

Authenticity Task Force

Lineage of Elements Included in the Template for Analysis (pre-InterPARES):

From Traditional Diplomatics to Contemporary Archival Diplomatics

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1. Traditional Diplomatics

1.1. Introduction

Diplomatics emerged in the seventeenth century as an analytical technique for determining the authenticity (and, therefore, legal validity) of medieval *diplomas* (charters) issued by sovereign authorities. In the nineteenth century, historians adopted diplomatics as a tool of documentary criticism for assessing the authority of medieval records as historical sources.

The fundamental assumptions of diplomatic criticism are that the context of a document's creation is made manifest in its documentary form (defined as the complex of rules of representation used to convey a message), and that this form can be separated from the document's content and examined independently of it. By comparing documents created in different periods and issued by different chanceries, and discovering the attributes they shared, as well as those they did not share, traditional diplomatists were able to articulate the necessary and sufficient elements of documents and identify the purpose each fulfilled in the document as a whole. Accordingly, the Template for Traditional Diplomatics is an ideal representation of a document, one that includes all the possible known elements of documentary form. Those elements are divided into two categories: extrinsic elements, which refer to the external make-up of the document, and intrinsic elements, which refer to its internal articulation.

1.2. Sources

Introduction

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1.3. Template for Traditional Diplomatics

Extrinsic Elements	Elements that refer to the appearance of the document. They can be examined only on the original documents and constitute the first and most obvious proof of their authenticity.			
	Medium	 Also called subjective material because it received and supported the inscription of the document. For medieval acts, the examination of the material on which the document is inscribed is one of the most obvious proofs of its authenticity: for example, a royal diploma of Childebert I (King of Francs, VIth century) written on parchment instead of papyrus is considered false. The medium can also make manifest the manner in which the act has been prepared. The documents from the German chancery have many erasures and corrections in comparison to the documents of the papal chancery. This indicates less care and less accurate procedures in the preparation of the final document. Material – papyrus, parchment, paper Format – dimension of the medium Preparation techniques - preparation of the <i>pars munda, recto</i> of the parchment, the side that received the document; as opposed to <i>pars pili, verso</i>, the side that received the chancery or notarial notes. Presence/absence of ruling Material presentation of the document - in rolls (<i>rotuli</i>) or in a flat form (<i>quaterni</i>) 		
	Script	 Page layout - paragraphing, formatting (the document is written on the shorter side of the medium (<i>carta transversa</i>) or on the longer side of it (<i>carta non transversa</i>) Types, size of the letters, different handwritings, direction of the writing (<i>ductus</i>) Ink - coloured or black. The red or gold ink were used for solemn acts of religious or politic nature Punctuation Abbreviations Erasures, corrections Different types of signs inscribed or apposited to the document such as: Chrismon Various types of subscription signs - subscription sign of the author or of the person who ordered the issuing of the act (autograph signature, signum manus or the sign of cross, the S - sign of recognition, the monogram, <i>rota, Benevalete</i>) Subscription sign of the beneficiary or of the witnesses 		
	Seals	The most important element of validation for the medieval acts is the seal. At the		

	 beginning of the XIIth century the seal becomes the common instrument of validation in the Western word. It replaces the use of the ring (<i>annulus</i>). Sigillographers study the seal and its evolution as figurative object. Diplomatists focus their attention on the characteristics that express the validation of the act. The authority of the seal is established according to time, place and custom. As to the degree of its authority, the diplomatists make the distinction between the authentic seal and the private seal. The authentic seal has an absolute and enduring authority and is the attribute of the pope, the emperor and the kings. The development of the notarial profession will give also the authority of a public seal to the notarial seal. The characteristic of the public seal is to be <i>'bene cognitum et famosum'</i> (well known and famous) in order to be recognised by all subjects. The private seal has a relative authority (ecclesiastic seals). In private acts, because of their probative nature, as opposed to the dispositive nature of the type of act. For instance, the French royal chancery used the red wax seal, while the papal chancery used the seal of fits colour, the way it is attached to the act are indicators of the provenance of the act (chancery, country), the importance and the type of act. For instance, the French royal chancery used the red wax seal, while the papal chancery used the seal of lead (<i>bulla</i>) with the exception of the confidential acts that were sealed with the <i>annulus pescatoris</i>, the secret seal of the pope, made of red wax. The seal of gold or silver was used in exceptional circumstances. The privaleges of the papal chancery could be recognised by the double silk ribbons, gold and red, sign of the papal authority, attached to the seal. On the contrary, the seal of the less solemn acts, written in the form of personal letter, and considered of temporary validity were attached with ribbons made of hemp or wool. The manner of the apposition of the seal constitutes also a
Additional	Additional notes are chancery or notarial notes, added on the bottom of the
Notes	 document or on the <i>verso</i>. They consist of various marks that indicate: The proof-reading of the document by the author or his delegate - the capital
	"L"
	• The correction of the document - the capital "C" followed by the signature of the corrector
	 The indication of the number of copies to be made (ampliation)
	• The registration of the document - the capital "R"
	• The payment of the tax for the registration – only when the registration was requested by the beneficiary
	 The transmission of the document to the beneficiary - the initials or a sign of
	the bearer

		-	tion or the notification of the document to the interested parties - ignature of the person in charge of the transmission service	
Intrinsic Elements	Elements that refer to the content of the document, its composition. They can be examined on both originals and copies.			
	Protocol	Invocation	There are two types of invocation: a formula of invocation, such as <i>'in nomine Dei'</i> (in the name of the Father) and a monogram invocation represented by the chrismon or by the capital <i>'C'</i> (Christ). Because the formula is very general and the chrismon became intermingled into the text, the invocation was omitted in the majority of the public acts after the XIth century. It was present only in the private acts (wills).	
		Superscription (or Entitling)	The German diplomatists call it <i>intitulation</i> (entitling). The form of the superscription has been rigourously defined by the chanceries and did not change over time. In the early medieval documents (IIIrd - VIIIth century) the superscription is placed after the addressee.	
		Inscription	The qualifications of the addressee are fixed in formulas, so that they permit an easy identification of the act. For instance the pope is qualified by the formula ' <i>servus servorum Dei</i> ,' a king is addressed with the qualification ' <i>carissimo in Christo filio</i> ' (dearest son in the name of the Christ), an ecclesiastic dignitary with ' <i>venerabilis, reverendus</i> ' (the most venerable, the most respectable) and a noble seigneur with ' <i>clarissimus, sapiens</i> ' (the most famous, the wise). The inscription precedes the superscription if, hierarchically, his position is superior to the position of the author. There are also fixed abbreviated formulas for the salutation, for instance: ' <i>Salt'et applicam.ben.</i> '	
		Salutation	Consists typically of a fixed formula, ' <i>salutem in Domino</i> ' (in the name of the Father, be greeted), but the modification of the salutation formula indicates the type of the act. The papal chancery privileges or the solemn royal diplomas replace the <i>salutem</i> formula with ' <i>in perpetuum</i> ' (for ever) or ' <i>ad perpetuam rei memoriam</i> ' (for the memory of the act in perpetuity) because the act is meant to have perpetual validity.	
	Text	Preamble	The preamble is found at the beginning of the text particularly in the chancery acts where the rules of the ' <i>ars dictamini</i> ' are followed. Sometimes the preamble is replaced by the notification. In the private acts the preamble can be found in different parts of the text.	

Notification	In some dispositive documents the preamble is followed by the notification, that is, by the publication of the purport of the document. Its purpose is to express that the act consigned to the document is communicated to all those who have an interest in it and, as well, that all persons concerned must be aware of the dispositive content of the document. The notification consists of a formula, such as " <i>notum sit</i> ," "be it known," "know you," and sometimes commences the text and is followed by, or exists without the preamble.
Exposition	The substance of the text is usually introduced by the exposition, that is, the narration of the concrete and immediate circumstances generating the act and/or the document. In documents resulting from procedures, whether public or private, the exposition may include the memory of the various procedural phases, or be entirely constituted by the mention of the request, of the reasons for the request and for its acceptance, and of the consensus and advice of the interested parties; in documents relating to contentious acts, there is the history of the case and its development; in warrants, we find a narration of facts, circumstances, reasons determining the decision, and so on. Sometimes the exposition includes names of individuals who have participated in the decision-making process, such as intermediaries, advisers, friends or relatives. It happens that many documents, both public and private, originate from analogous situations. In these cases, the narration becomes a stereotyped formula which, in legal documents, especially those of a contractual nature, is prescribed by law.
Disposition	Contains always a typical formula or a verb that express the nature of the action and the type of document. For example, in the <i>Litterae gratiosae</i> that confirm a title the formula is ' <i>auctoritate apostolica confirmamus</i> ' (the papal authority confirms the following); the Letters that are executive orders contain a verb or an expression such as ' <i>per apostolica scripta mandamus</i> ,' or ' <i>mandamus</i> ,' ' <i>obsecramus</i> ' (we order through this letter, or simply we order).
Final Clauses	 Through the passage of time and because of the frequent use of the <i>formularii</i>, some of the final clauses are transferred, like the preamble, from one document to another without having a direct relationship with the disposition. Corroboration Clause: The corroboration formulas vary from a chancery to another. The most used consist of two sentences: the first ensures that the means of validation will

