CommWeigh – Axle Standard Module

Background

Businesses that transport heavy goods/material need to ensure that the loading of their vehicles is within the limits prescribed by the road ordinance or else be subject to considerable fines. The road authorities have indicated that the checking of transport vehicles will be increased – on some routes a 100% inspection rate is expected.

It is more cost effective to incur the cost of a weighing capability than to be subject to the fines that will result due to overloading. At the same time, the knowledge gained by axle weighing will make it apparent to what extent current loads could have been increased.

CommWeigh – Axle Standard Module

The **CommWeigh – Axle Standard Module** is a software product aimed at supporting axle weighing in a number of different modes. The standard product provides the following functions (not all may be required by a particular application):
-   Registering and maintenance of various "static" information groups, such as:
-   vehicles, drivers, customers and products.
-   Weighing of axles.

Maintenance of static information

The main purpose of the **CommWeigh – Axle Standard Module** is to support the various weighing operations. However, each weighing needs to be put into context with regard to its relevant variable information, e.g. the identification of the driver, product, vehicle, etc. By maintaining this information using a separate function, the operator performing the weighing is greatly assisted in that the entry of information is limited to the selection from a set of available options presented.
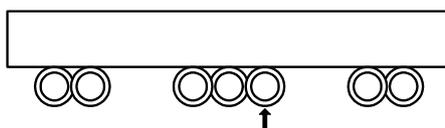
Axle Weighing

The weighing process or mode is largely determined by the specific bridge configuration and also the objective to be achieved. At the completion of the weighing process an axle weighing waybill is printed.
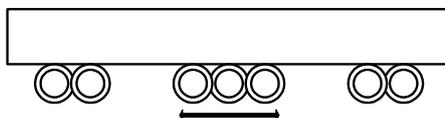
Axle weighing modes

Definitions:
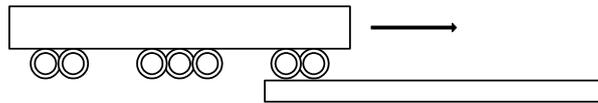
An Axle is

A Group is

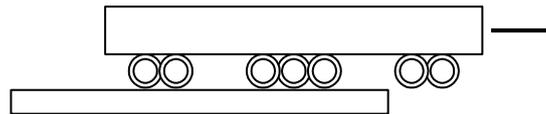## Types of axle weighing

All axle groups on or off a full length weigh bridge.

- ➢ In this operation there are two modes:-
    - ❖ Weigh onto the bridge (vehicle off bridge to start) The vehicle will drive ON to the bridge one group at a time and each group will be weighed.
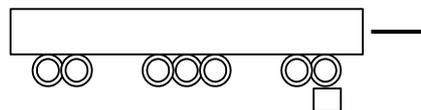
- ❖ Weigh off the bridge (vehicle on bridge to start) The vehicle will drive OFF the bridge one group at a time
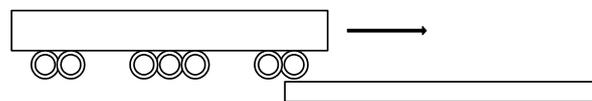
- ➢ A single axle scale
    - ❖ The vehicle will drive onto the bridge one axle at a time and be weighed until all individual axles are weighed. Only one axle at a time is weighed
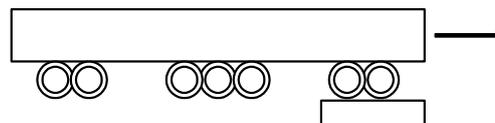
- ➢ All axles on or off a full length weigh bridge
    - ❖ The vehicle will drive onto the bridge one axle at a time and be weighed after each axle is on the bridge until all axles are on the bridge
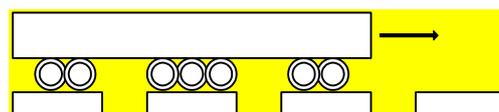
- ➢ A platform scale (weighs group)
    - ❖ The vehicle will drive a group of axles onto the bridge and be weighed. This will be repeated for each group

- ➢ A multi-platform scale (weighs groups at one time)
    - ❖ This consists of 4 separate in-line platform scales. The vehicle will drive all groups onto the multi-platforms and the groups will be read at one time

Multi Platform don't from part of the current CommWeigh software .....it will be a system completely on it own

Axle Weighing Ticket

The axle weighing ticket summarises all the information gathered and inferred from the weighing. Those weights that fall outside the set limits are highlighted.

