

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.1252

(04/2010)

SERIES X: DATA NETWORKS, OPEN SYSTEM
COMMUNICATIONS AND SECURITY

Cyberspace security – Identity management

Baseline identity management terms and definitions

Recommendation ITU-T X.1252

ITU-T X-SERIES RECOMMENDATIONS
DATA NETWORKS, OPEN SYSTEM COMMUNICATIONS AND SECURITY

PUBLIC DATA NETWORKS	X.1–X.199
OPEN SYSTEMS INTERCONNECTION	X.200–X.299
INTERWORKING BETWEEN NETWORKS	X.300–X.399
MESSAGE HANDLING SYSTEMS	X.400–X.499
DIRECTORY	X.500–X.599
OSI NETWORKING AND SYSTEM ASPECTS	X.600–X.699
OSI MANAGEMENT	X.700–X.799
SECURITY	X.800–X.849
OSI APPLICATIONS	X.850–X.899
OPEN DISTRIBUTED PROCESSING	X.900–X.999
INFORMATION AND NETWORK SECURITY	
General security aspects	X.1000–X.1029
Network security	X.1030–X.1049
Security management	X.1050–X.1069
Telebiometrics	X.1080–X.1099
SECURE APPLICATIONS AND SERVICES	
Multicast security	X.1100–X.1109
Home network security	X.1110–X.1119
Mobile security	X.1120–X.1139
Web security	X.1140–X.1149
Security protocols	X.1150–X.1159
Peer-to-peer security	X.1160–X.1169
Networked ID security	X.1170–X.1179
IPTV security	X.1180–X.1199
CYBERSPACE SECURITY	
Cybersecurity	X.1200–X.1229
Countering spam	X.1230–X.1249
Identity management	X.1250–X.1279
SECURE APPLICATIONS AND SERVICES	
Emergency communications	X.1300–X.1309
Ubiquitous sensor network security	X.1310–X.1339
CYBERSECURITY INFORMATION EXCHANGE	
Vulnerability/state exchange	X.1520–X.1539
Event/incident/heuristics exchange	X.1540–X.1549
Exchange of policies	X.1550–X.1559
Heuristics and information request	X.1560–X.1569
Identification and discovery	X.1570–X.1579
Assured exchange	X.1580–X.1589

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T X.1252

Baseline identity management terms and definitions

Summary

Recommendation ITU-T X.1252 provides definitions of key terms used in identity management (IdM). The terms are drawn from many sources but all are believed to be in common use in IdM work. This Recommendation is not intended to be a huge compendium of IdM-related terms. Instead, the terms defined here are limited to those considered to constitute a baseline list of the most important and commonly-used IdM-specific terms. This Recommendation includes Annex A that explains the rationale for some of these key terms.

One of the main objectives of this Recommendation is to promote a common understanding of these terms among the groups currently developing (or planning to develop) IdM-related standards. The definitions are constructed so that, as far as possible, they are independent of implementations or specific context and, therefore, should be suitable as baseline definitions for any IdM work. It is acknowledged that, in some instances and contexts, greater detail may be required for a particular term, in which case, elaboration of the baseline definition may be considered.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T X.1252	2010-04-16	17

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

© ITU 2010

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

	Page
1 Scope	1
2 References.....	1
3 Definitions	1
4 Abbreviations and acronyms	2
5 Conventions	2
6 Terms and definitions	2
Annex A – Key points and rationale for IdM basic terminology.....	7
A.1 Authentication and confidence	7
A.2 Claim/assertion	12
A.3 Enrolment and registration	12
A.4 Identity provider and identity service provider	12
A.5 Identity pattern.....	13
Bibliography.....	14

Introduction

Compilation of this list of IdM terms and definitions began in 2007. It has had many iterations, received contributions and comments from many people and been reviewed many times. The terms and definitions are from many sources. Some of these, but by no means all of them, are listed in the Bibliography. In some cases, the original definition was suitable and included, but in many cases it was modified or combined with others resulting in a "best of breed" for a particular term.

