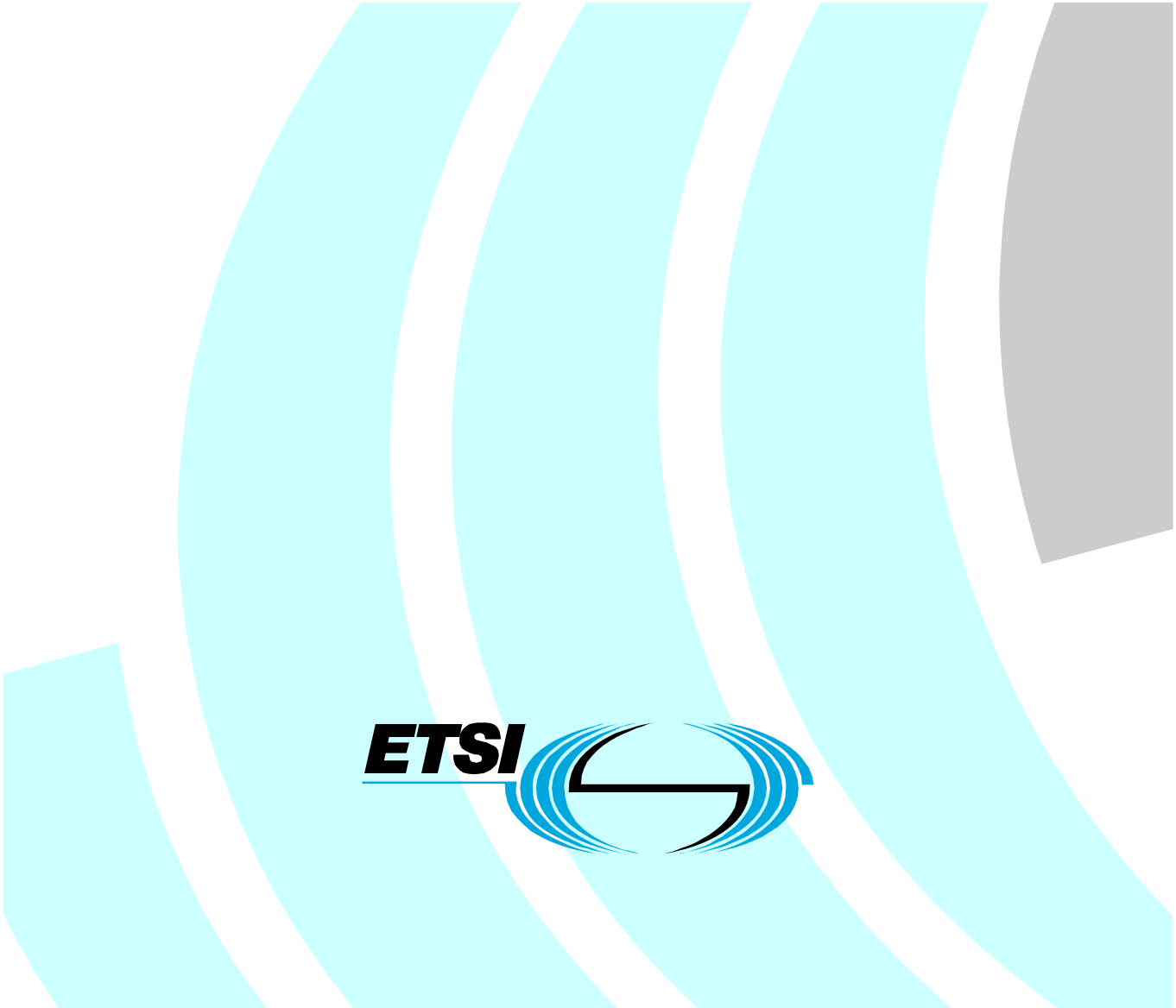
ETSI TR 101 533-2 V1.1.1 (2011-05)

Technical Report

Electronic Signatures and Infrastructures (ESI); Information Preservation Systems Security; Part 2: Guidelines for Assessors



Reference
DTR/ESI-000098

Keywords
e-commerce, electronic signature, information preservation, security, trust services

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Electronic Signatures and Infrastructures (ESI).

The present document is part 2 of a multi-part deliverable covering provisions for secure and reliable implementation, management and assessment of long term information preservation systems, as identified below:

TS 101 533-1: "Requirements for Implementation and Management";

TR 101 533-2: "Guidelines for Assessors".

Acknowledgment

The building blocks of this Technical Report were submitted by UNINFO, the Italian standardization body for ICT, federated to UNI, Italian member body of CEN and ISO.

Introduction

Provisions of the present document can be used by Assessors of Information Preservation Systems aiming to verify Information Preservation Services as compliant with the TS 101 533-1 [i.4], and in abidance by the applicable legislation.

1 Scope

The present document addresses the assessment of the Information Security Management System ("ISMS") of an Information Preservation System, by specifying guidelines for Assessors when reviewing and auditing an IPS.
No provisions are stated on:

a) Assessors' qualification for which existing documentation provides specification of an exhaustive set of provisions; for this purpose ISO/IEC 17021 [i.8] and ISO/IEC 27006 [i.5] are referred to;

b) basic Assessors' activities, such as examining the procedures audit trail, since Assessors are assumed to be familiar with them. Additional information is specified in annex B.

The present document specifies recommendations on how to assess reliable electronic information preservation services against the ICT security measures provided for in the sister document TS 101 533-1 [i.4].

These recommendations are based on provisions of ISO/IEC 27001 [i.1], ISO/IEC 27002 [i.2] and TS 102 573 [i.3], enhancing them where necessary.

The present document does not address specific document management related issues that are addressed by a number of ISO standards, such as ISO 14721 [i.9], ISO/IEC 15489 [i.10], ISO 23081 [i.11] and, more in general, those dealt with by ISO/TC 46/SC11 that the reader of the present document should refer to.

NOTE: The present document and its sister document TS 101 533-1 [i.4] can be referred to by various archival management standards and standard families as a complementary and detailed set of specifications through which a reliable Information Security Management System can be implemented, managed and assessed, as regards the Information Preservation peculiarities.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

Not applicable.

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ISO/IEC 27001: "Information technology -- Security techniques -- Information security management systems - Requirements".

[i.2] ISO/IEC 27002: "Information technology -- Security techniques -- Code of practice for information security management".

[i.3] ETSI TS 102 573: "Electronic Signatures and Infrastructures (ESI); Policy requirements for trust service providers signing and/or storing data for digital accounting".

[i.4] ETSI TS 101 533-1: "Electronic Signatures and Infrastructures (ESI); Information Preservation Systems Security Part 1: Requirements for Implementation and Management".

[i.5] ISO/IEC 27006: "Information technology -- Security techniques -- Requirements for bodies providing audit and certification of information security management systems".

[i.6] ISO/IEC 27007: "Information technology -- Security techniques -- Guidelines for information security management systems auditing".

NOTE: To be released in 2011.

[i.7] ISO/IEC 27008: "Information technology - Security techniques - Guidance for auditors on ISMS controls".

NOTE: To be released in 2011.

[i.8] ISO/IEC 17021: "Conformity assessment -- Requirements for bodies providing audit and certification of management systems".

[i.9] ISO 14721: "Space data and information transfer systems - Open archival information system - Reference model".

[i.10] ISO/IEC 15489:2001: "Information and documentation - Records management".

[i.11] ISO 23081: "Information and documentation -- Records management processes".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 101 533-1 apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TS 101 533-1 apply.

4 Overview

The present document is intended to be used by Assessors as a guidance to assess the compliance of an IPS with TS 101 533-1 [i.4].

Assessors should ascertain, for each of the present document clauses, that provisions in the corresponding TS 101 533-1 [i.4] clauses are complied with by the IPSP. In each of the following clauses, additional provisions may be specified that Assessors should implement.

Assessors could skip the review of ISO/IEC 27002 [i.2] controls -those marked with "Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing" in annex A of TS 101 533-1 [i.4] if the IPSP can demonstrate that a ISO/IEC 27001 [i.1] and ISO/IEC 27002 [i.2] audit has been conducted; the IPSP should provide the ISO/IEC 27001 [i.1] audit report and/or certification granted to Assessors for review in such a case.

Assessors should verify which legal system(s) the IPSP operates in and should have the necessary competence on such legal system(s) in order to be able to assess the legal compliance of providing Information Preservation Services. It is assumed that Assessors perform their review based on the same principles as assessments based on ISO/IEC 27001 [i.1].

5 Provisions based on TS 102 573

In this clause provisions are specified for Assessors related to the requirements specified in the corresponding clause of TS 101 533-1 [i.4].

5.1 IPSP Obligations specified in TS 102 573, clause 6

5.1.1 Arrangements to cover liabilities and financial stability

1) Assessors should verify that the Risk Assessment process has duly taken into account the indications as in clause 5.1.1 of TS 101 533-1 [i.4], including also financial risks.

5.1.2 Conformance by Subcontractors

1) Assessors should properly identify themselves at the IPSP's and at the IPSP's external service providers' premises, upon prior IPSP notification.

2) Assessors should assess that agreements between the IPSP and its subcontractors are in place. These agreements should include provisions obliging IPSP subcontractors to comply with all the security measures governing the IPSP relevant to their services.

3) Assessors should assess that the IPSP subcontractors comply with the dispositions specified in TS 101 533-1 [i.4].

5.1.3 IPSP service provisions in abidance by the applicable legislation

(TS 102 573 [i.3], clause 6.2, item 1.)

1) Assessors should verify existence of documentation suitable to demonstrate that the IPSP is a legal entity according to the applicable law.

2) Assessors should review the existing IPSP contractual documentation to ascertain that it specifies in readily understandable language the regulation or sets of legal requirements that are to be complied by each of the services provided.

3) Assessors should ascertain that the IPSP contractual documentation are written as specified in clause 5.1.3, item 5 of TS 101 533-1 [i.4].

4) Assessors should verify the existence of procedures addressing the issues in clause 5.1.3 item 6 of TS 101 533-1 [i.4] in order to gather evidence of the effectiveness of the controls used to identify and authenticate the legitimately entitled persons.

5) [EXT.1] Personal data preservation.

   - If metadata are created from personal data processing, Assessors should review the existing IPSP contractual documentation to ascertain that it contains the agreements addressing the issues in clause 5.1.3. clause 7, items b). of TS 101 533-1 [i.4]; moreover Assessors should verify that metadata are managed as private data, by the procedures addressing the issues in clause 5.1.3. clause 7, item a). of TS 101 533-1 [i.4].

5.1.4 Compliance with the TS

1) Assessors, after having verified the SoA exhaustiveness, should assess the IPSP against all controls and procedures declared as applicable in the IPSP's SoA.

2) Assessors should verify the presence of a formal declaration of compliance with the controls and procedures declared as applicable in the IPSP's SoA in the IPSP's Security Policy Document, procedures, job descriptions, and subcontractor agreements.

3) Assessors should review any significant deficiencies identified in or recommendations given in previous assessments, in relation to controls as per TS 101 533-1 [i.4] and ensure that the deficiencies have been corrected or properly addressed.

5.1.5 Contractual aspects

(TS 102 573 [i.3], clause 6.2, several items.)

1) Assessors should review the agreements addressing the issues and the IPSP duties towards its subscribers specified in clause 5.1.5 of TS 101 533-1 [i.4].

2) To assess the legal validity of the agreements between the IPSP and its subscribers, Assessors are advised to ask for legal assistance.

3) Assessors should verify that appropriate and effective procedures exist and that resources are allocated to meet the IPSP obligations as per clauses 5.1.5 and 5.1.1 of the TS 101 533-1 [i.4].

4) Assessors should verify that the IPSP is capable of correctly displaying the preserved information according to all its contractual agreements.

NOTE: This can be based on a sample of information.

5.1.6 Resolution of complaints and disputes

1) Assessors should gather evidence that the procedures related to the information deposit are in force and comply with the service agreement and record the information specified in items 1 and 2 of clause 5.1.6. of TS 101 533-1 [i.4].

2) [EXT.1] Personal Data Preservation:

- If the IPSP provides the appropriate extended service, such as personal data preservation, Assessors should verify that procedures are in place to comply with requirements as in clause 5.1.6, item 3 of TS 101 533-1 [i.4] and check the effectiveness of these procedures.

5.1.7 Organisation independence

1) Assessors should gather evidence of the IPSP's independence from its customers or providers and that in any case its decisions regarding information preservation and exhibition and regarding its abidance by the applicable legislation are free from undue influence.

5.1.8 IPSP Subscriber Obligations

(TS 102 573 [i.3], clause 6.3.)

1) Assessors should verify that the provisions in TS 101 533-1 [i.4], clause 5.1.8 are met; in particular that agreement(s) about the identification and authentication methods of the persons entitled to act in the name and on behalf of the subscriber are in place.

2) Assessors should verify that procedures are in place which ensure that subscribers provide and regularly update the information as in the clause 5.1.8 item 2 of TS 101 533-1 [i.4] to the IPSP.

3) Assessors should verify the existence of statements as in clause 5.1.8, item 3) of TS 101 533-1 [i.4] in the agreement with the subscriber.

5.1.9 Information for trading partners

(TS 102 573 [i.3], clause 6.4.)

1) Assessors should verify that the terms and conditions for trading partners as indicated in TS 101 533-1 [i.4], clause 5.1.9. are implemented.

2) Assessors should, if applicable, ascertain the existence of evidence that subscribers are provided, directly or through pointers to other sources, with information on whether the IPSP has been granted a still in force formal recognition of its status of IPSP, or positive assessment against the present specifications, by an external body and this body's official status.

5.1.10 Information for auditor/regulatory/tax authorities

(TS 102 573 [i.3], clause 6.5.)

1) Assessors should verify that documented procedures as specified in the clause 5.1.10 of TS 101 533-1 [i.4] are in place and implemented.

6 Objectives and controls in TS 102 573, annex A

In addition to provisions specified in TS 102 573 [i.3], annex A, the following clauses apply.

6.1 SS.1. Signature

6.1.1 SS.1.1. Class of Electronic Signature

1) Assessors should ascertain that one of the mechanism required by TS 101 533-1 [i.4] is in place. If the adopted mechanism is based on electronic signature issued on behalf of the IPSP, the Assessor should ascertain that is at least of AdES type, in compliance with the applicable legislation.

6.1.2 SS.1.2. Certification

1) Assessors should assess that the IPSP complies with provisions in clause 6.1.2. of TS 101 533-1 [i.4].

2) If the IPSP's DS use QES, Assessors should review that, according to the applicable legislation, when the CA issued the signature qualified certificate on which the QES is based (this can be deduced from a related trusted time reference) it was recognised as a valid certification authority issuing qualified certificates by the relevant authority.

3) Assessors should verify that the signature certificates meet the supported signature requirements.

EXAMPLE: Any limitations of use, however specified, are to be complied with.

6.1.3 SS.1.3. Signature Creation Data

1) Assessors should review that, if SSCD are used, they are provided and used in compliance with the applicable CP/CPS.

2) Assessors should review that the IPSP activation data management procedures are consistent with what is specified by the CA.

3) Assessors should gather evidence that, if SSCD are not used, reliable procedures and security mechanisms are enforced ensuring the SCD confidentiality.

6.1.4 SS.1.4. Certificate Subject's Registration

1) Assessors should gather evidence that the IPSP DS certificates are issued upon, and consistently with, specific agreements with CAs covering provisions of TS 101 533-1 [i.4], clause 6.1.4. Assessors should gather evidence that Delegate Signers have been officially appointed by the IPSP relevant management or have been delegated by the responsible for preservation.

6.1.5 SS.1.5. Certificate Revocation

1) Assessors should ascertain that the certificate management agreement between the IPSP and the CA indicates who (apart from the certificate subject) is entitled to forward a request to the CA for revocation of the certificates to be used for the IPS purposes.

2) Assessors should ascertain the existence of an auditable and effective procedure, consistent with provision in the corresponding clause of TS 101 533-1 [i.4], for requesting revocation of the certificates used for the purpose of the IPS, by the certificate subject and by the IPSP and should verify that the procedure has been carried out consistently with the written documentation.

3) Assessors, if this revocation procedure has already been enacted, should verify that the audit trail makes the procedure auditable.

6.2 SS.2. Maintenance of Signature over Storage Period

1) Assessors should ascertain existence of, and abidance by, a procedure ensuring that the signatures the IPSP or one of its DS applies (e.g. on the Closure Evidence) are maintained as specified in clause 6.2 of TS 101 533-1 [i.4].

6.3 SS.3. Storage

6.3.1 SS.3.1. Authorized Access

See also clause 6.4 SS.4. Reporting to and Exchanges with Authorities.

1) Assessors should gather evidence as to ascertain that procedures for persons' authentication and registrations are in place. The IPSP should demonstrate compliance with such procedures.

2) Assessors should gather evidence as to ascertain that procedures governing the preserved information modification and deletion are in place. IPSP should demonstrate compliance with such procedures.

3) Where an end-to-end encryption for the remote access is implemented, Assessors should verify the existence of an agreement with the counterpart on the encryption system to be adopted.

4) Assessors should ascertain that segregation among subscribers is ensured.

6.3.2 SS.2. Authenticity and Integrity

1) Assessors should gather evidence as to ascertain that procedure to detect loss or surreptitious modification and/or addition of documents as in clause 6.3.2. of TS 101 533-1 [i.4] are in place and correctly implemented.

2) Assessors should ascertain that provisions in clause 6.3.2 addressing the usage of Closure Evidence, including algos weakening, or of alternate mechanisms, are complied with.

3) Assessors should check that an exhaustive audit trail generated by the procedures as in clause 6.3.2. of TS 101 533-1 [i.4] exist.

NOTE: In order to perform the above verifications Assessors would look through the entire document trail, spanning, e.g. from the receipt, through the Closure Evidence, up to the records of additions, modifications, deletions to the preserved information.

6.3.3 SS.3.3. Document Readability

[EXT1]

1) Assessors should ascertain that:

   a) if item 1), a) of clause 6.3.3. of TS 101 533-1 [i.4] applies: all the required software, hardware and any other necessary equipment are reliably and securely kept;

b) if item 1), b) of clause 6.3.3. of TS 101 533-1 [i.4] applies:

i. formats as in such item 1), b). letter i meet the specified requirements;

ii. where such item 1), b). letter ii applies, assertion by the trusted third party exists that the documents transposed in a new format have maintained their original semantics.

2) Assessors should verify that the procedures as in clause 6.3.3. of TS 101 533-1 [i.4], item 2) are performed according to the required schedule.

3) Assessors should verify that, if degradation was identified, the IPSP properly and timely:

a) managed the event as a security event (see TS 101 533-1 [i.4], clause A.13);

b) performed the information recreation procedures.

4) Assessors should verify that the BCP encompasses also what is specified in clause 6.3.3. of TS 101 533-1 [i.4] item 1), in particular 1), a).

6.3.4 SS.3.4. Storage media type

1) If the IPSP has agreed with some of its subscribers upon using specific media types, Assessors should verify that these media are actually used for the information owned by those subscribers.

2) Assessors should gather evidence as to ascertain:

a) that the IPSP has in force procedures suitable to be timely informed when the used media types do not last for the envisaged preservation period; and

b) that the IPSP:

i. has in force procedures, if such case occurs, to timely migrate to another media type, performing information recreation;

ii. has implemented the above procedures when such an event happened.

6.3.5 SS.3.5. Documents Format

1) Assessors should ascertain that agreements between the IPSP and its service subscribers specify if the documents submitted to the IPSP are in analog and/or in electronic formats.

2) Assessors should verify if the provisions in clause 6.3.5 of TS 101 533-1 [i.4] are complied with, according to the Extended Services provided.

6.3.6 SS.3.6. Requirements on Separation and Confidentiality

1) Assessors should verify if the provisions on Separation and Confidentiality specified in TS 102 573 [i.3], annex A SS.3.6 are complied with, through existence of auditable procedures and implementation of technical and/or organisational measures.

6.4 SS.4. Reporting to and Exchanges with Authorities

1) Assessors should ascertain that procedures for remote document access, ensuring confidentiality according to the applicable law, exist, along with the rationale for their choice, and are complied with.

2) Assessors should ascertain compliance with TS 102 573 [i.3], annex A, SS.4.2 and clause 4.3.

6.5 SS.5. Conversion of Analog Originals to Digital Formats

[EXT1]

NOTE: The original title of the corresponding TS 102 573 [i.3] clause is "SS.5. Conversion of Paper Originals to Digital Formats". The following items apply not only to paper originals, but to any kind of analog document, even audio or video ones.

1) Assessors should ascertain that the procedures for the conversion of analog originals to digital formats have been defined based on the outcomes of the Risk Assessment.

2) Assessors should verify the existence of the procedures specified in the clause 6.5, item 1) of TS 101 533-1 [i.4] and that they produce an auditable trail.

3) Where the clause 6.5, item 2 of TS 101 533-1 [i.4] applies Assessors should ascertain that the provisions therein specified are complied with.

Annex A: ISO/IEC 27001 related Long Term Preservation-specific ISMS guidelines for control assessment

A.1 Reference to ISO/IEC 27001

Each of the subsequent clauses, from A.5 on, addresses assessment against the corresponding TS 101 533-1 [i.4] clause in annex A, that matches the ISO/IEC 27001 [i.1] clause that is also referred to as "clause of reference".

Being provisions in such TS 101 533-1 [i.4] clauses based on ISO/IEC 27001 [i.1] and ISO/IEC 27002 [i.2], their assessment should be conducted consistently with the requirements for ISO/IEC 27001 [i.1] based auditing.

A.2 Basic ISO/IEC 27002 provision

The number of each of the subsequent clauses, from A.5 on, matches the numbering of the corresponding ISO/IEC 27002 [i.2] clause (e.g. clause A.5.1.1 of the present document corresponds to ISO/IEC 27002 [i.2], clause 5.1.1).

A.3 Enhanced ISO/IEC 27002 provisions

Each subsequent clause matches the corresponding TS 101 533-1 [i.4], annex A Clause that enhances the corresponding ISO/IEC 27002 [i.2] clause.

A.4 New specific controls

The following clauses provide indications for assessing the specific provisions specified in the corresponding clauses of TS 101 533-1 [i.4].

A.5 Security Policy

A.5.1 Information security policy

A. 5.1.1 Information security policy document

1) Assessors should be provided with the IPSP's ISPD.

2) Assessors should ascertain that the ISPD addresses the preserved information classification levels.

3) Assessors should verify that audit trails provide evidence that the ISPD has been properly distributed to all interested persons.

A.5.1.2 Review of the information security policy

1) Assessors should verify that the ISPD is reviewed as per provisions in clause A.5.1.2 of TS 101 533-1 [i.4], item 1).

2) Assessors should verify the existence of records evidencing that the reviewed ISPD have been enforced consistently with the timeliness derived from the Risk Assessment.

A.6 Organization of information security

A.6.1 Internal organization

A.6.1.1 Management commitment to information security

1) Assessors should verify existence of a registration without gaps of who have been the persons Responsible for Preservation.

2) Assessors should verify that all depositors are made aware of the up to date IPSP organisation as per what affects them.

3) Assessors should verify existence of records on the education programme as provided to the IPSP persons.

A.6.1.2 Information security co-ordination

1) Assessors should ascertain that from the IPSP organisation chart appears that its Security is governed in a way to prevent implementation of conflicting practices in the various IPSP departments, e.g. hierarchically.

A.6.1.3 Allocation of information security responsibilities

1) Assessors should ascertain that the documentation specified in the clause A.6.1.3 2) of TS 101 533-1 [i.4] exists and is up to date.

A.6.1.4 Authorization process for information processing facilities

1) Assessors should ascertain that the IPSP has in force procedures ensuring that any new technology to be implemented is submitted to the Information Security management for approval before implementation.

2) Assessors should ascertain that for each of the implemented new technologies exists a specific prior consent to the implementation by the Information Security management.

A.6.1.5 Confidentiality agreements

1) Assessors should ascertain the existence of an IPSP procedure requiring that all formal communications to outside the IPSP are signed off by the IPSP relevant Management. Assessors may require the exhibition of some of the signed off permissions.

2) Assessors should ascertain the existence of procedures and regulations forbidding the IPSP employees to reveal confidential information in their contacts with outside the IPSP.

A.6.1.6 Contact with authorities

1) Assessors should ascertain that in the IPSP organisation chart are clearly specified the names or job titles of the officers who are entitled to speak with authorities on behalf of the IPSP.

A.6.1.7 Contact with special interest groups

1) Assessors should ascertain that the IPSP provides evidence of its capability to keep up to date with the security information.

A.6.1.8 Independent review of information security

1) Assessors should ascertain that where the previous assessments have been performed by accredited auditors, the IPSP is capable to exhibit evidence that it has verified their accreditation.

A.6.2 External Parties

A.6.2.1 Identification of risks related to external parties

1) Assessors should ascertain that the IPSP Risk Assessment addresses also the risks related to dealing with external parties.

A.6.2.2 Addressing security when dealing with customers

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.6.2.3 Addressing security in third party agreements

1) Assessors should ascertain that guidelines exist, possibly supported by a check list, specifying the topics to be addressed in the agreements with third parties, consistently with the Risk Assessment.

2) Assessors should inspect some existing agreements to verify if they meet the guidelines as in corresponding clause A.6.2.3 of TS 101 533-1 [i.4].

3) Assessors should verify that for each outsourced activity the relevant management has formally accepted the specific provider's ISPD that should be positively evaluated by Assessors that have neither contractual nor company relationship with the involved provider.

4) Assessors should verify the agreements with external providers require service continuity by the provider suitable to meet the IPSP BCP requirements.

5) Assessors should verify that, for each outsourced service, the IPSP has in force a back-out plan, regularly assessed for feasibility and duly approved by the IPSP management.

6) Assessors should verify that the agreements with the IPSP providers explicitly provide the right for the IPSP to perform what is specified in corresponding clause A.6.2.3 of TS 101 533-1 [i.4]. If it is not implemented Assessors should verify the existence of the statement as in corresponding clause A.6.2.3 of TS 101 533-1 [i.4].

7) If the IPSP operates ad hoc developed SW Assessors should verify that in an escrow facility exists the most recent version of such SW code and documentation, as in corresponding clause A.6.2.3 of TS 101 533-1 [i.4].

A.7 Asset Management

A.7.1 Responsibility for assets

A.7.1.1 Inventory of assets

1) Assessors should ascertain that the IPS allows at least the creation of the inventory indicated in corresponding clause A.7.1.1 of TS 101 533-1 [i.4], including the history of input, modified and deleted information.

2) Assessors should ascertain that the inventory indicated in the corresponding clause A.7.1.1 of TS 101 533-1 [i.4] complies with the applicable legislation and is auditable.

3) Assessors should ascertain that corresponding clause A.7.1.1 of TS 101 533-1 [i.4] is complied with, where applicable.

4) Assessors should verify that the IPSP updates its inventories with the timing as per corresponding clause A.7.1.1 of TS 101 533-1 [i.4].

5) Assessors should ascertain that for any information preserved the IPSP keeps for the same time period the information specified in corresponding clause A.7.1.1 of TS 101 533-1 [i.4].

A.7.1.2 Ownership of assets

1) Assessors should ascertain the existence of information on appointment as per corresponding clause A.7.1.2 of TS 101 533-1 [i.4].

2) Assessors should verify that the "Disaster Recovery Team" authorisations are activated only upon invocation of Disaster, in real or in case of drills.

A.7.1.3 Acceptable use of assets

Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.7.2 Information classification

A.7.2.1 Classification guidelines

1) Assessors should ascertain that the IPSP has in force an auditable classification mechanism.

2) Assessors should ascertain that the classifications assigned by the information owners are implemented by the IPSP.

3) Assessors should ascertain that the contractual documentation specifies in readily understandable language the consequences of lack of indication on his information classification.

4) Assessors should ascertain that the confidentiality classification is reviewed as specified in corresponding clause A.7.2.1 of TS 101 533-1 [i.4].

A.7.2.2 Information labelling and handling

1) Assessors should ascertain that provisions in corresponding clause A.8 of TS 101 533-1 [i.4] are complied with.

A.8 Human resources security

1) Assessors should ascertain that provisions in corresponding clause A.8 of TS 101 533-1 [i.4] are complied with.

A.8.1 Prior to Employment

A.8.1.1 Roles and responsibilities

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.8.1.2 Screening

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.8.1.3 Terms and conditions of employment

1) Assessors should verify that each IPSP employee accepts in writing the IPSP rules, declaring also his/her awareness of the consequences for non compliance.

A.8.2 During Employment

A.8.2.1 Management responsibilities

1) Assessors should verify that all IPSP officers involved in the IPS operations accepts in writing their job description that specifies the employee's responsibility.

2) Assessors should verify the existence of an employees' evaluation process to regularly assess their experience and reliability.

A.8.2.2 Information security awareness, education, and training

1) Assessors should ascertain that the training programs cover also information security awareness.

2) Assessors should verify existence of documentation evidencing that all officers operating on the IPS are formally provided in writing with information as per corresponding clause A.8.2.2 of TS 101 533-1 [i.4].

A.8.2.3 Disciplinary process

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.8.3 Termination or Change of Employment

A.8.3.1 Termination responsibilities

1) Assessors should ascertain that officers acting on the IPS formally accepted that the confidentiality agreement is in force even after their termination or change of employment and, where applicable, of the legal consequences related to sensitive and judicial data handling.

A.8.3.2 Return of assets

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.8.3.3 Removal of access rights

1) Assessors should ascertain the procedures exist to timely remove the access rights of officers leaving the IPS related mansions.

2) Assessors should ascertain that information on officers leaving the IPS related mansions is timely communicated to all interested personnel.

A.9 Physical and environmental security

A.9.1 Secure Areas

A.9.1.1 Physical security perimeter

1) Assessors should ascertain that provisions in corresponding clause of TS 101 533-1 [i.4] are complied with.

A.9.1.2 Physical entry controls

1) Assessors should ascertain, by inspecting the records, that the procedures as in the corresponding clause A.9.1.2 of TS 101 533-1 [i.4] are complied with.

A.9.1.3 Securing offices, rooms, and facilities

1) Assessors should verify that the ISPD addresses, consistently with the Risk Assessment, the physical security.

2) Assessors should verify the existence of security measures specifically tailored for the cases of emergency.

A.9.1.4 Protecting against external and environmental threats

3) Assessors should ascertain that provisions in the corresponding clause A.9.1.4 of TS 101 533-1 [i.4] are met.

A.9.1.5 Working in secure areas

4) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.9.1.6 Public access, delivery, and loading areas

5) Assessors should ascertain that provisions in the corresponding clause A.9.1.6 of TS 101 533-1 [i.4] are met.

A.9.2 Equipment Security

A.9.2.1 Equipment siting and protection

1) Assessors should verify the existence of a study on IPS equipment siting and protection demonstrating that the issue has been dealt with.

A.9.2.2 Supporting utilities

1) Assessors should ascertain the existence of a suitable emergency power supply meeting the requirement as in the corresponding clause A.9.2.2 of TS 101 533-1 [i.4], clause and that even in case of emergency, the computer rooms environmental conditions are compatible with the machine and human activities.

2) Assessors verify the above by ascertaining the existence of a study demonstrating that the issue has been dealt with.

A.9.2.3 Cabling security

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.9.2.4 Equipment maintenance

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.9.2.5 Security of equipment off-premises

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.9.2.6 Secure disposal or re-use of equipment

2) Assessors should ascertain the existence of records produced by the auditable procedure as in the corresponding clause A.9.2.6 of TS 101 533-1 [i.4].

A.9.2.7 Removal of property

1) Assessors should ascertain that the changes in the organisation as far as regards the authority to permit off-site removal of assets are timely communicated to the interested persons.

2) Assessors should verify that, where the ISPD requires it, the IPSP performs spot checks consistently with the clause of reference.

A.10 Communications and operations management

A.10.1 Operational procedures and responsibilities

A.10.1.1 Documented operating procedures

1) Assessors should ascertain the existence of the documentation, duly signed off, specified in the corresponding clause A.10.1.1 of TS 101 533-1 [i.4].

2) Assessors should ascertain that up to date copies of the operating procedures in force are securely kept by the relevant managers and that evidence exists that periodical inspections are performed aiming to verifying the consistency between the reference documentation and the operating procedures.

A.10.1.2 Change management

1) Assessors should ascertain the existence of records evidencing that the practices as in the corresponding clause A.10.1.2 of TS 101 533-1 [i.4] are complied with.

A.10.1.3 Segregation of duties

1) Assessors should ascertain that the segregation of duties is implemented, either by enforcing the applications or equipment features, or by organisational means.

2) Assessors should verify that the IPS is not operated with System Administrator's privileges.

A.10.1.4 Separation of development, test, and operational facilities

1) Assessors should ascertain that, where sensitive data are used for testing purposes, provisions in corresponding clause A.10.1.4 of TS 101 533-1 [i.4] are complied with.

2) Assessors should inspect the acceptance tests traces to ascertain that personnel involved in the SW development have not directly operated on the test environment in a way to affect the test results.

A.10.2 Third party service delivery management

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.2.1 Service delivery

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.2.2 Monitoring and review of third party services

1) Assessors should ascertain that senior managers have been appointed by the IPSP to comply with the ISO/IEC 27002 [i.2] Clause of reference, supported by either by IPSP experts or by external experts.

2) Assessors should ascertain the existence inside the agreements between IPSP and the external providers of provisions stating that the IPSP has the right to perform regular and extemporaneous inspections.

A.10.2.3 Managing changes to third party services

1) Assessors should TS 101 533-1 [i.4] Assessors should ascertain the existence of auditable procedures, both on the IPSP and on the outsourcers, recording the change process as in corresponding clause A.10.2.3 of TS 101 533-1 [i.4].

A.10.3 System planning and acceptance

A.10.3.1 Capacity management

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.3.2 System acceptance

1) Assessors should ascertain the existence of the documentations as in the corresponding clause A.10.3.2 of TS 101 533-1 [i.4].

2) Assessors should ascertain the existence of securely kept documentation of each IPS related system configuration and of the periodical verifications records as in corresponding clause A.10.3.2 of TS 101 533-1.

A.10.4 Protection against malicious and mobile code

A.10.4.1 Controls against malicious code

1) Assessors should ascertain the existence of the records generated by the procedures as in corresponding clause A.10.3.2 of TS 101 533-1 [i.4].

2) Assessors should verify that the IPSP has specified a sound rationale for its malware detection and removal applications update frequency and modality.

A.10.4.2 Controls against mobile code

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.5 Back-up

A.10.5.1 Information back-up

1) Assessors should ascertain that the back up frequency, the adopted media, the data architecture, the choice on what other assets are to be backed up are supported by technical reports consistent with the purpose of the Note in the corresponding clause A.10.5.1 of TS 101 533-1 [i.4].

2) Assessors should ascertain that the chosen back up copies storage locations are consistent with the BCP.

3) Assessors should verify the existence of records of the periodical back up copies readability checks.

A.10.6 Network security management

A.10.6.1 Network controls

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.6.2 Security of network services

1) Assessors should ascertain that the networks architecture, including Firewalls and Intrusion Detection Systems, meet the requirements in the in corresponding clause A.10.6.2 of TS 101 533-1 [i.4].

2) Assessors should inspect the logs taken by the Firewalls and Intrusion Detection Systems, to ascertain that the incident management procedures have been activated, where applicable.

A.10.7 Media handling

A.10.7.1 Management of removable media

1) Assessors should ascertain the procedures as in the corresponding clause A.10.7.1 of TS 101 533-1 [i.4] exist and have been performed.

2) Assessors should verify that the readability verification interval are based on the Risk Assessment outcomes.

3) Assessors should verify the existence of the reports of the inspections on media readability.

A.10.7.2 Disposal of media

1) Assessors should ascertain compliance with IPSP auditable procedures as per in corresponding clause A.10.7.2 of TS 101 533-1 [i.4].

A.10.7.3 Information handling procedures

1) Assessors should ascertain that the IPSP has in force procedures ensuring that no explicit reference on the information and on the information owner is present on the media labels.

A.10.7.4 Security of system documentation

1) Assessors should verify that the system documentation distribution procedures comply with the ISPD.

2) Assessors should verify the existence of report of the system documentation managing procedures as in corresponding clause A.10.7.4 of TS 101 533-1 [i.4].

A.10.8 Exchange of information

A.10.8.1 Information exchange policies and procedures

1) Assessors should ascertain that the adopted encryption mechanisms are either legally required or agreed upon with the recipient or depositor.

A.10.8.2 Exchange agreements

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.8.3 Physical media in transit

1) Assessors should ascertain that, where personal data is in transit, the reliable transport or couriers are chosen in agreement with, or under approval by, the Controller.

2) Assessors, where confidential data and in particular personal data are in transit, should verify the existence of report evidencing that these data are encrypted.

A.10.8.4 Electronic messaging

1) Assessors should ascertain that, where electronic mail solutions providing evidence of shipment and delivery, like Registered Electronic Mail, are not implemented although available, the IPSP has provided a documented rationale for this choice.

A.10.8.5 Business information systems

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.9 Electronic commerce services

Not applicable.

A.10.10 Monitoring

A.10.10.1 Audit logging

1) Assessors should ascertain that for all IPS Computer systems, technical procedures ensure that logs are created that address the information specified in the Clause of reference that apply to the specific system.

2) Assessors should ascertain that logs are available for the time specified at least on the basis of legal requirements and of the agreement with the customer.

A.10.10.2 Monitoring system use

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.10.3 Protection of log information

1) Assessors should ascertain that all logs are kept protected from loss, alteration for at least the period of time suitable to allow for exhaustive investigation when reviewing the IPSP security policy document.

2) Assessors should ascertain that the logs are either replicated or backed up as in corresponding clause A.10.10.3 of TS 101 533-1 [i.4].

A.10.10.4 Administrator and operator logs

1) Assessors should ascertain the existence of measures addressing the notification to Administrator and operator that all operations on the IPS are logged.

A.10.10.5 Fault logging

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.10.10.6 Clock synchronization

1) Assessors should ascertain the existence of documentation evidencing that the UTC time source is trustable.

2) Assessors should verify that the UTC Time is delivered unaltered to the entire IPS.

3) Assessors should ascertain that the all IPS component ensures that all time reference are as specified in corresponding clause A.10.10.6 of TS 101 533-1 [i.4].

A.11 Access control

A.11.1 Business requirement for access control

A.11.1.1 Access control policy

1) Assessors should ascertain the existence of a declaration by the Information Security Management of the Company to which the IPSP belongs, stating the compliance with the corresponding clause A.10.11.1 of TS 101 533-1 [i.4].

2) Assessors should ascertain that the IPSP access policies implement the provisions as the corresponding clause A.10.11.1 of TS 101 533-1 [i.4].

A.11.2 User access management

A.11.2.1 User registration

1) Assessors should ascertain the existence of records evidencing that provisions as in the corresponding clause A.11.2.1 of TS 101 533-1 [i.4].

A.11.2.2 Privilege management

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.2.3 User password management

1) Assessors should ascertain the compliance with provisions the corresponding clause A.11.2.3 of TS 101 533-1 [i.4], by:

   a) Inspecting the project specifications.

   b) Inspecting the applications records.

   c) Performing operations on the interested equipment/application.

   d) Verifying that no PIN/password is to be exchanged between the user and, where existent, the contact centre.

2) Where sampling is necessary due to the large number of items to inspect, Assessors should adopt a meaningful sampling criterion.

A.11.2.4 Review of user access rights

1) Assessors should ascertain that records exists evidencing that the security incidents management has implied the user's access rights review, where applicable.

2) Assessors should verify that the project specifications address issues in the corresponding clause A.11.2.4. of TS 101 533-1 [i.4].

A.11.3 User responsibilities

A.11.3.1 Password use

1) Assessors should ascertain that users:

   a) have been made aware of provisions in the corresponding clause A.11.3.1 of TS 101 533-1 [i.4].

   b) have accepted in writing the roles to build, update and use of passwords

2) Assessors should verify the correctness of the automated password validity checks.

3) Assessors should verify the existence or registrations of execution of the automated password change request.

A.11.3.2 Unattended user equipment

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.3.3 Clear desk and clear screen policy

1) Assessors should ascertain the existence of documents evidencing that all employees involved in IPSP related activities are made aware of the clear desk and clear screen policy and that they would incur in disciplinary sanctions in case of violation of these policies.

2) Assessors should verify the existence of records evidencing that regular clear desk and clear screen inspections are performed by the responsible managers.

A.11.4 Network access control

A.11.4.1 Policy on use of network services

1) Assessors should ascertain that the IPSP has appointed a number of network officers consistent with the disaster recovery plan.

2) Assessors should ascertain that records and logs exist evidencing that the IPSP network can connect only with duly authorised computers and networks.

3) Assessors should ascertain that the IPSP network is always protected by suitable network protection systems, like firewalls, Intrusion Detection Systems, Intrusion Prevention Systems.

A.11.4.2 User authentication for external connections

4) Assessors should ascertain that provisions in the corresponding clause A.11.4.2 of TS 101 533-1 [i.4].

A.11.4.3 Equipment identification in networks

1) Assessors should ascertain that automatic IPSP equipment connection to networks should occur only upon equipment identification and that the connection channels are encrypted where applicable,

A.11.4.4 Remote diagnostic and configuration port protection

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.4.5 Segregation in networks

1) Assessors should ascertain that, where the IPS related network is not segregated, exhaustive justifications exist.

A.11.4.6 Network connection control

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.4.7 Network routing control

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.5 Operating system access control

A.11.5.1 Secure log-on procedures

1) Assessors should ascertain the compliance with provisions in the corresponding clause A.11.5.1 of TS 101 533-1 [i.4].

A.11.5.2 User identification and authentication

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.5.3 Password management system

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.5.4 Use of system utilities

1) Assessors should ascertain that access to IPS system software utilities is proven as granted to only a limited number of users.

2) Assessors should ascertain the existence of system utilities execution audit trail.

A.11.5.5 Session time-out

1) Assessors should ascertain the existence of a formal assessment by the relevant manager stating which of the provisions in the corresponding clause A.11.5.5 of TS 101 533-1 [i.4] is best suited.

A.11.5.6 Limitation of connection time

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.11.6 Application and information access control

A.11.6.1 Information access restriction

1) Assessors should verify the technical documentation ensuring that:

   a) systems logs or application audit trails are accessed only by personnel with an actual need to know;

   b) users access only the information for which they have an actual need to know.

2) Assessors should verify that provision in the corresponding clause A.11.6.1 of TS 101 533-1 [i.4] are implemented consistently.

A.11.6.2 Sensitive system isolation

1) Assessors should ascertain that the IPSP implements physical, organisational and/or logical measures suitable to ensure the IPS environment isolation from other application environments.

A.11.7 Mobile computing and teleworking

A.11.7.1 Mobile computing and communications

1) Assessors should ascertain that the ISPD clearly specifies that if mobile devices are used in connection with IPS this is explicitly authorised in writing by a relevant manager.

A.11.7.2 Teleworking

1) Assessors should ascertain that, if teleworking is used, the security measures specified in the clause of reference are enacted.

A.12 Information systems acquisition, development and maintenance

A.12.1 Security requirements of information systems

A.12.1.1 Security requirements analysis and specification

1) Assessors should ascertain that the specification documents related to the IPS components, to be purchased or specifically developed by third parties, have been adequately assessed to verify that it takes in due account the security requirements identified based on the relevant Risk Analysis.

2) Assessors should verify the existence of independent positive evaluation or formal certification of the IPS software package or system, where applicable.

3) If some software package or the IPS have gone through formal acceptance test Assessors should verify the existence of test documentation asserting that the test object meets the requirements.

A.12.2 Correct processing in applications

A.12.2.1 Input data validation

1) Assessors should ascertain the existence of records evidencing that provisions as in the corresponding clause A.12.2.1 of TS 101 533-1 [i.4] are complied with.

2) Assessors should ascertain the existence of procedures ensuring the consistency between input and output information for every acceptance phase.

3) Assessors should ascertain that records provide evidence that the integrity assurance mechanism agreed between IPSP and customers is regularly performed.

4) [EXT1] Assessors should verify that the agreement between IPSP and customer, as in the corresponding clause A.12.2.1 of TS 101 533-1 [i.4] are complied with, by means of the signature verification process log and of what subsequent processes step are performed.

A.12.2.2 Control of internal processing

1) Assessors should ascertain that for each depositor and, possibly, for each information type, specific officers are specified as in the corresponding clause A.12.2.2 of TS 101 533-1 [i.4].

2) Assessors should ascertain that log records exist for procedures ensuring that no information has been dropped or modified in each step of the entire preservation process.

A.12.2.3 Message integrity

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.2.4 Output data validation

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.3 Cryptographic controls

A.12.3.1 Policy on the use of cryptographic controls

1) Assessors should verify the existence of a formal IPSP documentation providing evidence that the cryptographic choices are based on by de jure or de facto technical standards, and that deviations to such policy are consistent with the exceptions mentioned in the corresponding item of TS 101 533-1 [i.4].

2) Assessors should verify, for conditional services as in the corresponding clause A.12.3.1 of TS 101 533-1 [i.4]:

   a) that the information, agreed or legally required, to be encrypted is not preserved in clear;

   b) dual control based procedures exist to decrypt the encrypted information upon request by an authorised entity.

A.12.3.2 Key management

1) Assessors should ascertain that records exist for any key management related process.

2) Assessors should verify, where encryption algorithms are used, that emergency procedures exist suitable to timely deal with situations as per the corresponding clause A.12.3.2 of TS 101 533-1 [i.4]. In particular, evidence should be available that these procedures implement Dual Control. Where the IPSP has chosen not to use the Dual Control, formal documentation should exist providing the rationale for such decision.

A.12.4 Security of system files

A.12.4.1 Control of operational software

1) Assessors should ascertain existence of formal approval by the relevant management for every application installed in the IPS environment, possibly as a list of approved applications to be verified against the system logs.

2) Assessors should ascertain that no compiler or development tool is installed in the IPS production environment.

A.12.4.2 Protection of system test data

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.4.3 Access control to program source code

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.5 Security in development and support processes

A.12.5.1 Change control procedures

1) Assessors should ascertain that where the applications are developed and tested on the same system, procedures exist to verify that the test base is reset to its original status.

A.12.5.2 Technical review of applications after operating system changes

1) Assessors should ascertain:

   a) that where hardening procedures are not enforced, a formal explanation exists;

   b) where they exist, that is performed after every change to the IPS operating systems.

2) Assessors should verify that, where hardening procedures are enforced, the hardening records match the IPS status.

A.12.5.3 Restrictions on changes to software packages

1) Assessors should ascertain that the agreements with software developers address the topic specified in the corresponding clause A.12.5.3 of TS 101 533-1 [i.4].

A.12.5.4 Information leakage

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.5.5 Outsourced software development

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.12.6 Technical Vulnerability Management

A.12.6.1 Control of technical vulnerabilities

1) Assessors should ascertain that the team, as in the corresponding clause A.12.6.1 of TS 101 533-1 [i.4], issues regular reports on the updates in security and legislation and that the ISPD have been updated accordingly.

A.13 Information security incident management

A.13.1 Reporting Information Security Events and Weaknesses

A.13.1.1 Reporting information security events

1) Assessors should ascertain that the security events reporting is governed by a formal procedure, applicable both to IPSP officers and subcontractors, ensuring the timely and correct reporting of such events, including assigning a correct severity level.

2) Assessors should verify the existence of records evidencing that all IPSP officers and subcontractors have declared in writing they have been made aware in writing of the incident reporting related procedures and of the consequences of non abidance.

A.13.1.2 Reporting security weaknesses

1) Assessors should ascertain that the security weaknesses reporting is governed by a formal procedure, applicable both to IPSP officers and subcontractors, ensuring the timely and correct reporting of such events, including assigning a correct severity level.

2) Assessors should verify the existence of records evidencing that all IPSP officers and subcontractors have declared in writing they have been made aware in writing of the weaknesses reporting related procedures and of the consequences of non abidance.

A.13.2 Management of Information Security Incidents and Improvements

A.13.2.1 Responsibilities and procedures

1) Assessors should ascertain the existence of the procedures mentioned in the corresponding clause A.13.2.1. of TS 101 533-1 [i.4] and of the related records.

2) Assessors should ascertain that the records evidence that all the required communications to the involved persons have been enacted and that the related obligations have been formally accepted.

3) Assessors should verify that correct and complete documentation exists of the emergency cases handling.

A.13.2.2 Learning from information security incidents

1) Assessors should ascertain that records of all detected security incidents and weaknesses are reliably kept up to the next Risk Assessment and Information Security Policy Document review sessions.

2) Assessors should verify that it is clearly indicated upon the occurrence of what minimum security event severity level the revision of the Risk Assessment and/or the ISPD is to be performed extemporaneously.

A.13.2.3 Collection of evidence

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.14 Business continuity management

A.14.1 Information security aspects of business continuity management

A.14.1.1 Including information security in the business continuity management process

1) Assessors should ascertain that the IPSP BCP is designed to restart its operations within precise time periods, to be assessed against the agreements in force and the applicable legislation, and that the records of the BCP implementation procedures simulations proved to meet such limits.

2) Assessors should verify that tests have been made to verify that such time periods can be met or have effectively been met.

A.14.1.2 Business continuity and risk assessment

1) Assessors should ascertain that the IPSP BCP has been drafted giving the highest priority to the personnel safety and according to commonly accepted specifications, such as de jure or de facto standards, taking into account a Service Discontinuity Impact Analysis on the IPS components, to which a scale of criticality level has been assigned.

2) Assessors should verify that the IPS components have been assigned a scale of criticality level or that the IPSP has provided in the SoA an exhaustive explanation of the rationale.

3) Assessors should verify that the BCP specifies the maximum downtime acceptable at least for the services and processes indicated in the corresponding clause A.14.1.2 of TS 101 533-1 [i.4].

A.14.1.3 Developing and implementing continuity plans including information security

1) Assessors should ascertain that an assessment has been performed to identify "the acceptable loss of information and services" of the Clause of reference and that the outcomes of this decision are correctly reported in the agreements with its information customers.

A.14.1.4 Business continuity planning framework

1) Assessors should ascertain that the IPSP documentation clearly specifies the person, by name or role, in charge of invoking the BCP.

2) Assessors should verify the existence of the Disaster Recovery Team, the components of which have been formally appointed, and of the rationale for their appointment. Where these team members are not IPSP employees documentation should exist evidencing their abidance to the provisions in the corresponding clause A.14.1.4 of TS 101 533-1 [i.4].

3) If the disaster recovery/back up - site is under the control of a Service Provider, Assessors should verify the existence of an assessment of its reliability and of an agreement addressing the BCP requirements, including provisions also specifying adequate sanctions in case of default.

A.14.1.5 Testing, maintaining and re-assessing business continuity plans

1) Assessors should ascertain that the IPSP has in place testing plans for at least the ISO/IEC 27002 [i.2] items specified in the corresponding clause A.14.1.5 of TS 101 533-1 [i.4].

2) Assessors should verify the existence of records evidencing that rehearsals are planned and, where applicable, have been performed according to the planned schedule, with the participation of its external services providers.

3) Assessors should verify that the agreements with the IPSP service providers address the obligations specified in the corresponding clause A.14.1.5 of TS 101 533-1 [i.4].

4) Assessors should verify the existence of records evidencing that the IPSP has performed the inspections on its service providers as per the corresponding clause A.14.1.5 of TS 101 533-1 [i.4].

A.15 Compliance

A.15.1 Compliance with legal requirements

A.15.1.1 Identification of applicable legislation

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing, also in respect of ISO/IEC 15489 [i.10], part 1, chapter 5.

A.15.1.2 Intellectual property rights (IPR)

1) Assessors should ascertain that the IPSP policies require registering all licensed hardware and software products prior to putting them into use, except where the owner of IPR on a specific software waivers its own rights, in which cases the IPSP should be able to exhibit Assessors suitable documentation.

2) Assessors should verify the existence of records evidencing that all licensed hardware and software products have been regularly registered with the exception in the previous item.

A.15.1.3 Protection of organizational records

1) Assessors should ascertain that the IPSP can exhibit documentations suitable to giving evidence that ISO/IEC 15489:2001 [i.10], chapter 7 was taken into account when designing the IPS.

A.15.1.4 Data protection and privacy of personal information

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.15.1.5 Prevention of misuse of information processing facilities

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.15.1.6 Regulation of cryptographic controls

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.15.2 Compliance with security policies and standards and technical compliance

A.15.2.1 Compliance with security policies and standards

1) Assessors should ascertain the existence of reports evidencing that all managers, at any level, perform, preferably in an unscheduled way, reviews on their respective departments to ascertain compliance with the rules.

2) Assessors should verify the existence of records evidencing that all persons working on, and/or for, the IPS, are made aware of the consequences of non compliance.

A.15.2.2 Technical compliance checking

1) Assessors should ascertain that exhaustive reports of the compliance checks exists.

2) Where the IPSP resorts to external providers, Assessors should ascertain the existence in the agreement of the mutual obligations and responsibility as well as the scope of the testing.

A.15.3 Information System Audit Consideration

A.15.3.1 Information systems audit controls

1) Assessors should act consistently with requirements for ISO/IEC 27001 [i.1] based auditing.

A.15.3.2 Protection of information systems audit tools

1) Assessors should ascertain the existence of procedures for installing and removal of assessing tools and that such tool are not present in the IPS.

2) Assessors should verify the existence of records asserting that the assessing tools removal procedures have been performed.

Annex B:
Audit Report Framework

Two deliverables of the ISO/IEC 27000 family are under development, namely ISO/IEC 27007 [i.6] and ISO/IEC 27008 [i.7], that, once published, will provide guidelines for auditing, respectively:

- ISO/IEC 27007 [i.6]: Guidelines for information security management systems auditing.
- ISO/IEC 27008 [i.7]: Guidance for auditors on ISMS controls.

These ISO/IEC documents will therefore cover both aspects of an IPSP ISMS: Information Security management and ISMS controls (such as in ISO/IEC 27002 [i.2]).

This annex indicates the main issues a Final Audit Report is to contain, to be followed at least for the time the above mentioned ISO documents are not available. Moreover, even once published, these ISO documents will be complemented with the IPSP specific requirements provided in the present document.

The structure of the Audit Report is not addressed here, as well as intermediate reports.

Assessors would clearly address in their reports at least all the topics described hereinafter, in relation to the related Clauses, in order to facilitate readers in identifying common issues across different assessment reports so to perform a cross evaluation of IPSPs.

The Final Audit Report would address the following topics.

1) Statutory and/or customary environment of the Assessed IPSP.
2) List of the IPSP documents that have been submitted to the Assessing team, prior to and during the assessment process, as well as of those that have not been submitted although required.
3) Statement by the Assessing team on whether the conditions to conduct an Assessment were met prior and during to the Assessment and if it was therefore deemed possible to conduct and conclude the assessment and, in case of a negative position, the reasons for this position.
4) If the assessment could be conducted, an overall evaluation of the IPSP: whether it was deemed as fully, partially or not compliant with the provisions of the present document.
5) For each Clause of the present document the Assessing team would specify their evaluations as follows:
    a) What in the present document was recommended on Assessors to verify:
        i. was verified (this can be assumed by default);
        ii. was not verified; in this case, the reasons for such omission will be clearly explained and if this omission was such to affect the assessment also of other items, that would be clearly indicated, or even of the ISMS overall assessment (this would be complementary to the statement as per the previous item 3.
    b) The outcomes of the assessment:
        iii. the IPSP has been deemed fully compliant with the requirements established in TS 101 533-1 [i.4];
        iv. the IPSP has been deemed partially compliant or not compliant with the requirements established in TS 101 533-1 [i.4], in which case the affected requirements will be specified;
        v. (applicable when the previous item ii. applies) shortcomings found and their severity level;

NOTE 1: The severity levels would be structured at least in three steps. An example of such severity levels definitions would be as follows:

- Severity 1: the IPSP is not compliant with the requirement at issue;
- Severity 2: the requirement at issue may not be met in some circumstances, yet workarounds for achieving the desired compliance goal exist and can be easily applied;
- Severity 3: the IPSP is substantially compliant with the requirements, although it is wished a more straightforward implementation of the IPSP requirements.

vi. (applicable when the previous item ii. applies) recommendations for the IPSP to implement in order to comply with the requirements established in TS 101 533-1 [i.4].

NOTE 2: These recommendations will be specified on a high level, since the way to implement them is be left to the IPSP.

6) A possible range of dates when the IPSP the next assessment will occur.

7) Where audit/assessing sessions are not performed on the whole of the provisions specified in the IPSP SoA, but on a statistically meaningful sample of these provisions, it would be good practice to verify, in the subsequent assessing sessions, the provisions that have not been verified in previous sessions.

Annex C: Bibliography

- COM(2009) 324: "Commission of the European Communities Brussels, 3.7.2009 - WHITE PAPER Modernising ICT Standardisation in the EU - The Way Forward".
- 00323/07/EN - WP 131 (Artcile 29): "Data Protection Working Party - Working Document on the processing of personal data relating to health in electronic health records (EHR)".
- ISO/IEC 15408: "Information technology -- Security techniques -- Evaluation criteria for IT security".
- ISO/IEC 20000: "Information technology -- Service management".
- ITU-R Recommendation TF.460: "Standard-frequency and time-signal emissions".
- ETSI TS 102 176-1: "Electronic Signatures and Infrastructures (ESI); Algorithms and Parameters for Secure Electronic Signatures; Part 1: Hash functions and asymmetric algorithms".
- ETSI TS 102 640: "Electronic Signatures and Infrastructures (ESI); Registered Electronic Mail (REM)".

History

Document history		
V1.1.1	May 2011	Publication