		warrant the will expressed in the text of the act and its perduring effects; the second announces the means of validation.
Eschatocol	Date	The date is the last intrinsic element examined by the diplomatists. Most documents from the early middle ages are not dated. Beginning with the XIIth century the date has been inscribed at the end of the text. In the private acts the date is inscribed at the top of the act. The formulas that announce the inscription of the date are: <i>Datum</i> (Given, transmitted), <i>Actum</i> (Action has been taken), <i>Factum</i> (Executed), <i>Scriptum</i> (Written). The most used were <i>Actum</i> , which relates to the <i>actio</i> , the act, and <i>Datum</i> , which relates to the transmission of the act. The examination of the chronological date is very complex because there are numerous systems that vary according to the style, the partitions of the months and their designation.
	Appreciation	The appreciation is a short prayer for the realization of the content of the document: <i>feliciter</i> (happily), or <i>amen</i> (so be it).
	Subscription	Autograph subscriptions are usually represented by a cross, or by the letter S (<i>subscripsi</i> - I signed). This type of validation is characteristic mainly of ecclesiastic acts. In contracts the same type of subscription is included within the act.
Language	the document, the exceptions, all the constitutes the ob the following aspe- (the <i>cursus</i> of the <i>formularii</i> ; the int examination focu may throw into do rapid (<i>velox</i>) and sentence are acce schools of rhetori chancery acts. Th because of the inf language (the firs papal acts that be point of view, the	diplomatists consider the Language to be an Intrinsic Element of ey do not examine it in depth as such, because, with few e documents were written in Latin. As the study of the language ject of philology (linguistics), diplomatists focus their attention on ects: the influence of the Latin rhetorical tradition in the rhythm document); the use of formulas and the development of the fluence of the vernacular Latin on the chancery literate Latin. The ses mainly on <i>cursus</i> of the documents, because an irregular <i>cursus</i> bubt the authenticity of the document. The <i>cursus</i> is of two types: slow (<i>tardus</i>). It is based on the manner the final words of the ntuated. A remnant of the public speech training in the Latin c, the constant use of the <i>cursus</i> can be found only in the papal e <i>cursus</i> rules are less observed in the French and German acts fluence of the vernacular Latin and the introduction of the national t act written in French is from the XIIIth century, as opposed to gin to be written in Italian in XVIIth century). From a diplomatic e study of the Language of the document is important to establish and the date of the document.

2. Modern Diplomatics

2.1. Introduction

Modern diplomatics is defined broadly as "the discipline which studies the genesis, forms and transmission of archival documents, and their relationship with the facts represented in them and with their creator, in order to identify, evaluate, and communicate their true nature." (Duranti, *Diplomatics*, 45). In a series of articles written between 1989 and 1992, Luciana Duranti examined the principles and concepts of diplomatic criticism to determine whether they could be adapted to deal with records generated by modern bureaucracies. She believed that diplomatic criticism could provide a potentially powerful tool both for appraising and describing inactive records and for managing current records. The Template for Modern Diplomatics is a translation and adaptation of the traditional elements of documentary form, taking into account the complexity of modern recordkeeping environments and, to a more limited extent, the impact of new information technologies on bureaucratic recordkeeping.

2.2. Sources

Introduction

MacNeil, Heather. *Trusting Records: Legal, Historical, and Diplomatic Perspectives*. Dordrecht: Kluwer, 2000 (forthcoming).

Template for Modern Diplomatics

Duranti, Luciana. *Diplomatics: New Uses for an Old Science*. Lanham, MD: Scarecrow Press, 1998. (Originally published as a 6 part series in *Archivaria*, vols. 28-33)

Elements of	Appearance of the documentary form. Formerly Extrinsic Elements.		
Physical			
Form	Medium	MediumMedium is considered the first extrinsic element of the record regardless of the type of support, paper or electronic. In the traditional diplomatics the way the parchment or paper was cut and treated constituted an element of authentication of the content it carried, because it contributed to the meaning of the document. With records generated electronically, medium becomes only the material support for the message•Material•Format•Preparation for receiving the message	
	Script	 Formulas of the kind examined by the traditional diplomatists as part of the Language become part of the Script in modern diplomatics. Layout, pagination, formatting Type(s) of script Different hands, typefaces or inks Paragraphing Punctuation Abbreviations and initialisms Erasures and corrections Computer software Formulae 	
	Language	Language, considered as an internal component of the medieval record, is considered an extrinsic element.	

2.3. Template for Modern Diplomatics

Γ	×7 1 1
	• Vocabulary
	Composition
	• Style
Special Signs	The traditional diplomatists examined the special signs within the extrinsic
	elements under two different categories as follows: the signs of chanceries are
	discussed together with other notes (Annotations in Duranti's list) as additions
	made to the record after its composition. They are related to the procedural
	phase. The signs of writers and subscribers are examined in the category of
	elements added to the record to validate it. They are related to the act and its
	execution. Duranti breaks down this category in two sub-categories: Special signs related to:
	a. the bureaucratic procedures and
	b. to the validation phase.
	• Examples:
	• Signs of writers and subscribers
	• Signs of chanceries and record offices
Seals	
	• Shape and size
	• Typology
	Legend or inscription
	• Method of affixing
Annotations	
	elaborated to form a new distinct category; they are introduced as component
	of the extrinsic part of the record. The traditional diplomatists examine in
	depth these additional notes in relation with the historical development of the
	various chancery procedures; they concentrate essentially on the compilation phase of the individual document. Duranti extends the elements of Annotations
	to integrate the phases of the receiving and the setting aside of the record in
	relationship with other records (archival bond) and according to the definition
	of the record in archival science.
	Included in the • Authentication
	execution • Registration
	phase
	Included in the • Signs beside the text
	handling phase • Previous or following action
	Dates of hearings or readings
	Notes of transmission
	Disposition
	• Subject
	"Urgent," "Bring forward"

		Included manag	8
Elements of Intellectual	Internal ar	ticulation of the do	cumentary form. Formerly Intrinsic Elements.
Form	Protocol Contains the administrative context of the action (i.e., indication of the persons involved, time and place, and subject) and initial formulae.		
		Entitling	Comprises the name, title, capacity and address of the physical or juridical person issuing the document, or of which the author of the document is an agent. Today, entitling might correspond to the letterhead.
		Title	Under the entitling or in its place we may give the title of the document (e.g., "Indenture," "Agreement," "Minutes," "This is the Last Will and Testament.")
		Date	In contemporary documents, the entitling is usually followed by the date, indicating the place (topical date) and/or the time (chronological date) of the compilation of the document and/or of the action which the document concerns. In medieval and early modern documents the date is in the eschatocol. In very solemn documents the date is present in both protocol and eschatocol.
		Invocation	The invocation, that is, the mention of God, in whose name each action had to be done, was present in both public and private documents in the medieval period. It can still be found in documents issued by religious bodies, but more and more rarely. When it appears, it takes a verbal form (starting with the words "in the name of") or a symbolic form (expressed by a cross, the Constantinian monogram for Christos, or the 'I' and 'C', for Jesus and Christus). The mention of God is in the eschatocol, when he is called to witness an act (e.g., an oath). It is possible to say that modern and contemporary documents contain an invocation whenever they present a claim that the act therein is done in the name of the people, the king, the republic, the law or other similar entities.
		Superscription	A typical element of the protocol used to be the superscription, that is, the mention of the name of the author of the document and/or

<u> </u>		
		the action. Today, the superscription tends to take the form of an entitling; sometimes, however, it coexists with the entitling. It still appears by itself in all contractual documents (the superscription includes the mention of the first party), in declarative documents (those beginning with the pronoun "I," followed by the name of the subscriber), and in holographic documents, such as wills (e.g., "This is the last will and testament [title] of John Smith of Vancouver" [superscription]).
	nscription	Documents in epistolary form usually present in their protocol the name, title and address of the addressee of the document and/or the action. This element is termed the inscription. It may be a nominal inscription or a general one. The former refers to one or more specific person(s), while the latter refers to a larger, indeterminate entity, such as the citizens, the people, the believers, the students, all those concerned, or "To all to whom these presents shall come." In contractual documents, given that the first party is considered to be the author, any other party is the addressee and the mention of his/her/their name(s) constitutes the inscription of the document. The inscription is regularly present in dispositive documents, often in supporting and narrative documents, but very rarely in probative documents, because usually the latter are not directed to the persons to whom they are issued (e.g., certificates).
	Salutation	The inscription is generally followed by the salutation, a form of greeting which only appears in letters.
	Subject	Today, the inscription may be followed by the subject, rather than by the salutation, that is, by a statement signifying what the document is about. The subject has been stated in some court records since the last century, but has generally been introduced into records of governmental bureaucracies and, by extension, into business records during this century.
	Formula Perpetuatis	Typical of medieval and early modern documents conferring titles or privileges is an element called <i>formula perpetuatis</i> . It is a sentence declaring that the rights put into existence by the document are not circumscribed by time: <i>in perpetuum</i> (forever), <i>ad perpetuam rei memoriam</i> (in continuing memory), or <i>pp</i> . (abbreviation of perpetuum).
Ар	preciation	The appreciation, that is, the short prayer for the realization of the content of the document (<i>feliciter</i> [happily], or <i>amen</i> [so be it]) appears in the protocol in private documents, and in the eschatocol in public documents, following the date.

