

# Finding Competence: Intelligent sensors



Using micro controllers to monitor, measure, and read electronic signals, then having the information visually displayed with a PC is widely known. Nevertheless this method of measuring and controlling electronics is required more than ever. The quick and precise preparation of a range of data in a restricted micro controller, guaranties real time capability. An independent PC can be used to display the information being transferred over the serial interface. This combination of micro controller and PC is ideal for developing complex measuring systems together with a human graphical user interface.

In this field of digital measurement technology and visualisation TZCIS assisted the firm Mechaless Systems GmbH (developers of the patented measuring device HALIOS, High Ambient Light Independent Optical System) in designing a Micro Mouse demonstrator.

The technology behind this sensor has had powerful response in the industry. TZCIS continues to support the firm Mechaless in achieving their objectives.

#### Micro Controllers Software Development

- Sampling analog signals (Digitalisation) using a Jitter-Filter (dynamical hysteresis).
- Temporarily saving data to a ring-buffer allowing time redundant input to be analysed.
- Conversion of digital signals into a protocol in order to be transferred over the serial interface.

#### Windows Software Development

- Different Graphical User Interface modes and presentations.
- Adjustment of different parameters types using option menus in runtime mode.
- Encapsulating the basis (serial communications) as an ActiveX component which can be used in any SDKs together with Windows.

#### TZ Customer Innovative Solutions

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