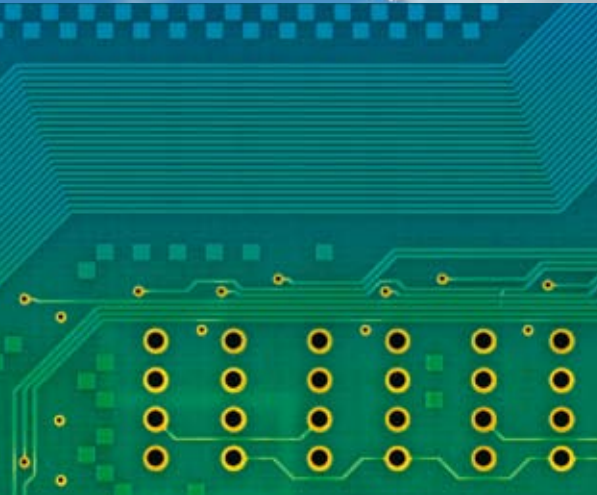




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## /foreword

Computers are getting faster and smaller all the time and memory is constantly increasing. Combined with all the communication options available, this is creating ever more opportunities to build cooperative, intelligent systems. New interactive services are springing up. Measurement and control systems no longer just control the temperature in ovens and the like; they govern complete machines or even complete ecosystems such as road traffic. These rapid developments are impacting on society and us as a company.

## >>everything is connected with everything else

As new trends emerge, so new names are coined to describe them. Take 'cooperative traffic systems', in which vehicles act as sensors and have 'intelligence' to help improve traffic flow and enhance road safety. Other examples are 'collaborative workspace' for cooperation between hospitals performing operations and 'coordinated control' of machines.

The great quantity and diversity of data generated makes combining and interpreting it all a challenge. Directing and taking decisions is also becoming ever more complicated. New approaches are needed if we are to keep an overview. Forms of artificial intelligence offer ways to facilitate this.

How do we overcome obstacles such as the need to secure our personal data? Objections come thick and fast whenever the impression is given that privacy might be compromised by these types of cooperative systems which can tell where somebody is to the nearest metre. Vociferous objections were raised against the Kilometer road pricing scheme, even though the technology underlying the concept had been well thought through. These kinds of responses can be avoided with clear and consistent communication towards users.

Coping with the technical challenges to achieve successful implementation of such systems demands knowledge of the application, the overall system, integration and architecture, along with the desire to get to grips with the detail. In this issue of Objective, we discuss a number of aspects of this vision. Among other things, we look at information security, complex decision-making in traffic management and the control of high-speed mechatronic applications.

Happy reading!