Text	Contains the action, including the considerations and circumstances which gave origin to it, and the conditions related to its accomplishment The text is the central part of the document, where we find the manifestation of the will of the author, the evidence of the act, or the memory of it. From an historical, legal and administrative point of view this is usually the most important part of the document, because it represents the substance, the reason for its existence. However, to the diplomatist, the text does not offer more material for the criticism of the document than the other two sections.	
	Preamble	The text often begins with a preamble, which expresses the ideal motivation of the action. It does not give the concrete and immediate reason for which the document was created, or the action accomplished, but the ethical or juridical principle. It consists of general considerations, which are not directly linked to the subject of the document, but expresses the ideas which inspired its author. The preamble has the purpose of engaging the addressee's interest and ornating the discourse, and is therefore composed of moral or pious expressions, sentences expressing political conceptions, administrative policies, legal principles, feelings on friendship, cooperation, interest, security, and so on. The preamble has never been an essential part of the text, thus its presence indicates solemnity or formalism. In modern legal documents, the preamble contains a citation of the laws, regulations, decrees, or opinions on which the act rests.
	Notification	In some dispositive documents the preamble is followed by the notification, that is, by the publication of the purport of the document. Its purpose is to express that the act consigned to the document is communicated to all those who have an interest in it and, as well, that all persons concerned must be aware of the dispositive content of the document. The notification consists of a formula, such as " <i>notum sit</i> ," "be it known," "know you," and sometimes commences the text and is followed by, or exists without the preamble.
	Exposition	The substance of the text is usually introduced by the exposition, that is, the narration of the concrete and immediate circumstances generating the act and/or the document. In documents resulting from procedures, whether public or private, the exposition may include the memory of the various procedural phases, or be entirely constituted by the mention of the request, of the reasons for the request and for its acceptance, and of the consensus and advice of the interested parties; in documents relating to contentious acts, there is the history of the case and its development; in warrants, we find a narration of facts, circumstances, reasons determining the decision, and so on. Sometimes the exposition includes names of individuals who have participated in the decision-making process, such as intermediaries,

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		advisers, friends or relatives. It happens that many documents, both public and private, originate from analogous situations. In these cases, the narration becomes a stereotyped formula which, in legal documents, especially those of a contractual nature, is prescribed by law. In contemporary documents, such a formula is usually preprinted formally, and begins with "whereas."
	Disposition	The core of the text is the disposition, that is, the expression of the will or judgement of the author. Here, the fact or act is expressly enunciated, usually by means of a verb able to communicate the nature of the action and the function of the document, such as "authorize," "promulgate," "decree," "certify," "agree," "request," etc. The verb may be preceded by a word or locution which puts the disposition in direct relationship to the previous exposition or preamble, such as "therefore," "hereby," etc. There are specific formulas routinely used for certain types of transaction, but generally the disposition varies from one document to another because there are no two acts which are quite the same.
	Final Clauses	In many documents the text ends with the disposition, that is, as soon as the substance of the action is expressed. The text of most documents, however, contains after or within the disposition several formulae, the object of which is to ensure the execution of the act, to avoid its violation, to guarantee its validity, to preserve the rights of third parties, to attest the execution of the required formalities, to indicate the means employed to give the document probative value. These formulae constitute the final clauses, and can be divided into groups as follows:
		• Clauses of injunction: those expressing the obligation of all those concerned to conform to the will of the authority.
		• Clauses of prohibition: those expressing the prohibition to violate the enactment or oppose it.
		• Clauses of derogation: those expressing the obligation to respect the enactment, notwithstanding other orders or decisions contrary to it, opposition, appeals or previous dispositions.
		• Clauses of exception: those expressing situations, conditions or persons which would constitute an exception to the enactment.
		• Clauses of obligation: those expressing the obligation of the parties to respect the act, for themselves and for their successors or descendents.

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	•	Clauses of renunciation: those expressing consent to give up a right or a claim.
	•	Clauses of warning: those expressing a threat of punishment should the enactment be violated. They comprise two categories: 1) spiritual sanctions, comprising threats of malediction or anathema; 2) penal sanctions, comprising the mention of specific penal consequences.
	•	Promissory clauses: those expressing the promise of a prize, usually of a spiritual nature, for those who respect the enactment.
	•	Clauses of corroboration: those enunciating the means used to validate the document and guarantee its authenticity. The wording changes according to time and place, but these clauses are usually formulaic and fixed. Examples are "I have hereunto set my Hand and Seal of Office," "Signed and Sealed," "Witness our Trustworthy and Beloved ," etc.
Eschatocol		imentation context of the action (i.e., enunciation of the means of tion of the responsibilities for documentation of the act) and the
	Corroboration and Date	More and more often, particularly in solemn, official and legal documents, the clause of corroboration begins the eschatocol, immediately followed by the topical and chronological date, or a reference to the date expressed in the protocol
	Appreciation	The appreciation may appear in the eschatocol, following the date, in public documents. A modern form of appreciation may be considered to be the expression which often concludes contemporary documents, and which is introduced by the words "looking forward to," "I appreciate," "I hope," etc.
	Salutation	In modern and contemporary documents the salutation is often in the eschatocol; sometimes it is in both the protocol and the eschatocol.
	Complimentary Clause	A new element, becomes part of the Eschatocol, while in the medieval documents all the clauses are regrouped and examined as part of the Text. The complimentary clause consists of a brief formula expressing respect, such as "sincerely yours," "yours truly," and similarly.
	Attestation	The substance and core of the eschatocol is the attestation, that is, the subscription of those who took part in issuing the document

		(author, writer, countersigner) and of witnesses to the enactment or the subscription. Usually, the subscription takes the form of a signature, but this is not always so; for example, telegrams and electronic mail messages present subscriptions which are not signatures. The attestation is the means generally used to validate a document, but is not present in every type of document. For example, account books, journals and invoices do not need a subscription to be valid because their process of creation validates them. Other documents present their validation in the protocol. This is typical of electronic records, but examples can also be found in traditional records: registries may be validates on the front page, memoranda may be signed or initialed on the side of the superscription, and documents issued by the English monarchs show the <i>signum magnus</i> in the top left corner.
	Qualification of Signature	When the attestations are signatures, they are usually accompanied by qualification of signature, that is, by the mention of the title and capacity of the signer.
	Secretarial Notes	The qualification of signature may be followed by the secretarial notes (initials of the typist, mention of enclosures, indication that the document is copied to other persons, etc.), but usually it constitutes the last intrinsic element of documentary form.

3. Contemporary Archival Diplomatics

3.1. Introduction

The articles written by Duranti between 1989 and 1992 laid the groundwork for a research project carried out between 1994 and 1997 at UBC, entitled "The Preservation of the Integrity of Electronic Records." The goal of that project was to identify and define conceptually the nature of an electronic record and the conditions necessary to ensure its reliability and authenticity, during its active and semiactive life.

The researchers began their work by articulating a set of general premises concerning the nature of a record in a modern (and predominantly paper) recordkeeping environment and the conditions necessary to ensure its reliability and authenticity. Those premises were then interpreted within the framework of electronic systems. This interpretation generated a number of hypotheses expressing the necessary and sufficient components of a complete, reliable, and authentic electronic record. The hypotheses draw on both diplomatic and archival science concepts and methods, thereby integrating the perspective of diplomatics, which studies individual documents, with that of archival science, which studies records as aggregations. The Templates from the UBC Project articulate these hypotheses.

3.2. Sources

Introduction

MacNeil, Heather. *Trusting Records: Legal, Historical, and Diplomatic Perspectives*. Dordrecht: Kluwer, 2000 (forthcoming).

Templates from the UBC Project

"The Preservation of the Integrity of Electronic Records," 27 May 1999, http://www.slais.ubc.ca/users/duranti/index.htm>

3.3. Templates from the UBC Project

TEMPLATE 1

WHAT IS A RECORD IN THE TRADITIONAL ENVIRONMENT?

I. DIPLOMATICS

Record = archival document

Archival document = a document produced in the course of practical activity

Document = written evidence of juridical facts

Evidence = testimony of facts = conveyed observation of events

Written evidence = evidence produced on a medium by means of a writing instrument or of an apparatus for fixing data, images, or voices

Facts = human conduct or natural events

Juridical facts = facts whose occurrence is taken into consideration by the juridical system. Facts include acts.

Juridical system = a social group organized on the basis of a system of rules

System of rules = all the rules that are perceived as binding at any time and place by a given social group

Produced = made or received

Activity = a collection or sequence of acts aimed to one purpose

Practical activity = an activity whose purpose is not the activity itself but the production of effects capable of influencing situations

Therefore, a record is testimony, produced on a medium in the course of practical activity, of facts taken into consideration by the rules recognized as binding by a social group.

