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## Information technology — Sensor network testing framework

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réseaux de capteurs*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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The committee responsible for this document is ISO/IEC JTC 1, *Information technology*.

## Introduction

Sensor network is widely used around the world in multiple fields such as industrial automation, environment monitoring, smart home, intelligent health-care and smart grid. The applications can involve different devices supplied by different manufacturers, e.g. sensors, actuators, controllers, routers and gateways, etc. Data can be collected and processed by use of different wired/wireless communication technologies. Thus, various test systems should be employed to satisfy some specific requirements. The operations of test systems is a challenge to users, if without a uniform test platform.

When designing and developing a sensor network test system, the characteristics regarding the following aspects should be considered:

- a) Sensor network heterogeneity. It is necessary to verify the interoperability of sensor networks based on different protocols prior to system application;
- b) Diversity of sensor network applications.

However, an international test standard for sensor networks which can provide guidance to design and develop a uniform platform integrating different tests for sensor networks is still unavailable.

# Information technology — Sensor network testing framework

## 1 Scope

This document specifies:

- testing framework for conformance test for heterogeneous sensor networks,
- generic services between test manager (TMR) and test agent (TA) in the testing framework, and
- guidance for creating testing platform and enabling the test of different sensor network protocols.

## 2 Normative references

There are no normative references in this document.