

TechniComm News No. 13 – SEPTEMBER 2006

“SLAVE UNITS AND CANBUS”

Fassi has entered decisively into the **digital era**.

The innumerable electronic devices and sensors installed on the latest generation cranes (EVOLUTION) and on top cranes range make full use of their potential, if we consider that the data transfer system to handle, check and intercommunicate among the different equipments is represented by the **Canbus** data transfer protocol.

What exactly is Canbus and what advantages does it offer?

Canbus is a digital data transmission system.

On the advanced electronic systems, in presence of many interacting devices, the digital data transfer is the only viable option. Infinite number of signals can pass on a single cable simultaneously, as these signals are codified and compressed.

Using conventional analogical systems would require an infinite number of wirings and it would be however impossible to realise some applications.

Canbus is used today in the industrial vehicles, aeronautical, car industry and even in Formula 1 sectors, for example, where the electronic components have replaced the conventional systems.

In crane applications, the data transmission system works as follows:

- The sensors installed in the system are electrically connected and send analogical signals to the “slave units”.
- The slave units, having some microprocessors at their inside, convert the analogical signals into digital signals and transfer them to the main unit which contains the handling electronic card by means of a single cable.
- This card handles this information and transforms it into “output” as return signals to the sensors or visualisation of the data on the display.

The electronic card also verifies whether the type of transmission and of digital data that it receives is correct. In negative case, the card indicates the problem showing on the display the alarm code related to the imperfect data transmission via Canbus with consequent safety block of the crane functions.

Currently, the Canbus data transmission to the electronic card from the main panel is made by means of the following devices:

- Radio control receiver
- “Slave unit” collecting the data coming from crane sensors
- “Slave unit” collecting the data coming from the outriggers system sensors (currently only on cranes with turntable)