On the basis of this definition the **necessary components** of a record are:

- 1. **medium** = the material support of the record's content, that is, of the testimony of facts
- 2. **content** = the facts the record speaks of
- 3. **form** = the way in which content is manifested = all the characteristics of a record determined by the application of the rules of representation of content typical of a given environment.

Form breaks down into:

- a. **physical form** = the characteristics of the external appearance of the record, such as format, colors, etc. These characteristics are also called "extrinsic elements."
- b. **intellectual form** = the characteristics of the internal composition of the record. Intellectual form can be distinguished into:
 - i. **content configuration** = the mode of expression of the content: text, graphics, images, or a combination
 - ii. **content articulation** = the elements of the writing and their arrangement, that is, what determines the distinction between a letter and a memo or a chart and a map.
 - iii. **annotations** = additions to the content of the record made after its compilation
- 4. **persons** = entities which the juridical system recognizes as having the capacity to act, that is, to generate consequencences on the basis of the will. Persons can be either physical or juridical. Juridical persons are collections or successions of physical persons (also called moral persons or artificial persons). The existence of every record needs the concurrence of three persons:
 - a. **author** = the person competent for the creation of the record, which is issued by it or its command or in its name. The author of a record

may coincide with the author of the action of which the record is the outcome, or may not.

- b. **addressee** = the person to whom the record is directed. The addressee of a record may coincide with the addressee of the action, or may not. The addressee is not necessarily the person to whom a record is delivered or transmitted.
- c. **writer** = the person responsible for the intellectual form of the record. A modern term that expresses the same concept is **originator**. The writer cannot be a secretary or a clerk or a scribe.

There are other persons who can be involved in the creation of a record, but are not necessary to its existence. They are:

- d. **countersigner** = the person who validates the form of the record, its procedure of creation, or its content. For example, the city-clerk signing a by-law.
- e. witness = the person signing the record for the purpose of either conferring solemnity to it; authenticating the signature of the author, the content of the record, or its compilation; or stating that an act for which both oral and written form are required, such as an oath, took place in its presence.
- 5. **acts** = acts are movements of the *will* aimed to create, maintain, modify or extinguish situations. A special type of act is a

transaction = an act capable of changing the relationships between two or more persons

Therefore, the necessary components of a record are medium, content, form, persons, acts. Intent of the author to transmit and capability to be transmitted are implied by the necessary existence of an addressee. Because of the necessary intent to transmit (over time or through space) and capability of the record to be transmitted, readability to and intelligibility by the addressee at the moment of the creation of the record (see creation in the "archival science" section below) are also implied.

The minimum necessary requirements for a record to exist are:

- a. **medium**
- b. content
- c. form
- d. persons
- e. acts

Implied requirements are:

- f. intent to be transmitted
- g. capability to be transmitted

h. readability at the creation stage by the intended addressee i. intelligibility at the creation stage by the intended addressee

Question

are actual **transmission** and **communication** necessary components?(tentative answer: not for a record to be "made," that is, to exist with the author; yes for a record to be "received," that is, to come into existence with the addressee--see "creation")

II. ARCHIVAL SCIENCE

Archival science does not define "a record", but "records," because it only deals with aggregations.

Records = archival documents

Archival documents = documents created by a physical or juridical person for the achievement of its purposes or in the exercise of its functions

Document = recorded information

Information = intelligence given = understanding conveyed

Recorded = affixed to a medium in a stable form

Created = made or received. A record is **made** when its compilation in its intended form is concluded and the record is set aside for transmission (over time or over space), reference and use, or subsequent action. A record is **received** when it reaches the intended addressee and is set aside for transmission, reference and use, or subsequent action. Initial preservation is necessary to the arising of documentary relationships.

Function = the whole of the activities aimed to one purpose. When such activities, or part of them, are assigned to a person, they constitute a **competence**

Therefore, records are documents made or received by a physical or juridical person as means and residue of its activity.

On the basis of this definition, we can add two other **necessary components** to those identified by diplomatics:

1. **creator** = the physical or juridical person who makes or receives the records in the course of its activity

2. **archival bond** = the relationships that, because of the circumstances of their creation, records have with their creator, with the activity in which they participate, and among themselves. The archival bond is *originary* (it comes into existence when the record is made or received), *necessary* (it exists for every record), and *determined* (it is characterised by the purpose of the record).

Therefore, archival documents or records are necessarily <u>composed of documents and the</u> <u>complex of their relationships</u>. Because of this, any document, of any nature, which acquires relationships with a group of archival documents or records, is to be considered a record itself, following the fundamental rule which governs every collectivity, according to which <u>each individual entity acquires the nature and characteristics of the</u> whole to which it belongs.

Is **order** a necessary component? The existence of an intellectual order is implied by the archival bond, thus order is a necessary consequence of the existence of the bond.

TEMPLATE 2

WHAT IS A COMPLETE RECORD IN THE TRADITIONAL ENVIRONMENT?

COMPLETE RECORD = a record that has all the elements of form required by the juridical system in which it is created. Completeness is conferred to a record by the presence of all required elements of its intellectual form, specifically the features of content articulation and the annotations.

Intellectual form = the characteristics of the internal composition of the record

They are, in any order:

- 1. **entitling** = name, title, capacity, or address of the physical or juridical person issuing the record or of which the author of the record is an agent (eg. letterhead)
- 2. **title** = name of the record. It refers either to the form of the record (eg. indenture, minutes) or to the act carried out by the record (eg. agreement, oath of office)
- 3. **date** = place (topical date) and time (chronological date) of the compilation and/or issuing of the document and/or of the act which the record concerns
- 4. **superscription** = name of the author of the record and/or of the act (eg. "I, John Smith,declare..." or "John Smith, of the first party"). In letters, it often takes the form of entitling.
- 5. inscription = name, title, and address of the addressee of the record and/or of the act
- 6. **salutation** = a greeting (eg. "Dear sir")
- 7. **subject** = statement signifying what the record is about
- 8. **preamble** = statement expressing the ideal motivation of the act, or the ethical or juridical principles inspiring it, or the articles of law on which the action is based
- 9. **exposition** = statement of the concrete and immediate circumstances generating the record and/or the act
- 10.disposition = expression of the will or judgement of the author
- 11.**appreciation** = a wish for the realization of the disposition
- 12.complimentary clause = a brief formula expressing respect (eg. "yours truly")

- 13.**attestation** = the subscription of those who took part in issuing the record (i.e. author, writer, countersigner, and/or witnessess). It might or might not take the form of signatures
- 14.qualification of subscription(s) = title and capacity of the subscriber(s)
- 15.secretarial notes = initials of typists, mention of enclosures, indication that the record is copied to other persons

Some other elements of content articulation are particular to certain record forms and contribute to their identification by being necessary to their completeness. They are:

- 16.**invocation** = mention of the higher power in the name of whom the type of act is carried out (eg. "In the name of the law")
- 17.**formula perpetuitatis** = sentence declaring that the rights put into existence by the record are not circumscribed by time
- 18.**notification** = publication of the purport of the record (eg. "Know you" as in a letters patent)
- 19.corroboration = enunciation of the means used to validate the record and guarantee its authenticity
- 20.**clause of injunction** = expression of the obligation of all those concerned to conform to the will of the author
- 21.clause of prohibition = prohibition to violate the enactment or oppose it
- 22.clause of derogation = expression of the obligation to respect the enactment notwithstanding other orders or decisions contrary to it, opposition, appeals, or previous dispositions
- 23.clause of exception = expression of the situations, conditions, or persons which are excepted from the enactment
- 24.clause of obligation = expression of the obligation of the parties to respect the act for themselves and for their successors or descendants
- 25.clause of renunciation = expression of the consent to give up a right or a claim
- 26.clause of warning = treat of punishment, should the enactment be violated
- 27.**promissory clause** = expression of the promise of a prize if the enactment is respected

The minimum required elements of content articulation for a record to be complete are:

a. date (for identifying the topical and temporal context)

b. **superscription** or **attestation** (for identification of the author)

c. **inscription** (for identification of the addressee)

d. **disposition** (for identification of the action)

With non textual records, that is, with graphic or image records, the minimum required elements of content articulation are:

- a. dateb. superscription or attestationc. inscription
- d. title or subject (for identification of the content)

The **disposition** is represented by the graphics or the image.

In addition to these, other elements of content articulation are required within each given juridical system for each given record form.

Annotations = additions to the content of the record made after its compilation. They can be distinguished in categories in relation the procedural moment in the treatment of the affair in which they were added to the record in question:

Annotations added in the **execution phase**:

authentication = the express, legal recognition that a record or the signature(s) on it is what it purports to be (particular to certain record forms)

registration = the reference to a transcription of the record made in a register by an office different from the one creating the record (particular to certain record forms)

Annotations added during the **handling** of the record:

instructions = the mention of previous or following actions, directions for transmission, disposition, classification, etc.

dates of hearings or readings

signs besides the text = notations added by the reader, such as check marks, question marks, etc.