Export of Information

The key information to be transferred to the rest of the business is the end result of the process. The standard **CommWeigh** provides an export mechanism where the completed transactions are formatted according to one of the available options and recorded in a file. The target system can then read the information from this output file for further processing.

An export mechanism is also provided for the exchange primarily of "static" information.

Features Summary

- A standardised package based on commercial off the shelf products

- It can be interfaced to all types of weighing equipment:
  Weigh bridges - Platform scales - Laboratory scales

- It has been used in all types of industry:
  Factories - Mining - Farming - Commercial

- Various standardised reports
- User defined fields
- Backup and restore
- Security
- Low cost and High availability (24x7)

Business Benefits

Most of the business benefits to be gained have been alluded to above. The business case to motivate its introduction will probably include the following:

1. Cost savings can be achieved by avoiding fines for overloading
2. Revenues can be increased by being able to carry higher loads (up to the maximum allowed)
3. Other business efficiencies may result due to the accurate and timely measurement of loads transported.

Architecture

The **CommWeigh** software is executed on a standard PC workstation connected to the Indicator and the Database Platform is SQL Express (Free from Microsoft). See diagram below:
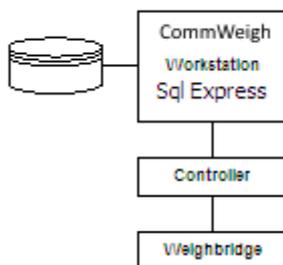
The **CommWeigh** software runs a Graphical User Interface (GUI) on a Windows platform. The software has been constructed such as to allow the easy configuration of options and the introduction of new functions.

System Requirements

The following lists the minimum system requirements for using *CommWeigh* software:

- Microsoft® Windows® XP (SP2), Windows 7 or Windows 8
- 800 MHz processor
- 500 MB hard-disk space for program installation
- 1 GB RAM
- DVD-ROM drive (for installation from a DVD only)
- Microsoft .NET Framework 4.5 (included on application disc)
- Communication to the Weighbridge Indicator is either by RS-232 or Ethernet

Please note: You must provide your Activation Request Code to Weighcomm to activate the software before the 30 Day Trail Period expires.

Optional extensions to the CommWeigh

The standard **CommWeigh** can be extended to accommodate other customer requirements. The following functions are requirements that typically arise:

- Automated weighing: this usually involves the use of smart cards as a means of identifying the driver.
- Access control: this usually requires the installation of booms, robots and sensors.
- Security cameras: A number of cameras may be positioned around the weighbridge. At the time of weighing (or any other time as defined) photos are taken and stored with the weighing. This function will support a supervisor in the investigation of any suspicious transactions.
- On-line interfaces to other systems. In some applications it may be a requirement that certain information be exchanged with other systems on a real-time basis.

Apart from the above more common extensions, the scope of possible extensions could be very wide. Such extensions may involve the integration of available components/applications (e.g. an accounting package), or the development of a complete bespoke solution.

Look and Feel

- Main Menu

- Axial Weighing Screen

Weighbridge Mass

05 June 2015
13:30:09

Mass | 0 | **Kg**

[Accept]   [Manual Input]

[Add New Transaction]   [Cancel]   [Main Menu]

Weighing Mode
- ◉ Weigh On
- ○ Weigh Off

Registration No: HBR 145 GP

Groups/Axles		Axles per Group	Wheels per Axle	Allowable Mass		Allowable+Tolerance		Mass	
3	Steering	1	2	7700	Kg	8085	Kg		Kg
		2	4	18000	Kg	18900	Kg		Kg
		3	4	24000	Kg	25200	Kg		Kg

User: 0   User Level: 0