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American National Standard

Information technology - Sensor networks - Services and interfaces supporting collaborative information processing in intelligent sensor networks

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Where **IT** all begins

Approved American National Standard

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Technologies de l'information — Réseaux de capteurs — Services et interfaces prenant en charge le traitement d'information collaboratif dans les réseaux de capteurs intelligents

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Foreword

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Introduction

Sensor networks have been widely deployed in different application domains including environment monitoring, transportation, manufacturing, chemical process, healthcare, home and buildings, and many other domains. Wired/wireless sensor networks can be regarded as an extension of the Internet interfacing the physical world. Intelligent sensor networks are increasingly attractive in a wide range of applications to meet challenges from intrinsic environment complexity, large orders of magnitude network scaling and dynamic application requirements. Intelligent sensor networks are developed to provide new system capabilities such as environment self-adaptability, dynamic task supporting and autonomous system maintenance. Collaborative information processing (CIP), which closely integrates information processing algorithms with collaboration mechanisms, is an essential technology enabling the intelligent sensor networks to enhance efficiency and to improve quality and reliability of information processing and its outputs in real application scenarios. This standard specifies services and interfaces supporting CIP in the intelligent sensor networks.