Annotations added during the **management** of the record:

registry number = the consecutive number assigned to incoming and outgoing mail in offices using the registry system

classification code = the code which identifies a record by its documentary relationships in the receiving and/or generating offices

cross-references = the indication of the classification code of related files

date of receipt = chronological date of the receipt of the record

name of recipient = name of the receiving office (usually affixed by a stamp) or individual.

The annotations required for a record to be complete are entirely dependent on the context of the creator

TEMPLATE 3

WHAT IS A RELIABLE RECORD IN THE TRADITIONAL ENVIRONMENT?

RELIABLE RECORD = a record endowed with trustworthiness. Specifically, trustworthiness is conferred to a record by its degree of **completeness** and the degree of control on its **creation procedure** and/or its **author's reliability**. Reliability of a record is not affected by its **mode, form**, or **state of transmission**.

Completeness = see the template entitled "What is a Complete Record in a Traditional Environment?"

Creation procedure = the procedure governing the formation of the record and/or its participation in the act.

Author's reliability = the competence of the author to issue the specific document and/or the degree to which an author can be trusted. The trustworthiness of an author can be ensured by:

1) restricting the capacity to generate certain documents to certain persons

- 2) requiring signatures
- 3) giving responsibility to an author for reporting only a portion of a fact
- 4) increasing the numbers of authors who report the same fact
- 5) making the same record serve different purposes and users

Mode of transmission = the method by which a record is communicated (eg. by hand, by regular mail, by FAX, by consigning it to the files and preserving it)

Form of transmission = the form that the record has when it is made or received

State of transmission = the primitiveness (i.e., order in time), completeness, and effectiveness (i.e., ability to achieve the purpose for which it was created) of a record when it is initially set aside after being made or received.. There are three states of transmission: **draft**, **original**, and **copy**.

Draft = temporary version of a record, prepared for purposes of correction

Original = the first complete and effective record. It is possible to have **multiple originals** = records contemporarily created complete and effective, as in the case of reciprocal obligations, multiple addressees, or security needs.

Copy = a reproduction of a record in any state of transmission. There are different types of copies:

simple copy = a transcription of the content of a record
imitative copy = a reproduction of the form and content of a record

pseudo-original = an imitative copy made for purpose of deception copy in the form of original = a complete and effective record, not the first to be created authentic copy = a copy certified by an officer authorized to execute such function

inserts or **insets** = records entirely or partially quoted or reported in subsequentrecords in order to renew their effects or because they constitute precedent or serve as reference

While it can be assumed that an authentic copy is more reliable than a simple copy, this derives from the controlled creation procedure, not from the state of transmission. In fact, an authentic copy is as reliable as the record it reproduces.

Procedure = the body of written or unwritten rules which establishes the formal sequence of steps, stages or phases to be undertaken in carrying out an activity. A procedure needs to be distinguished from a **process** = a series of motions, or activities in general, carried out to set oneself to work and go on towards each formal step of a procedure (processes can create records, which would not be reliable, because what characterizes a process is its spontaneity and the absence of rules).

A record is as reliable as the procedure in which it takes part.

Reliable procedure = a procedure that has required phases, each with its own purpose, and that is controlled in each of its phases. A typical procedure has six possible phases: initiative = the acts which start the mechanism of the procedure inquiry = the acts which aim to the collection of information for decision consultation = the collection of opinions and advice deliberation = the act of deciding deliberation control = control on the form and substance of the decision exercised by persons not involved in it execution = the acts giving formal character to the transaction (validation, communication, notification, publication).

Of these six phases, the necessary ones for each procedure are:

a. initiative

b. deliberation

c. execution (in this phase, the one necessary element for reliability purposes is the validation = the conferring on the record of those extrinsic or intrinsic elements which make it effective, such as a signature, a seal, a stamp, or a signet

For each procedure the number and type of formal phases vary. However many they are and whatever they are, in order to have a reliable procedure, they must be clearly identifiable according to the scheme presented above, expressely regulated, and controlled. The records created in the course of a procedure have determined relationships with the acts of which they are part. This relationships can be of four types creating four different kinds of records:

dispositive = records that substantiate the act **probative** = records that provide a posteriori evidence of completed acts **supporting** = records that provide written support for an oral activity **narrative** = records generated in the course of non-juridical activities

Dispositive and probative records are those whose <u>written form is required</u> by the juridical system. Supporting and narrative records are those whose written form is optional. Thus, dispositive and probative records need to be complete according to expressed rules in order to be reliable, while the reliability of supporting and narrative records can only be assessed on the grounds of their completeness (see the minimum requirements for completeness in the template entitled "What is a Complete Record in a Traditional Environment?"), their authors' reliability, and their **context of use** (i.e., the circumstances in which a record is actually used, including the reasons for such use), as showed by its relationships with the other records in the aggregations in which it belongs.

Each procedural phase is characterized by a predominance of one type or another of the types of records mentioned above. For example, the execution phase features a predominance of dispositive records.

CONCLUSION

The context of use of a record is expressed by its **annotations**, which represent the conjunction between elements of intellectual form and of procedure, as annotations are components of intellectual form added in the course of the creation procedure. Thus, they are a bridge between the completeness aspect of a record and the procedural control on its creation. This implies that a reliable record, whether dispositive, probative, supporting or narrative, must include in its intellectual form at least the following annotations:

- a. **name of recipient** = office or individual receiving the record
- b. **date of receipt** = (see template 2)
- c. **classification code** = (see template 2)

Other annotations are usually required by the specific juridical system and/or organizational context.

TEMPLATE 4

WHAT IS AN AUTHENTIC RECORD IN THE TRADITIONAL ENVIRONMENT?

AUTHENTIC RECORD = a record whose **genuineness** can be established. Authenticity is conferred to a record by its **mode**, **form**, and/or **state of transmission**, and/or **manner of preservation** and **custody**. In other words, an authentic record is one whose genuineness can be assumed on the basis of one or more of the following: mode, form and state of transmission, and manner of preservation and custody. (While a reliable record is one whose content you can trust, an authentic record is one whose provenance you can believe.)

Genuineness = the quality of a record that is truly what it purports to be

Mode of transmission: the method by which a record is communicated over space or time.

Requirements:

security = control on procedures of collection, delivery, reception, distribution and deposit of the record, on those carrying them out, and on the instruments or means used for carrying them out:

identification of hand carriers, and ground and air carriers identification of mail office and mail clerks identification of stamping and transmitting machines

routines for collecting records from the offices producing them routines for classifying and/or registering outgoing records routines for stamping and for consigning the records to the carrier routines for date-stamping, classifying and/or registering incoming records

routines for distributing incoming records

routines for filing copies of outgoing records, incoming records, and internally produced records (after dating, classification and/or registration)

Form of transmission: the form that the record has when it is made or received.

Requirements:

presence of one or more of the following extrinsic or intrinsic elements:

watermarks seals signets special signs stamps registration clause authentication clause registry number classification number entitling (e.g., letterhead) or superscription date (topical and chronological) addressee corroboration attestation(s)

Traditionally, the type of medium, its format, and its chemical composition, as well as the type, colour, and composition of the ink, have been used as means of authenticating records. While these characteristics of form are provided to the records in the course of their formation, rather than transmission or preservation, their explicit purpose is that of facilitating future authentication. It might also be noted that some elements of form, like attestation(s), serve reliability as well as authenticity.

State of transmission: the primitiveness, completeness, and effectiveness of a record when it is initially set aside after being made or received.

Requisites: genuineness is assumed a priori for originals copies in the form of original authentic copies inserts contained in originals, copies in the form of originals and authentic copies

Manner of preservation and **custody** = the way in which a record is maintained by its creator and/or legitimate successor.

Requisites:

security = control on procedures of identification, filing, retrieval and access, storing, disposition, transfer, preservation, and conservation of the record, on those carrying them out, and on the instruments and means for carrying them out:

existence of a properly authorized records managent office and records management officers

existence of a records keeping system including

a records management written policy

a records management written procedure

an integrated classification/disposition system

a registry system (optional)

a controlled retrieval and access system

an audit system

secure records technologies

records storage equipment and supplies

a secure and natural place of preservation

controlled environmental conditions

existence of proper procedures of transfer to the legitimate successor existence of proper procedures of preservation and custody a secure and environmentally controlled building existence of guarantees of unbroken custody overtime formally authorized and professionally qualified custodians a system of finding aids a controlled and secure system of consultation of the records a tracking system, a locator system

A non-authentic record can still be proved genuine by expert testimony or by witnesses present to its creation, but cannot be assumed such on its own account.

TEMPLATE 5

WHEN IS A RECORD CREATED IN THE ELECTRONIC ENVIRONMENT?

The necessary and sufficient requirements for any record to be created (made or received) are:

- a. **medium**
- b. **content** (facts or information)
- c. form
- d. persons (author, writer, addressee and creator)
- e. acts
- f. archival bond

The implied necessary and sufficient requirements for any record to be made are:

- g. intent to be transmitted
- h. capability of being transmitted
- i. readability at the creation stage by the intended addressee
- j. intelligibility at the creation stage by the intended addressee

The implied necessary and sufficient requirements for any record to be received are:

- g. successful transmission
- h. readability at receipt
- i. intelligibility at receipt

PROPOSITION: for any electronic record to be created all these requirements must be met.

a. **medium**

The entity needs to be saved on a medium (on the hard drive, to a floppy disk, etc.) at least once when compiled or received.

b. content

The entity needs to carry facts or information. This means that so-called "virtual records," which consist of pointers needed to create documents, have a content constituted by the information on the basis of which such documents are created. If these virtual entities meet all the other necessary and sufficient requisites, they are records of the sources used to create records. The same reasoning can be applied to metadata.

c. form

The entity needs to have a readable and intelligible form. As the form is taken by the content that is affixed to the medium, it follows that the physical and intellectual form is stable at the moment of creation. (Specific elements of form are needed to have a complete, reliable, or authentic record.)

d. persons

The entity needs to have an author, a writer or originator, an addressee, and a creator. Do these persons need to be human beings? No. Do these persons need to be juridical persons? Not all of them, only the author and/or the creator. They need to be recognised by the juridical system as capable of acting, that is, as having a will that can create, maintain, modify, or extinguish situations. For example, if an expert system makes decisions capable of generating consequences recognised as such by the juridical system, it has to be considered a juridical person. However, a database, such as a GIS, is not a juridical person, having no will.

e. acts

The entity needs to be directly connected with some action. Specifically, it must either carry out an action (e.g., a job advertisement sent via E-Mail), provide evidence of an action already carried out (e.g., report of a job interview), provide support to an action (e.g., questions for the interview prepared ahead of time), or provide information on which to base action (e.g., the applicant's curriculum vitae). Observational databases, for example, do not contain entities directly connected with action. However, entities extracted from such databases can come into direct connection with action. (This absolves us from an item by item examination of databases.)

f. archival bond

The entity needs to be part of the whole of the documents made or received in the course of the activities of its creator. This implies that the entity has established and unique relationships with those documents. These relationships arise when the entity is set aside for use (for example, filed in a directory, in an E-Mail file, registered, classified, etc.).

g. transmission

The entity needs to be created with the intent and the capacity of being communicated.

It is essential to underline that the requirements discussed above must coexist in any given entity for it to be considered a record. For example, if an individual queries a database and retrieves an "answer," both query and answer (which obviously have been transmitted) can be considered record(s) only if their content is saved by that individual to a medium, in a readable and intelligible form, and connected by an archival bond (that is, by saving them to the proper file, or assigning them a classification or registration code) to the specific activity that they were meant to support. In this example, the action is entirely carried out by the person who sends the query and retrieves the answer, who

would therefore be the author, writer, addressee and creator of the record(s) in question. This act (retrieving information) cannot be considered a transaction because it is not aimed to change, maintain, extinguish or create relationships or situations among two or more persons, as only one person is involved.

TEMPLATE 6

WHEN IS A COMPLETE RECORD CREATED IN THE ELECTRONIC ENVIRONMENT?

The necessary and sufficient elements of intellectual form for a traditional textual record to be complete are:

- a. **date** (time and place)
- b. superscription or attestation (name or signature of author)
- c. inscription (name of addressee)
- d. disposition (action)

The necessary and sufficient elements of intellectual form for traditional non-textual records to be complete are:

a. date

- b. superscription or attestation
- c. inscription
- d. title and/or subject (identification of content)
- e. disposition (the image, the graphic, the numerals, etc.)

PROPOSITION: for any electronic record to be complete, elements of intellectual form comparable to those required for traditional records are necessary, but they might not be sufficient.

TEXTUAL RECORDS IN ELECTRONIC FORM

a. date

The record must have a date, because the mention of the time and place of the record's creation captures the relationship between its author/writer and the fact/act in question, and this relationship becomes something the record talks about. With traditional records, the date is usually included in the record when its compilation begins, and appears on the top or bottom of the record. With electronic records, the date is usually automatically added by the electronic system to electronic messages, when these pass through the buffer, that is, after their compilation is concluded and the transmission command has been given. The date appears on the first line of the header, and includes the time of receipt of the message in addition to that of delivery, but does not include the place. With other electronic applications, the time is added by the system if this has the ability

to control the "version" of the documents moved through it, or is included by the author/originator when the document is finished.

Therefore, with electronic records, the chronological date must include the time of transmission (to an internal and/or external addressee) and time of receipt. Moreover, the topical date (the mention of the place where the document is made and/or from where it is transmitted) is also necessary for a record to be complete.

b. superscription or attestation

The record must include the name of the author, because this element assigns responsibility for its content. With traditional records, the name of the author may appear in the letterhead (entitling), in the initial wording of the text (superscription), and/or at the bottom of the document as a signature, a symbol, or a signet (attestation). The signature or its equivalent attests that the record is adequate, and this attestation becomes the most important fact about the record. With electronic records, the name of the person releasing the record (not necessarily its author) is usually automatically added by the electronic system to messages after their compilation is concluded and the transmission command has been given. Any electronic record system can only automatically include among the intellectual elements of form the electronic address from which a message is sent. This address might be that of the author/writer of the message, or of its originator (be this person aware or not of it). Juridically, the person from whose address the message is sent is its author and writer, unless an attestation is attached to the record that would unequivocally demonstrate who its author/writer is, such as an electronic seal. The subscription (that is, the mention of the name of the author/writer at the end of the record) is not to be considered an attestation, because anyone could type any name. While the name of the person from whose address the record is sent, by automatically appearing on the header, carries with itself some authority, and therefore can be compared with an entitling or letterhead, it can never have an attestation function.

Therefore, with electronic records, the attestation of the author and an entitling showing the name of the originator are necessary for completeness. (If security is such that nobody other than the electronic address holder, that is, the originator, can have access to that address for sending messages, then the entitling does acquire a superscription function, but never an attestation function).

c. inscription

The record must include the name of the addressee, because it needs to be manifested, that is, transmitted or intended for transmission to some person in order to come into existence. With traditional records, the name of the addressee is usually expressed in the initial part of the record, whereas the names of those to whom the record is copied (**receivers**) is expressed in a separate section, usually at the end. With electronic records, the name of the addressee(s) is usually included in the header of electronic messages as well as the names of the receivers. However, when a message is forwarded to a list of addressees and/or receivers that resides in the electronic system, such list may not appear in the header of the record.

Therefore, with electronic records, the name of all addressees and receivers must be included for completeness, making sure that the two groups are formally distinguished. (While the names of the addressees need to be in the body of the record, that is, constitute an intrinsic element of form, the names of the receivers can simply be linked to the record and constitute an extrinsic element of form, which would fall into the category "annotations").

d. disposition

The record must include the disposition, that is, the expression of the will or judgement of the author, because this is the reason why the record is created in the first place. With traditional records, the disposition is usually introduced by a verb able to communicate the nature of the action and the function of the record. With electronic records, there is no difference.

Therefore, with electronic records, a message expressive of the will or judgement of the author is necessary for completeness.

NON-TEXTUAL RECORDS IN ELECTRONIC FORM

a. date

As with textual records in electronic form, **chronological** and **topical dates are necessary for a non-textual record in electronic form to be complete.**

b. superscription or attestation

As with textual records in electronic form, both an entitling and the attestation of the author are necessary for a non-textual record in electronic form to be complete.

c. inscription

As with textual records in electronic form, the name of all addressees must be included in each non-textual record in electronic form for it to be complete, while the names of the receivers need only to be linked to it.

d. title and/or subject

The record must include a title, providing its name, and/or a subject, describing its content. The title or the subject should include the date of the event, fact, or act represented, if different from the date of the record. While traditional non-textual records do not always have a title or subject, <u>non-textual records in electronic</u> form, just like the textual ones, always include a one line title (which is usually called "file name") that is often the subject of the record. This is not sufficient for either textual or non-textual records.

Therefore, with both textual and non-textual electronic records, a title and/or subject that properly describe the record and its matter are necessary for completeness.

e. disposition

With non-textual records, the disposition is represented by the graphics or images contained in the record.

CONCLUSION

All complete electronic records, whether textual or non-textual, must include the following elements of intellectual form:

- 1. Chronological date (of both transmission and receipt)
- 2. Topical date
- **3.** Entitling (originating address)
- 4. Attestation (name of author/writer)
- 5. Addressee(s)
- 6. Receivers (name of copied persons)
- 7. Title or subject
- 8. Disposition

TEMPLATE 7

HOW IS A RECORD CREATED RELIABLE IN THE ELECTRONIC ENVIRONMENT?

The reliability of any record depends on its degree of completeness, degree of control on its creation procedure, and/or its author's reliability.

An electronic record is to be considered <u>complete</u> when it includes the eight elements of intellectual form.

