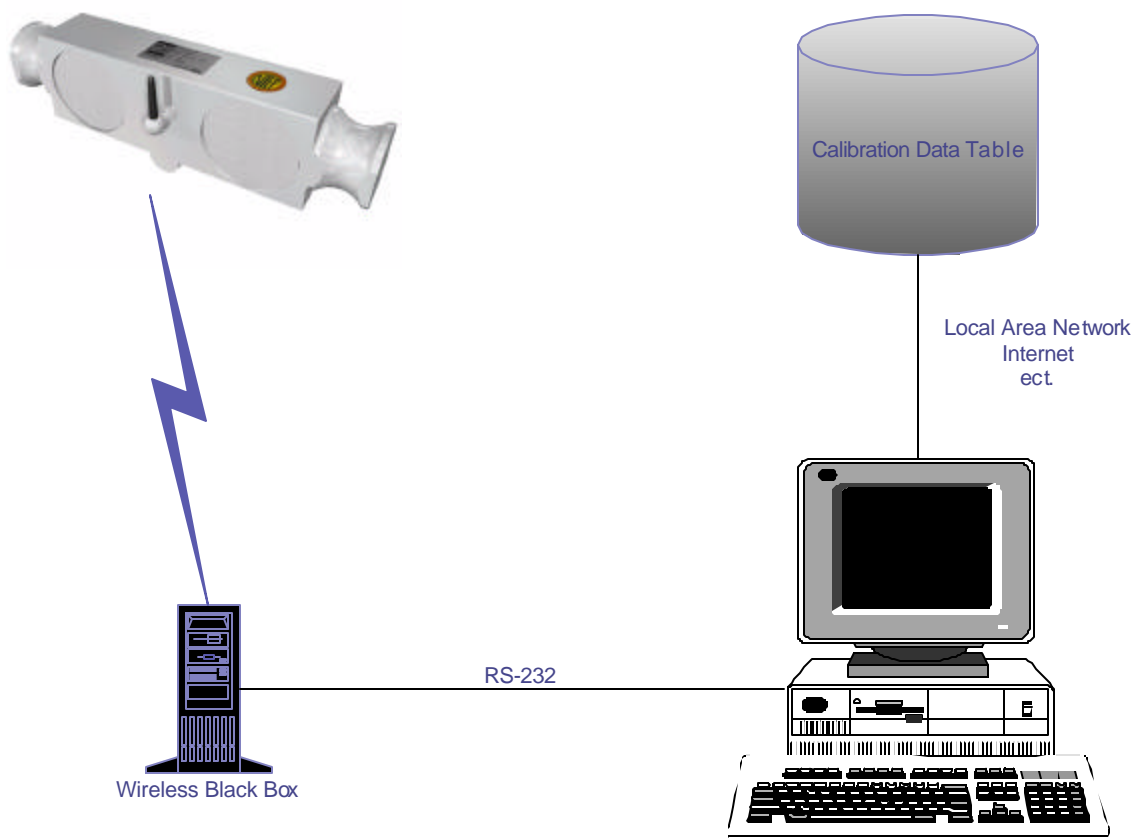
Description:

Use any configuration of wireless link to communicate directly with a loadcell. The transceiver inside the loadcell stores all the calibration data for the loadcell. When the cell needs to be re-calibrated, a central database is contacted, (could be stored on the internet) the calibration data for that loadcell is found, transmitted directly to the loadcell, and the loadcell automatically updates itself with the new information. The loadcell would also be able to monitor it's own health and determine when there is a problem.

Unique Factors:

2 way low speed communication between the loadcell and a computer. Loadcell becomes 'smart'. It can monitor it's own health and flag the operator when there is a problem.

Example:



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Multiple Hardware Interface

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Description:

The wireless link could be used to monitor more than just weight. Several devices could be fitted with transceivers that talk to the same wireless handheld or blackbox. The wireless device can be programmed to accept different types of signals, whether it's an on/off switch, temperature, level, ect. The readout only has to be programmed to display the correct unit for the channel that the hardware device is on. The signal can also be sent to a host of various peripherals, wether it be a computer, printer, traffic lights, ect.

Unique Factors:

2 way low speed communication between a host of devices.
Handheld unit can be programmed to take actions based on other actions.
Wireless control system.

Example:

