



Public Record Office Standard

PROS 99/007 Version 2.0

# Standard

Last updated: 18 March 2020

PROS 99/007 has been replaced by [PROS 19/05 Create, Capture and Control Standard](#).

Public offices that have implemented and configured a system in accordance with PROS 99/007 requirements — namely VERS Version 2 VEO creation — can continue to refer to the standard and its associated specifications and advices for the life of the system.

Public Record Office Victoria will continue to:

- Accept digital record transfers in VERS Version 2 VEO format.
- Test current vendor products against the PROS 99/007 requirements up until 30 June 2021. (After this time, PROV will only test vendor VEO creation validity for VERS Version 3 VEOs against PROS 19/05 requirements).

Vendors may continue to self-certify versions of their current products against PROS 99/007 up until 30 June 2025.



Public Record Office Standard

PROS 99/007 Version 2.0

# Standard

## Errata for Management of Electronic Records PROS 99/007 (Version 2.0)

July 2008



*Department for  
Victorian Communities*

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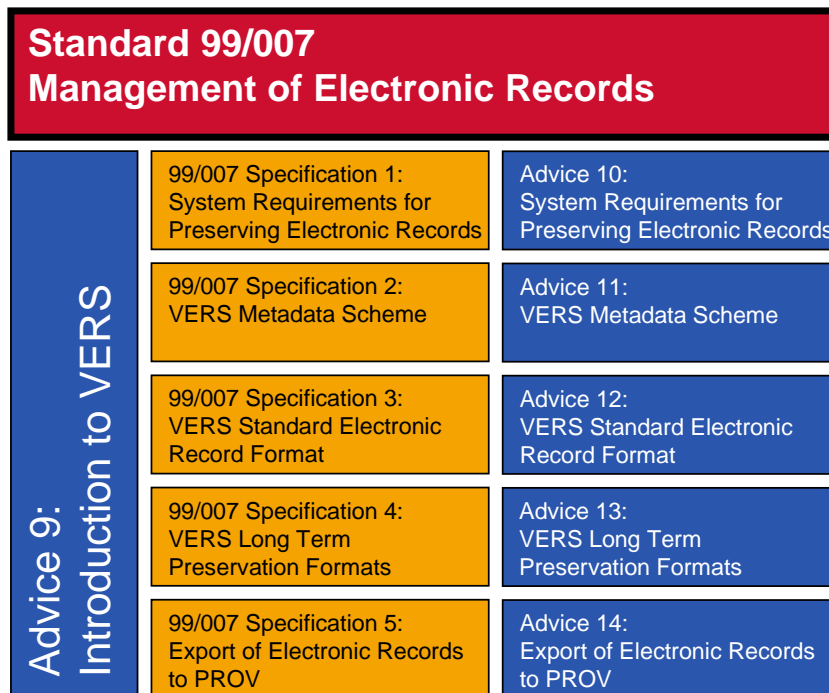
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Version	Version Date	Details
1.0	30 Sep 04	Released
1.1	07 Feb 05	Added errata re Timezones (Spec 2, Section 14)
1.2	26 Apr 05	Made M132 vers:RenderingKeywords mandatory
1.3	30 Jun 06	Specifications 4 & 5 revised and errata updated
1.4	28 Jul 06	Corrected diagram on page 13, Spec 2
1.5	02 Aug 06	Minor amendments to Spec 2 (diagram on page 13, & XML names for M46 and M74)
1.6	01 Jul 08	Errata for Spec 2 folded back into version 2.1 of that specification

## The Victorian Electronic Records Strategy (VERS)

This document is an Errata to the Victorian Electronic Records Strategy (VERS) Standard (PROS 99/007). The relationship between the VERS Standard, the Specifications that support this Standard, and the Introduction and Advices that explain VERS is shown below.



These documents have the following purposes:

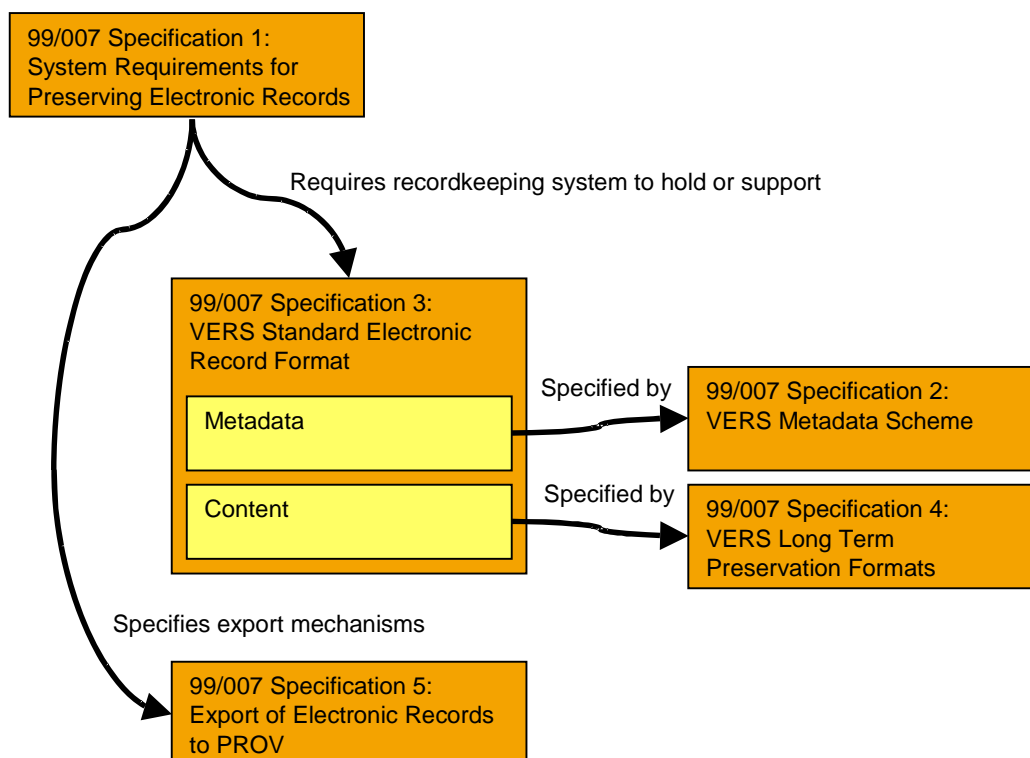
- *Management of Electronic Records*. This document is the Standard itself and is primarily concerned with conformance. The technical requirements of the Standard are contained in five Specifications.
- *Introduction to VERS*. This document provides background information on the goals and the VERS approach to preservation. Nothing in this document imposes any requirements on agencies.
- *Specifications*. These five documents provide the technical requirements that support the Standard. Agencies *must* conform to the mandatory requirements of the specifications, *must* conform to the conditional requirements of the specifications if the appropriate conditions are satisfied, and *may* conform to the optional requirements. Some optional requirements are strongly recommended and these are noted as such.

The five Specifications are:

- *Specification 1: System Requirements for Preserving Electronic Records*. This document specifies the overall functions that a recordkeeping system must perform to preserve electronic records for a substantial period.
- *Specification 2: VERS Metadata Scheme*. This document specifies the metadata that a recordkeeping system must hold to conform to VERS.
- *Specification 3: VERS Standard Electronic Record Format*. This document contains the technical definition of the VERS Encapsulated Object (VEO) format; the mandatory long-term format for records.

- *Specification 4: VERS Long Term Preservation Formats.* This document lists the data formats that PROV accepts as suitable for representing documents for a significant period.
  - *Specification 5: Export of Electronic Records to PROV.* This document lists the approved media and mechanisms by which PROV will accept an export of electronic records.
- *Advices.* These six documents provide background information, explanatory material, and examples in support of the Standard and associated Specifications. None of the information in the Advices imposes any requirement on agencies.

*Relationship between Specifications.* A second view of the relationship between the five Specifications is shown in the following diagram:



*Specification 1 (System Requirements for Preserving Electronic Records)* details the overall requirements on a recordkeeping system for preserving electronic records over a significant period. Amongst other requirements, the recordkeeping system must be capable of exporting the records in a standardised format.

The overall features of this standardised format are defined in *Specification 3 (VERS Standard Electronic Record Format)*, but some details are defined in two other Specifications. *Specification 2 (VERS Metadata Scheme)* defines the meaning and allowed values of the metadata that appears in a record. *Specification 4 (VERS Long Term Preservation Formats)* defines the formats in which the record content must be expressed.

*Specification 5 (Export of Electronic Records to PROV)* defines the mechanisms by which records are exported to PROV.

*Relation to Version 1 of this Standard.* This version of the VERS Standard completely replaces Version 1 of the Standard. Version 2 is identical in its base requirements, but makes those requirements clearer and more explicit. It also contains a number of conditional and optional extensions to Version 1.

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## 1 Introduction

Implementation experience with the Standard for the Management of Electronic Records (PROS 99/007 (Version 2)) has highlighted a number of minor errors and inconsistencies in the Standard and its associated Specifications and Advices.

This Errata corrects those errors and inconsistencies.

## 2 Management of Electronic Records PROS 99/007 (Version 2)

There are no errata for this document.

## 3 Specification 1 System Requirements for Preserving Electronic Records

There are no errata for this document.

## 4 Specification 2 VERS Metadata Scheme

There are no errata for this document. Previous errata have been included in Version 2.1 of this specification which was released on 1 July 2008.

## 5 Specification 3 VERS Standard Electronic Record Format

### 5.1 Page 11/Lock Signatures

Change	<p>Add the following as a new section after 5.6 and renumbered section 5.7 as 5.8.</p> <p><b>5.7. Calculation of Lock Signatures</b></p> <p>The data that is signed to generate a Lock Signature is the non white space content of the referenced M138 Signature element.</p> <p>In calculating or verifying the Lock Signature, the actual content of the M138 Signature element is used. This will be the Base64 encoded signature. However, any white space in the element is not included. White space is defined as in 5.3.1.</p>
Discussion	This section makes explicit the actual octets over which the Lock Signature is calculated.

### 5.2 Page 15/DTD

Change	<p>Change the definition of the attributes in vers:DocumentData to be:</p> <pre>&lt;!ATTLIST vers:DocumentData   vers:id ID #IMPLIED   vers:forContentSeeElement IDREF #IMPLIED   vers:forContentSeeOriginalDocumentAndEncoding CDATA #IMPLIED   vers:forContentsSeeElement IDREF #IMPLIED   vers:forContentsSeeOriginalDocumentAndEncoding CDATA #IMPLIED&gt;</pre>
Discussion	This allows PROV to accept VEOs that contain both 'forContent...' and 'forContents...' attributes. These options take care of a contradiction between Specification 2 and 3.

## 6 Specification 4 VERS Long Term Preservation Formats

There are no errata for this document.

## 7 Specification 5 Export of Electronic Records to PROV

There are no errata for this document.



## 8 Advice 9 Introduction to the Victorian Electronic Records Strategy (VERS)

There are no errata for this document.

## 9 Advice 10 Advice on VERS System Requirements for Preserving Electronic Records

There are no errata for this document.

## 10 Advice 11 Advice on VERS Metadata Scheme

There are no errata for this document.

## 11 Advice 12 Advice on VERS Standard Electronic Record Format

### 11.1 Page 12/XML Fragment

Change	In the 15 <sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Signature-1". In the 18 <sup>th</sup> line change the value of the vers:signsSignatureBlock attribute to be "Revision-1-Signature-1".
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

### 11.2 Page 18/Figure 6

Change	Change all the ':' in the attribute values to be '-'
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

### 11.3 Page 18/XML Fragment

Change	<p>In the 8<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-1".</p> <p>In the 9<sup>th</sup> line change the value of the vers:subordinateDocuments attribute to be "Revision-1-Document-1 Revision-1-Document-5".</p> <p>In the 19<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2".</p> <p>In the 20<sup>th</sup> line change the value of the vers:subordinateDocuments attribute to be "Revision-1-Document-3 Revision-1-Document-4".</p> <p>In the 21<sup>st</sup> line change the value of the vers:parentDocument attribute to be "Revision-1-Document-1".</p> <p>In the 29<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2-Encoding-1".</p> <p>In the 31<sup>st</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2-Encoding-1-DocumentData".</p> <p>In the 36<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-3".</p> <p>In the 37<sup>th</sup> line change the value of the vers:parentDocument attribute to be "Revision-1-Document-2".</p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

## 11.4 Page 19/XML Fragment

Change	<p>In the 7<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-3-Encoding-1".</p> <p>In the 8<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-3-Encoding-1-DocumentData".</p> <p>In the 18<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-4".</p> <p>In the 19<sup>th</sup> line change the value of the vers:parentDocument attribute to be "Revision-1-Document-2".</p> <p>In the 27<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-4-Encoding-1".</p> <p>In the 30<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-4-Encoding-1-DocumentData".</p> <p>In the 38<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-5".</p> <p>In the 39<sup>th</sup> line change the value of the vers:parentDocument attribute to be "Revision-1-Document-1".</p> <p>In the 47<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-5-Encoding-1".</p> <p>In the 50<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-5-Encoding-1-DocumentData".</p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

## 11.5 Page 25/Figure 10

Change	<p>Change all the ':' in the vers:id attribute values to be '-'. In Document 2/Encoding 1 (2<sup>nd</sup> encoding from left), change the value of the vers:forContentsSeeElement attribute to "Revision-1-Document-1-Encoding-1-DocumentData".</p>
Discussion	<p>The id reference must point to the Document Data element, not the Encoding that encloses it.</p> <p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

## 11.6 Page 26/XML Fragment

Change	<p>In the 9<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2".</p> <p>In the 14<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2-Document-1".</p> <p>In the 16<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2-Document-1-Encoding-1".</p> <p>In the 18<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2-Document-1-Encoding-1-DocumentData".</p> <p>In the 25<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2-Document-2".</p> <p>In the 27<sup>h</sup> line change the value of the vers:id attribute to be "Revision-2-Document-2-Encoding-1".</p> <p>In the 30<sup>th</sup> line change the value of the vers:id attribute to be "Revision-2-Document-2-Encoding-1-DocumentData".</p> <p>In the 31<sup>st</sup> line change the value of the vers:forContentsSeeElement attribute to be "Revision-1-Document-1-Encoding-1-DocumentData".</p> <p>In the 45<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-1".</p> <p>In the 47<sup>h</sup> line change the value of the vers:id attribute to be "Revision-1-Document-1-Encoding-1".</p> <p>In the 50<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-1-Encoding-1-DocumentData".</p> <p>In the 54<sup>th</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2".</p> <p>In the 56<sup>h</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2-Encoding-1".</p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p> <p>The id reference in a 'vers:forContentsSeeElement' attribute must point to the Document Data element, not the Encoding that encloses it.</p>

## 11.7 Page 27/XML Fragment

Change	<p>In the 2<sup>nd</sup> line change the value of the vers:id attribute to be "Revision-1-Document-2-Encoding-1-DocumentData".</p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

**11.8 Page 27/1<sup>st</sup> Bullet Point (Version 2 VEO)**

Change	<p>In the second paragraph, second sentence, change the format for the vers:id attribute to be 'Revision-LL-Document-DD-Encoding-EE-DocumentData'.</p> <p>In the second paragraph, last sentence change the example to be 'Revision-1-Document-3-Encoding-2'.</p> <p>In the third paragraph, second sentence, change the examples to be 'Revision-1-Document-1-Encoding-1' and 'Revision-2-Document-2-Encoding-1'</p>
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

**11.9 Page 27/2<sup>nd</sup> Bullet Point (Version 1 VEO)**

Change	In the second paragraph, first sentence, change the reference to the value of the vers:id attribute to be 'Revision-LL-Document-DD-Encoding-EE'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

Change	<p>Add an additional paragraph at the end of the bullet point:</p> <p>Note that no account is made of onion layers in the Version 1 VEO. The entire Version 1 VEO is considered to be 'Revision 1' irrespective of the number of onion layers contained within it. The first modified VEO layer is 'Revision 2'.</p>
Discussion	This clarifies whether onion layers are included in the revision count. It does not make any difference to the VEO, but not including them simplifies implementations as they do not need to count the onion layers.

**11.10 Page 28/Figure 11**

Change	<p>Change all the ':' in the vers:id attribute values to be '-'.</p> <p>In Revision3/Document1/Encoding 1 (1<sup>st</sup> encoding from left), change the value of the vers:forContentsSeeElement attribute to "Revision-2-Document-1-Encoding-1-DocumentData".</p>
Discussion	<p>The id reference must point to the Document Data element, not the Encoding that encloses it.</p> <p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

Change	In Revision3/Document2/Encoding 1 (2 <sup>nd</sup> encoding from left), change the text of the 2 <sup>nd</sup> attribute to be 'vers:forContentsSeeOriginalDocumentAndEncoding="Revision-1-Document-1-Encoding-1-DocumentData'
Discussion	The id reference must point to the Document Data element, not the Encoding that encloses it.

Change	In Revision2/Document2/Encoding 1 (4 <sup>th</sup> encoding from left), change the text of the 2 <sup>nd</sup> attribute to be 'vers:forContentsSeeOriginalDocumentAndEncoding="Revision-1-Document-1-Encoding-1-DocumentData'
Discussion	The id reference must point to the Document Data element, not the Encoding that encloses it.

### 11.11 Page 29/3.5.3 Lock Signature Block

Change	In the 1 <sup>st</sup> bullet point, second sentence, change the reference to the value of the vers:id attribute to be 'Revision-LL-Signature-SS'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

Change	Change the text to read of the 2 <sup>nd</sup> bullet point to be: The Signature element (M138) is then signed using the same private key used to produce the Lock Signature Block (M152) (see Figure 12). The Base64 encoded signature is signed, not the original binary signature, and white space is discarded from the value before signing. White space is defined in PROS 99/007 Specification 3, Section 5.3.1. The Lock Signature Block element must contain a vers:signsSignatureBlock attribute which identifies the Signature Block containing the Signature that has been signed.
Discussion	This section makes explicit the actual octets over which the Lock Signature is calculated.

### 11.12 Page 32/5.1.1 Selection of signed portion

Change	Change the heading to read 'Selection of signed portion (normal signature block)'.
Discussion	This section makes explicit the actual octets over which the Lock Signature is calculated.

### 11.13 Page 32/5.1.2 Selection of signed portion (lock signature block)

Change	<p>Add a new section after 5.1.1 and renumber section 5.1.2 to 5.1.3.</p> <p>5.1.2 Selection of signed portion (lock signature block)</p> <p>The algorithm to generate the bit string to be signed or verified is as follows:          Open the XML file representing the VEO.          Find the signature block referenced by the 'vers:signsSignatureBlock' attribute          Extract the 'vers:Signature' element from the signature block.          For each character in the value of the vers:Signature element.</p> <pre>                 If the character is XML whitespace (space,                 Unicode U+0020, carriage return, Unicode U+000D;                 line feed, Unicode U+000A; or tab, Unicode                 U+0009)                     skip the character             Else                 Express the character as a sequence of                 binary octets using UTF-8                 Add octets to the binary string         Sign or verify the resulting binary string         </pre> <p>Equivalently:</p> <ul style="list-style-type: none"> <li>• The Base64 encoded value of the vers:Signature element is signed, not the original binary value of the signature.</li> <li>• All XML whitespace is removed from the characters to be signed. Whitespace characters are defined as space (Unicode U+0020), carriage return (Unicode U+000D), line feed (Unicode U+000A) and tab (Unicode U+0009).</li> <li>• The remaining Unicode characters are represented in binary using the UTF-8 encoding.</li> </ul>
Discussion	<p>This section makes explicit the actual octets over which the Lock Signature is calculated.</p>

### 11.14 Page 37/XML Fragment

Change	<p>In the 1<sup>st</sup> line change the value of the vers:id attribute to be "Revision-1-Signature-1".</p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

### 11.15 Page 43/7.1 Record VEO

Change	<p>Change all the ':' in the attribute values to be '-'. </p>
Discussion	<p>The XML discourages the use of the colon in id attributes and some XML tools have problem with them.</p>

**11.16 Page 43/7.2 Record VEO**

Change	Change all the ':' in the attribute values to be '-'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

**11.17 Page 43/7.3 Record VEO**

Change	Change all the ':' in the attribute values to be '-'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

**11.18 Page 43/7.4 File VEO**

Change	Change all the ':' in the attribute values to be '-'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

**11.19 Page 43/7.5 File VEO**

Change	Change all the ':' in the attribute values to be '-'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

**11.20 Page 43/7.6 Modified VEO**

Change	Change all the ':' in the attribute values to be '-'.
Discussion	The XML discourages the use of the colon in id attributes and some XML tools have problem with them.

## **12 Advice 13**

### **Advice on VERS Long Term Preservation Formats**

There are no errata for this document.

## **13 Advice 14**

### **Advice on Export of Electronic Records to PROV**

There are no errata for this document.