However, for purposes of reliability, some of those elements, together with others, need to be also included in attachment to the record, called the **document profile**. For an electronic record, the document profile is the container of all annotations, but also of some elements of intellectual form, as follows:

every record made, in order to be considered complete and transmitted internally, must include in its document profile:

date time author addressee subject

every record received from outside, in order to be either filed or further transmitted, must include in its document profile:

date of receipt time of receipt date of further transmission time of further transmission author addressee classification code registry number (if applicable)

The elements related to the control of <u>creation procedure</u> that have been identified for traditional records are:

the express regulation of three procedural phases, that is, of initiative, deliberation, and execution, and

the required addition to the record of at least three annotations, that is, name of recipient, date of receipt, and classification code.

With electronic records, the second of the above requirements is satisfied in the document profile, while the first requirement must be preceded by a series of other controls, as follows:

identification of the communication networks, electronic record system and software to be used

identification of the users of the electronic record system and of their individual privileges within the system on the basis of the administrative competence of each of them and of the organization of their work

definition within the system of the boundaries of **general space**, **group space**, and **individual space**

general space = that part of the system that is accessible to all members of the organization, managed according to established record making and record keeping rules by the competent staff, and that contains the central filing system of the organization, including the linkages with related records in other media. The primary characteristic of the general space is that no record that has crossed its boundaries can thereafter be manipulated.

group space = that part of the system that is accessible to all the individuals who share the same competence, horizontally or vertically, temporarily or permanently. This is the space containing many draft versions of the same record, comments, notations, etc.

individual space = that part of the system that is accessible only to individual members of the organization. The individual space within the organization's records system must be distinguished from the personal, **private space** of the individual, which should have also a different electronic address. This private space may lie beyond the concerns of the organization

identification of a secure way of entering the system, such as cards with magnetic stripe, voice print, finger print, etc.

In addition, it is essential to distinguish within each creating context between those procedures that can be embedded in the electronic systems as automated workflows, and those that can only be regulated by a code of administrative procedure external to the electronic system. Reliability is served by either or both methods of procedural control.

As mentioned earlier, the document profile can be used as a primary instrument for making a record reliable. A complementary instrument to the document profile is constituted by the **metadata**, that is, data on the creation and use of the records within the system that are automatically generated and preserved by the system and transparent to the user.

The elements related to the <u>author's reliability</u> are procedural ones, which are expressed in traditional records by the signature of the author.

With electronic records, the procedural elements that guarantee the author's reliability are best expressed in the control of the access by the users--as said earlier. This control is exercised by limiting and identifying the persons who can have access to the system, and, once inside it, who can read what, who can interact with what and in which way, etc. This control is also exercised by enabling the electronic system to keep an audit trail of the uses made of the system.

As it has been seen, when procedures of creation control are in place, the control on user's access to specific applications is an integral part of them. The control on user's access has the purpose of making the persons competent for the actions in which the records take part responsible for generating them, and accountable for their contents. This is because reliability is linked to administrative competence for action, not to security, which is an authenticity issue.

TEMPLATE 8

HOW IS AN ELECTRONIC RECORD GUARANTEED AND/OR PROVED AUTHENTIC?

Authenticity is conferred to a record by its mode, form, and/or state of transmission, and/or manner of preservation and custody.

In electronic systems as well as in traditional records systems, authenticity is ensured by enforcing sophisticated administrative procedures, employing difficult to reproduce technical instruments, and installing security systems.

Mode of transmission

The method by which a record is communicated over space or time needs to be secure in order to guarantee the authenticity of the record. This security can be achieved as follows:

articulation of the circumstances and manner of transmitting records from one space to another either automatically or manually, and of receiving records from outside in any of the spaces

inclusion in the system of an audit trail capability that keeps a trace of every transmission (date, time, persons, subject)

Form of transmission

The form the record has when it is made or received can also guarantee the authenticity of records. Traditionally, authenticity relies on extrinsic or instrinsic characteristics such as watermarks, seals, etc. In the electronic environment,

every record made, in order to be transmitted externally, must have a document profile attached to it that must include: date time author addressee subject classification code registry number (if applicable) corroboration (indication of the protection used) every record made, in order to be transmitted in a completely secure way, must be protected by:

date stamping or cryptographed seal

cryptographed seal

a simple way of providing records with **special signs** difficult to imitate is by accompanying the subscription on the record with some drawing and/or motto that can only identify specific persons

State of transmission

Authenticity relates to state of transmission in the measure in which it can be assumed for originals, copies in the form of originals, authentic copies, and inserts contained in originals, copies in the form of originals, and authentic copies. Thus, with electronic records,

every record received from outside is to be considered an original at the moment in which it is physically affixed to the system, being the first complete record to reach the effects for which it was transmitted. In order to protect the characteristics of this original record, it is essential to attach to it a complete document profile before the record is handled for the transaction of the affairs to which it relates, and to include it in the central files in the general space.

every record transmitted from the individual to the group space is to be considered an original as well.

most records moving within the work space are drafts. To allow for its identification, each draft must have attached a document profile indicating date, time, author, number of version, and any other relevant data, such as names of other persons consulted about it outside the work space. Other records are comments on drafts, and must be considered originals because each comment is a first, complete and effective record on its own. This means that each comment has to have a document profile too with date, time, author, and the reference to the draft, including its version number, to which it relate. Still other records are copies in the form of originals of the records on file used as reference, or forwarded to the group for taking action. Each final complete record transmitted to the general space must have the appropriate profile as defined above; it leaves the group space as the final draft and is received in the general space as an original. This original is then protected by adding classification code etc. to the profile. If it is meant to be sent outside, the protective measures mentioned above must be added; otherwise it may be filed.

A specific issue that needs to be addressed is that of **inserts**. Inserts are records entirely quoted (if textual) or reported (if images or graphics) in subsequent original records in order to renew their effects, or because they constitute precedents of the actions to which the subsequent originals refer. While the authenticity of the record containing the insert can be guaranteed by using any of the measures described in this document or a combination thereof, the authenticity of the insert itself cannot be ensured, as it depends on the reliability of the author of the record containing it and on the authenticity of the record from which the insert is made.

Manner of preservation and custody

In addition to all the requisites identified for records created in the traditional environment, it is necessary to establish specific ones for the secure preservation and custody of electronic records, such as:

backward and forward compatibility for the technology chosen for preservation purposes

a routine for making backup copies of the records in the system

a routine according to which master copies of the record are preserved in a climatically suitable and physically secure environment, while other copies are reserved for use and made easily available to the users

a routine for authenticating master copies

a system of regular recopying and/or migration

4. Descriptive List of Components of an Electronic Record in Accordance with Contemporary Archival Diplomatics

4.1. Introduction

Apart from identifying the visible manifestations of documentary elements, the early diplomatists looked at the document conceptually as embodying a system of both external and internal elements consisting of *acts*, which are the determinant cause of documentary creation, *persons* who concur in its formation, *procedures*, which are the means by which acts are carried out and the *documentary form* itself which binds all the elements together.

While these same groups of elements can still be found in electronic record forms, they tend to manifest themselves differently, and certain of the elements require further elaboration and expansion. In an electronic environment, the external and internal elements translate into eight fundamental components of an electronic record, i.e., *medium, content, physical form, intellectual form, action, persons, archival bond,* and *context.* The Descriptive List of Components of an Electronic Record in Accordance with Contemporary Archival Diplomatics defines and explains each of these components.

4.2. Sources

Duranti, Luciana, and Heather MacNeil. "The Protection of the Integrity of Electronic Records: An Overview of the UBC-MAS Research Project." *Archivaria 42* (Fall 1996): 46-67.

MacNeil, Heather. *Trusting Records: Legal, Historical, and Diplomatic Perspectives*. Dordrecht: Kluwer, 2000 (forthcoming).

Component	onent Description		
Medium	With electronic records, the medium is a separate physical part of the record, which is not meant to convey meaning, but whose exclusive purpose is to provide a support for the message. While a record does not come into existence until it is affixed to a medium, the neutral character of the medium in electronic records is vital to their survival, because all media designed to carry magnetically or optically affixed signals have very limited longevity, due not only to the deterioration of the material, but also, and primarily, to the obsolescence of the technology necessary to read them. The obvious implication is that the preservation of electronic records requires repeated and continuing reproduction. If the medium were meant to convey meaning <i>per se</i> , each reproduction and authority. However, because the medium of electronic records is not imbued with meaning, each record reproduction in which the only component that changes is the medium can be taken to be a complete and effective record identical to the one that it reproduces.		
Physical Form	Physical form comprises the formal attributes of the record that determine its external make-up. It includes script (e.g., type font, format, inserts, colours, etc.), language, special signs (e.g., symbols indicating the existence of attachments or comments, mottoes, emblems, etc.), seals of any kind (including digital signatures, time-stamps, etc.), the configuration and architecture of the electronic operating system, the architecture of electronic records, the software, etc., that is, all those parts of the technological context that determine what the document will look like and how it will be accessed, and that, in electronic systems, are mostly "transparent," or invisible, to the user (whoever the user might be, author, addressee, or other). Because the components of the physical form of a record are intended to convey meaning, any change in any of them generates a new and different record.		
Intellectual	The intellectual form of a record is the sum of its formal attributes that		