Considerable effort has been made to ensure that the definitions convey the same meaning as those in other IdM Recommendations | International Standards. This means that, in some cases, the words may not be identical but the meaning should be the same.

Because a term may be used in a number of different contexts, the definitions are confined to a baseline or simple definition of the term without including alternatives or variations that may occur. If additional detail or clarification is needed, this can be added as required.

The fundamental points from which the definitions are derived are discussed further in Annex A.

Recommendation ITU-T X.1252

Baseline identity management terms and definitions

1 Scope

This Recommendation contains a baseline set of definitions of terms commonly used in identity management (IdM). The definitions provide a basic definition of the term, i.e., they are intended to convey the basic meaning although exceptionally, a note is included when it helps to clarify the definition. The rationale for some of the key terms/definitions is included in Annex A.

NOTE – The use of the term "identity" in this Recommendation relating to IdM does not indicate its absolute meaning. In particular, it does not constitute any positive validation of a person.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- | | |
|----------------|---|
| [ITU-T X.501] | Recommendation ITU-T X.501 (2005) ISO/IEC 9594-2:2005, <i>Information technology – Open Systems Interconnection – The Directory: Models.</i> |
| [ITU-T X.800] | Recommendation ITU-T X.800 (1991), <i>Security architecture for Open Systems Interconnection for CCITT applications.</i> |
| [ITU-T X.810] | Recommendation ITU-T X.810 (1995) ISO/IEC 10181-1:1996, <i>Information technology – Open Systems Interconnection – Security frameworks for open systems – Overview.</i> |
| [ITU-T X.811] | Recommendation ITU-T X.811 (1995) ISO/IEC 10181-2:1996, <i>Information technology – Open Systems Interconnection – Security frameworks for open systems – Authentication framework.</i> |
| [ITU-T Y.2701] | Recommendation ITU-T Y.2701 (2007), <i>Security requirements for NGN release 1.</i> |
| [ITU-T Y.2702] | Recommendation ITU-T Y.2702 (2008), <i>Authentication and authorization requirements for NGN release 1.</i> |
| [ITU-T Y.2720] | Recommendation ITU-T Y.2720 (2009), <i>NGN identity management framework.</i> |

3 Definitions

This clause is intentionally left blank.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations:

IdM	Identity Management
IdP	Identity Provider
IdSP	Identity Service Provider
NGN	Next Generation Network
PII	Personally Identifiable information
RP	Relying Party

5 Conventions

This clause is intentionally left blank.

6 Terms and definitions

6.1 access control: A procedure used to determine if an entity should be granted access to resources, facilities, services, or information based on pre-established rules and specific rights or authority associated with the requesting party.

6.2 address: An identifier for a specific termination point that is used for routing.

6.3 agent: An entity that acts on behalf of another entity.

6.4 alliance: An agreement between two or more independent entities that defines how they relate to each other and how they jointly conduct activities.

6.5 anonymity: A situation where an entity cannot be identified within a set of entities.

NOTE – Anonymity prevents the tracing of entities or their behaviour such as user location, frequency of a service usage, and so on.

6.6 assertion: A statement made by an entity without accompanying evidence of its validity.¹

6.7 assurance: See authentication assurance and identity assurance.

6.8 assurance level: A level of confidence in the binding between an entity and the presented identity information.

6.9 attribute: Information bound to an entity that specifies a characteristic of the entity.

6.10 attribute type [ITU-T X.501]: A component of an attribute that indicates the class of information given by that attribute.

6.11 attribute value [ITU-T X.501]: A particular instance of the class of information indicated by an attribute type.

6.12 (entity) authentication: A process used to achieve sufficient confidence in the binding between the entity and the presented identity.

NOTE – Use of the term authentication in an identity management (IdM) context is taken to mean entity authentication.

¹ The terms assertion and claim are agreed to be very similar.