



ISO/IEC 30100-1

Edition 1.0 2016-04

INTERNATIONAL STANDARD



Information technology – Home network resource management –
Part 1: Requirements

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INFORMATION TECHNOLOGY – HOME NETWORK RESOURCE MANAGEMENT –

Part 1: Requirements

FOREWORD

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A list of all parts in the ISO/IEC 30100 series, published under the general title *Information technology – Home network resource management*, can be found on the IEC website.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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INTRODUCTION

Products and services based on a variety of technologies are being installed and connected to existing home networks. Figure 1 illustrates the range of products being adapted to home networks: broadband, low power and high computing processors, reliable networking technology, high quality content services, e-health care, sensing technology, smart grid and robotics technology. These devices, providing a diversity of services and functions, may co-exist on a home network. Such a home network may need to support a multi-protocol environment. Some of these network protocols are based on standards and others use industry-developed specifications. In spite of this complex technology, users want simple, uniform and transparent services from all home network entities.

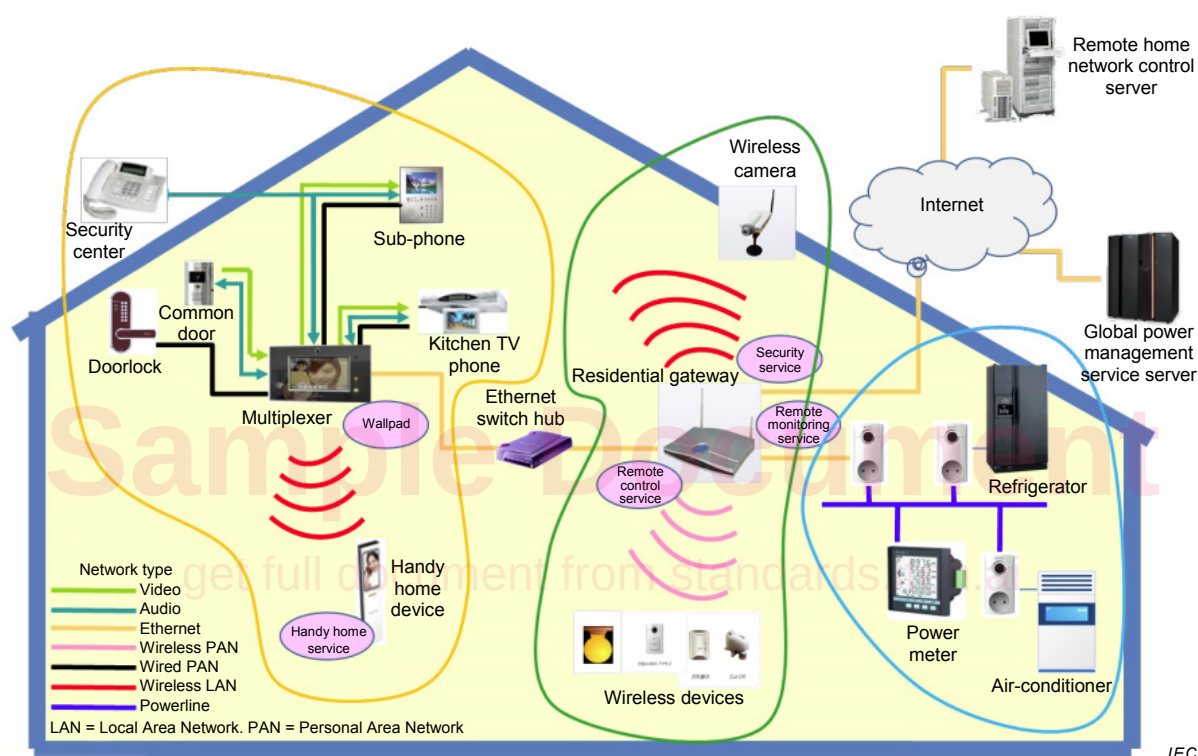


Figure 1 – Some examples of home networking devices and services

Interoperability among devices complying with these protocols is essential. The ISO/IEC 18012 series addresses product interoperability. The ISO/IEC 30100 series extends interoperability to the management of network resources. These management services may support fault diagnosis and remote management, and thus require that all available information be integrated. For example, when an audio/video (AV) streaming service has a problem, a diagnostic program should check all related information for the service plus the usage status of physical devices, network connectivity and traffic condition. The collection of this information may involve multiple information types and multiple protocols within each information type. Since home network information is collected and maintained independently for each data type and each protocol, it is very difficult to get access to all required data and to determine the relationship among various data types and protocols. This standard specifies a method for automatically maintaining information about HES entities poly-synthetically. This information provides the precise status of all available home network entities enabling the delivery of intelligent management services.

The ISO/IEC 30100 series of standards specifies an abstract model that accesses and manages home network information for various home network services including remote management and fault diagnosis. To handle different types of information, HES abstracts all HES elements as logical resources and provides a uniform architectural management method for them. Basic resource information for HES is defined as a collection of physical space,