4.3. Components of an Electronic Record

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Form	represent and communicate the elements of the action in which the record is involved and of its immediate context, both documentary and administrative. The intellectual form of electronic records may be subdivided into three parts: the "information configuration," which refers to the type of representation of the content, whether text, graphic, image, sound, or a combination thereof; the "content articulation," which refers to the elements of the discourse and their arrangement, such as date, salutation, exposition, etc.; and "annotations," which refer to the additions made to the record either in the execution phase of the procedure (e.g., authentication of signatures), or in the handling of the matter (e.g., indication of "urgent" or "bring forward," date and name of action taken), or in the development of the procedure (e.g. mention of subsequent actions or their outcome), or in the management of the record (e.g., classification code, registry number). Content articulation includes primarily elements that, in traditional documents, are called "intrinsic." With electronic records that are transmitted across electronic boundaries, the most important of those elements, that is, those referring to persons, administrative context, and action (e.g., superscription, inscription, date of document, date of transmission, subject), are in the header of the record, which is its protocol, not in the eschatocol of the record, which may contain mention of names, but without any validity as attestations of what the record is all about. With records that are not transmitted across electronic boundaries, those same elements may be mentioned in the content articulation, but they have validity as attestations of what the record is about only if they appear in the record profile.
Persons	With regard to the persons concurring in the production of electronic records, the requirement for atomic control presented by this type of record imposes a multiplication of the persons of which a diplomatist/archivist needs to keep track. Diplomatics says that, while many persons may take part in the creation of a record (among them, witnesses and countersigners), only three persons are necessary to its existence, that is, the <i>author</i> (i.e., the person having the authority and capacity to issue the record or in whose name or by whose command the record has been issued), the <i>addressee</i> (i.e., the person to whom the record is directed or for whom the record is intended), and the <i>writer</i> (i.e., the person having the authority and capacity to articulate the content of the record). However, the integration of the components of traditional records is such that, once the author, addressee and writer are identified, the creator and the originator are obvious. It is not so with electronic record made or received and set aside for action or reference, the creator being the person producing the archival fonds in which the record in question belongs, and the originator being the person owning the electronic address or space in which the record has been generated (i.e., from which the record is transmitted or in which the record is compiled and closed). The

	primary reason for the identification of the creator in connection with each electronic record relates to preservation over time. In fact, while the records are in the live electronic system in which they are produced, their creator is easily identifiable as the person having jurisdiction over the system for making, receiving and accumulating records in the conduct of business. But, once the records are taken out of the system, their location on a storage medium and in a given storage facility is no longer meaningful for the purpose of identifying their creator. In an ideal system, the identity of the creator of an electronic record would be revealed by a visual, or presentation, component of the record profile form attached as an annotation to each record item, such as a logo or a crest. The primary reason for the identification of the originator in connection with each electronic record is that such person may be different from the author or writer of the record, especially when a record has multiple authors but only one of them is responsible for its transmission: the issue relates primarily to responsibility and accountability. The identity of the originator of a record electronically transmitted is in the header of the mail message, while that of the originator of a record that has not crossed electronic boundaries is included by the system in the record profile and corresponds to the name of the owner of the electronic individual space in which the record is closed.
Action	The action is the core component of every record, regardless of its medium and form. An action is any exercise of will which aims to create, change, maintain or extinguish situations. A special type of action is a <i>transaction</i> , which is an action between two or more persons, aiming to change the relationship existing between them. The relationship between an electronic record and the action in which it takes part is usually revealed by the conceptual position that the record occupies in the dossier or the class of records to which it is connected by a classification code. Such relationship may be similar in nature to the relationship that traditional records have with juridical acts: <i>dispositive</i> (when the record is the essence of the act, which comes into existence with the creation of the record: e.g., the electronic records admitting patients to a hospital), or <i>probative</i> (when the record is proof of an act which is complete before the creation of the record: e.g., the electronic records have a <i>supporting</i> function with respect to the action in which they take part. For example, a geographical informational system, that is, a relational database which presents data in a geographic arrangement, contains only documents (i.e., information affixed to a medium in an objectified and organized way, according to specific rules of representation), information (i.e., a meaningful group of data intended for communication, either across space or through time), or individual data (i.e., the smallest meaningful recorded facts). However, it can itself be considered a record, if its function as a database is to support a specific business activity (it does have all the necessary components of a

	record when it is regarded as a unit), and can produce documents that, once extracted from it and linked to other records of action, become records (e.g., a representation of the intensity of traffic in a given place that is attached or linked to a report containing recommendations for the regulation of city traffic). Another large portion of electronic records has a <i>narrative</i> function, that is, it does not relate to business activity other than by being expression of the way in which individuals set themselves to work and go through the informal motions of carrying out activities and decision making. While they are records themselves, they are not procedurally bound to action in the way in which the other types of records are, but relate to it in an indirect way. Supporting and narrative records are records whose existence is not required by the juridical system, but that are generated by their author for his or her convenience and by choice.
Context	Context refers to the juridical-administrative framework in which the action takes place. Four contexts are relevant to non-electronic and electronic records alike: the <i>juridical-administrative context</i> (i.e., the legal and organisational system in which the creating body belongs), the <i>provenancial context</i> (i.e., the creating body, its mandate, structure, and functions), the <i>procedural context</i> (i.e., the procedure in the course of which the record is generated), and the <i>documentary context</i> (i.e., the internal structure of the archival fonds of which the record forms a part). This last context represents the totality of all the archival bonds existing within a creator's fonds. While it is clearly impossible for any single record to fully communicate these contexts, it is possible to provide clues and pointers to them through the other identified components. For example, the name of the creator (identified under <i>persons</i>) is a pointer to the record's provenancial context; an annotation, such as the classification code (identified under <i>archival bond</i>), is a kind of shorthand for the record's administrative, procedural and documentary context.
Anchival	The archivel hand refers to the link that each record has with the second
Archival Bond	The archival bond refers to the link that each record has with the previous and subsequent one participating in the same activity. It is an essential component of the record, in keeping with our understanding that records are necessarily composed of documents and the complex of their relationships. It is originary (i.e., it comes into existence when the record is made or received), necessary (i.e., it exists for every record), and determined (i.e., it is characterized by the purpose of the record). With traditional records, this bond is implicit in the records' physical arrangement. With electronic records, it is necessary to make it explicit. The formation of the archival bond – which conceptually arises at the moment a record is set aside, and in so doing determines the moment of the record's creation – may be manifested in the specific classification code assigned to the record, which connects it to other records belonging to the same class, or, in the case of incoming and outgoing records, in the

	registration number assigned to the record, which connects it to previous and subsequent records made or received by the creator and dealing with the same matter.
Content	Content refers to the message the record is intended to convey. The content of an electronic record, for the record to exist at all, must be fixed and stable. This implies that so-called "virtual documents" cannot be considered records in the electronic environment. A virtual document consists of pointers to data residing in different locations within a database, or in multiple databases. While it is possible to see on a computer monitor the document resulting from the assembly of those data in a meaningful form, this document does not exist as such until its components are actually joined together in an inextricable way, that is, until the content of the document is explicitly articulated in a fixed form. This is different from what happens with traditional records, where a document constituted of pointers to information contained in other documentary sources is a record of the sources to be used to make another record. With electronic documents, the pointers lead to data whichbeing contained in databases that, by their nature, are dynamicmay vary over time. Thus, a virtual document lacks stability and may be ten different documents in a ten minute time span.

5. Template for Discussion at Pre-InterPARES Meeting in Cagliari

5.1. Introduction

In October 1998, 3 months prior to the official commencement of the InterPARES project, the International Team met in Cagliari, Italy, to lay the foundation for the first phase of the project, i.e., the development of an electronic records typology. In the course of that meeting, the Project Director provided an overview of archival diplomatic analysis as developed in the UBC Project. The Template for Discussion below was intended to aid the research team's understanding of the elements included within that analysis.

The Authenticity Task Force was established at the Cagliari meeting. Since the official commencement of the InterPARES project in January 1999, the Task Force has been responsible for developing and refining a Template for Analysis that will aid in the identification of a typology of electronic records based on the requirements for authenticity. The first Template for Analysis was presented at the first International Team Workshop in Budapest in March 1999. For the lineage of the Authenticity Task Force templates, please consult the Template's revision history.

5.2. Sources

Duranti, Luciana, and Heather MacNeil. "The Protection of the Integrity of Electronic Records: An Overview of the UBC-MAS Research Project." *Archivaria 42* (Fall 1996): 46-67.

"The Preservation of the Integrity of Electronic Records," 27 May 1999, http://www.slais.ubc.ca/users/duranti/index.htm>

Medium			
	Script		
Physical Form	Language Special Signs		
	Seals		
	Technological Context	Operating System Application Software	
		File Format Information Configuration	
Intellectu Form	al	t Articulation	
		Annotations	

5.3. Template for Discussion at Pre-InterPARES Meeting

Persons		Author	
		Addressee	
		Writer	
		Creator	
		Originator	
Action		Type of Act	
		Name of Act	
Juridical-Adı		ridical-Administrative	
	Provenancial		
Context	Procedural		
	Documentary		
Content			