The Internet of Things. Key Applications and Protocols. 2nd Edition

Description: An all-in-one reference to the major Home Area Networking, Building Automation and AMI protocols, including 802.15.4 over radio or PLC, 6LowPAN/RPL, ZigBee 1.0 and Smart Energy 2.0, Zwave, LON, BACNet, KNX, ModBus, mBus, C.12 and DLMS/COSEM, and the new ETSI M2M system level standard. In-depth coverage of Smart-grid and EV charging use cases.

This book describes the Home Area Networking, Building Automation and AMI protocols and their evolution towards open protocols based on IP such as 6LowPAN and ETSI M2M. The authors discuss the approach taken by service providers to interconnect the protocols and solve the challenge of massive scalability of machine-to-machine communication for mission-critical applications, based on the next generation machine-to-machine ETSI M2M architecture. The authors demonstrate, using the example of the smartgrid use case, how the next generation utilities, by interconnecting and activating our physical environment, will be able to deliver more energy (notably for electric vehicles) with less impact on our natural resources.

Key Features:
- Offers a comprehensive overview of major existing M2M and AMI protocols
- Covers the system aspects of large scale M2M and smart grid applications
- Focuses on system level architecture, interworking, and nationwide use cases
- Explores recent emerging technologies: 6LowPAN, ZigBee SE 2.0 and ETSI M2M, and for existing technologies covers recent developments related to interworking
- Relates ZigBee to the issue of smartgrid, in the more general context of carrier grade M2M applications
- Illustrates the benefits of the smartgrid concept based on real examples, including business cases

This book will be a valuable guide for project managers working on smartgrid, M2M, telecommunications and utility projects, system engineers and developers, networking companies, and home automation companies. It will also be of use to senior academic researchers, students, and policy makers and regulators.

Contents:
List of Acronyms xv
Introduction xxiii

Part I M2M AREA NETWORK PHYSICAL LAYERS
1 IEEE 802.15.4 3
1.1 The IEEE 802 Committee Family of Protocols 3
1.2 The Physical Layer 3
1.2.1 Interferences with Other Technologies 5
1.2.2 Choice of a 802.15.4 Communication Channel, Energy Detection, Link Quality Information 7
1.2.3 Sending a Data Frame 8
1.3 The Media-Access Control Layer 8
1.3.1 802.15.4 Reduced Function and Full Function Devices, Coordinators, and the PAN Coordinator 9
1.3.2 Association 12
1.3.3 802.15.4 Addresses 13
1.3.4 802.15.4 Frame Format 13
1.3.5 Security 14
1.4 Uses of 802.15.4 16
1.5 The Future of 802.15.4: 802.15.4e and 802.15.4g 17
1.5.1 802.15.4e 17
1.5.2 802.15.4g 21

2 Powerline Communication for M2M Applications 23
2.1 Overview of PLC Technologies 23
2.2 PLC Landscape 23
2.2.1 The Historical Period (1950–2000) 24
2.2.2 After Year 2000: The Maturity of PLC 24
2.3 Powerline Communication: A Constrained Media 27
2.3.1 Powerline is a Difficult Channel 27
2.3.2 Regulation Limitations 27
2.3.3 Power Consumption 32
2.3.4 Lossy Network 33
2.3.5 Powerline is a Shared Media and Coexistence is not an Optional Feature 35
2.4 The Ideal PLC System for M2M 37
2.4.1 Openness and Availability 38
2.4.2 Range 38
2.4.3 Power Consumption 38
2.4.4 Data Rate 39
2.4.5 Robustness 39
2.4.6 EMC Regulatory Compliance 40
2.4.7 Coexistence 40
2.4.8 Security 40
2.4.9 Latency 40
2.4.10 Interoperability with M2M Wireless Services 40
2.5 Conclusion 40

References 41
3.1 Standardization 45
3.1.1 United States 46
3.1.2 Europe 46
3.1.3 Interworking 46
3.2 Technology 46
3.2.1 Physical Layer 47
3.2.2 Link Layer 47
3.2.3 Network Layer 47
3.2.4 Transport and Session Layers 49
3.2.5 Presentation and Application Layers 49
3.3 BACnet Security 55
3.4 BACnet Over Web Services (Annex N, Annex H6) 55
3.4.1 The Generic WS Model 56
3.4.2 BACnet/WS Services 58
3.4.3 The Web Services Profile for BACnet Objects 59
3.4.4 Future Improvements 59
4 The LonWorks R Control Networking Platform 61
4.1 Standardization 61
4.1.1 United States of America 61
4.1.2 Europe 62
4.1.3 China 62
4.2 Technology 62
4.2.1 Physical Layer 63
4.2.2 Link Layer 64
4.2.3 Network Layer 65
4.2.4 Transport Layer 66
4.2.5 Session Layer 67
4.2.6 Presentation Layer 67
4.2.7 Application Layer 71
4.3 Web Services Interface for LonWorks Networks: Echelon SmartServer 72
4.4 A REST Interface for LonWorks 73
7.4.3 Packet Forwarding 101
7.4.4 Routing Support Primitives 101
7.4.5 Routing Algorithms 102
7.5 The ZigBee APS Layer 105
7.5.1 Endpoints, Descriptors 106
7.5.2 The APS Frame 106
7.6 The ZigBee Device Object (ZDO) and the ZigBee Device Profile (ZDP) 109
7.6.1 ZDP Device and Service Discovery Services (Mandatory) 109
7.6.2 ZDP Network Management Services (Mandatory) 110
7.6.3 ZDP Binding Management Services (Optional) 111
7.6.4 Group Management 111
7.7 ZigBee Security 111
7.7.1 ZigBee and 802.15.4 Security 111
7.7.2 Key Types 113
7.7.3 The Trust Center 114
7.7.4 The ZDO Permissions Table 116
7.8 The ZigBee Cluster Library (ZCL) 116
7.8.1 Cluster 116
7.8.2 Attributes 117
7.8.3 Commands 117
7.8.4 ZCL Frame 117
7.9 ZigBee Application Profiles 119
7.9.1 The Home Automation (HA) Application Profile 119
7.9.2 ZigBee Smart Energy 1.0 (ZSE or AMI) 122
7.10 The ZigBee Gateway Specification for Network Devices 129
7.10.1 The ZGD 130
7.10.2 GRIP Binding 131
7.10.3 SOAP Binding 132
7.10.4 REST Binding 132
7.10.5 Example IPHA–ZGD Interaction Using the REST Binding 134
8 Z-Wave 139
8.1 History and Management of the Protocol 139
8.2 The Z-Wave Protocol 140
8.2.1 Overview 140
8.2.2 Z-Wave Node Types 140
8.2.3 RF and MAC Layers 142
8.2.4 Transfer Layer 143
8.2.5 Routing Layer 145
8.2.6 Application Layer 148

Part III LEGACY M2M PROTOCOLS FOR UTILITY METERING
9 M-Bus and Wireless M-Bus 155
9.1 Development of the Standard 155
9.2 M-Bus Architecture 156
9.2.1 Physical Layer 156
9.2.2 Link Layer 156
9.2.3 Network Layer 157
9.2.4 Application Layer 158
9.3 Wireless M-Bus 160
9.3.1 Physical Layer 160
9.3.2 Data-Link Layer 162
9.3.3 Application Layer 162
9.3.4 Security 163

10 The ANSI C12 Suite 165
10.1 Introduction 165
10.2 C12.19: The C12 Data Model 166
10.2.1 The Read and Write Minimum Services 167
10.2.2 Some Remarkable C12.19 Tables 167
10.3 C12.18: Basic Point-to-Point Communication Over an Optical Port 168
10.4 C12.21: An Extension of C12.18 for Modem Communication 169
10.4.1 Interactions with the Data-Link Layer 170
10.4.2 Modifications and Additions to C12.19 Tables 171
10.5.1 Reference Topology and Network Elements 171
10.5.2 C12.22 Node to C12.22 Network Communications 173
10.5.3 C12.22 Device to C12.22 Communication Module Interface 174
10.5.4 C12.19 Updates 176
10.6 Other Parts of ANSI C12 Protocol Suite 176
10.7 RFC 6142: C12.22 Transport Over an IP Network 176
10.8 REST-Based Interfaces to C12.19 177
11 DLMS/COSEM 179
11.1 DLMS Standardization 179
11.1.1 The DLMS UA 179
11.1.2 DLMS/COSEM, the Colored Books 179
11.1.3 DLMS Standardization in IEC 180
11.2 The COSEM Data Model 181
11.3 The Object Identification System (OBIS) 182
11.4 The DLMS/COSEM Interface Classes 184
11.4.1 Data-Storage ICs 185
11.4.2 Association ICs 185
11.4.3 Time- and Event-Bound ICs 186
11.4.4 Communication Setup Channel Objects 186
11.5 Accessing COSEM Interface Objects 186
11.5.1 The Application Association Concept 186
11.5.2 The DLMS/COSEM Communication Framework 187
11.5.3 The Data Communication Services of COSEM Application Layer 189
11.6 End-to-End Security in the DLMS/COSEM Approach 191
11.6.1 Access Control Security 191
11.6.2 Data-Transport Security 192
Part IV THE NEXT GENERATION: IP-BASED PROTOCOLS
12 6LoWPAN and RPL 195
12.1 Overview 195
12.2 What is 6LoWPAN? 6LoWPAN and RPL Standardization 195
12.3 Overview of the 6LoWPAN Adaptation Layer 196
12.3.1 Mesh Addressing Header 197
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