

ISO-TimeML Annotation Guidelines for French

This document describes the annotation guidelines for marking up French texts according to the ISO-TimeML specification language. It is intended as a supplement to the current ISO-TimeML annotation guidelines which are outlined in [5].

1 The EVENT tag

The definition of *event* adopted here is the same as that specified in Annex A.2.1 of [5, 40].

The types of expressions denoting events in French are similar to those postulated for English. Various verb forms and nouns, as well as certain adjectives and prepositional phrases¹ may be annotated with the <EVENT> tag.

With respect to the extent of the <EVENT> tag, the element to be annotated is the head of the minimal event-denoting chunk. Any auxiliaries, specifiers, modifiers, clitics, polarity markers, complements and particles are not included in the annotation. In the following examples, the event-denoting chunk is in bold face and the head to be tagged is underlined. Only one event in each example is annotated.

- (1) *La France occupe une place plutôt effacée dans la campagne.*
- (2) *On **n’a pas** evoqué un embargo sur les exportations de pétrole soudanais.*
- (3) *Le gouvernement a répondu sèchement, rappelant l’armée à l’ordre.*
- (4) *De **violentes** secousses ont fait trembler l’est du pays tôt dimanche matin.*
- (5) ***La** crise entre Moscou et Talinn prend de l’ampleur.*

The following sections detail the guidelines for annotating each category of the aforementioned event expressions. In the annotated examples not all instances of <EVENT>s will necessarily be annotated. In most cases, only the pertinent event expression under discussion is marked up.

1.1 Annotating Verbs

This section presents guidelines for annotating verbal event expressions. In the following illustrative examples, which show a range of verbal constructions, the head of the event-denoting verbal chunk is shown in bold type. Again, only one event in each case has been highlighted.

- (6) *Le ministre **annonce** qu’il ne démissionnera pas.*
- (7) *Des milliers de personnes ont **manifesté**.*
- (8) *Plus de 130 civils ont été **tués**.*
- (9) *Elle voulait **empêcher** l’Iran d’accéder au nucléaire civil.*

As a general rule, most (finite and non-finite) verbs are candidates for annotation with the <EVENT> tag. It is obviously important to bear in mind the possible readings of verbs, which may vary depending on their argument structure, the construction in which they are used, or other contextual elements.

¹The annotation guidelines for Italian also mention “predicative sections”, such as *Jones is the new **president** of the company*. These are not included here as we do not wish to extend the definition of EVENT to individual entities.

1.1.1 Modal verbs

Modal verbs in French (as in other Romance languages) bear a much richer inflectional morphology than English modals. They may be conjugated in all tenses and moods and may be attributed aspectual properties. Instances of French modals that introduce an `<EVENT>` must be annotated to capture this information. Occurrences of the verbs *devoir*, *falloir*, *savoir*, *vouloir*, *pouvoir* are marked up with the `<EVENT>` tag. This section deals in particular with the verbs *devoir*, *falloir* and the reflexive *se pouvoir* (which appears in impersonal constructions). The other verbs mentioned, although modals, belong to different event classes to the these three (see section 1.5.1 for details).

The verb *devoir* is to be annotated when it introduces an infinitival `<EVENT>` complement, as in the following example. The modal is in bold face, the event complement is underlined.

(10) *Les résultats **devraient** paraître dans les jours qui viennent.*

The verb *falloir* must be annotated when it has a nominal (11) or infinitival (12) `<EVENT>` in direct object position, or when it introduces a complementizer phrase (CP in *que*) which contains an `<EVENT>` as its main verb (13). In the examples below, the modal to annotate is in bold face, its event argument is underlined.

(11) *Ce qui devient toujours ne saurait être, il **faut** un commencement.*

(12) *Il a **fallu** mettre l'armée en état d'alerte et mobiliser les unités de police.*

(13) *Il **faudra** que la reconstruction définitive s'effectue sur des bases financières saines.*

The verb *se pouvoir* appears in impersonal constructions (where the subject is an impersonal pronoun *il* or *ça*, for example). Similarly to *falloir*, this verb must be annotated when it introduces a complementizer phrase (CP in *que*) which contains an `<EVENT>` as its main verb. In the following examples, the modal is in bold face and its event complement is underlined.

(14) *Il se **peut** que les descriptions du psychomètre se fassent sous l'influence des personnes qui le dirige.*

(15) *Il se **pourrait** que la quatrième république la laisse tomber en désuétude.*

The tense, mood and aspect attributes must be set according to the values expressed by the modal verb's morphology and the tense of the construction in which it appears. Any event complement of a modal verb must also have its `modality` attribute set in accordance with the value expressed by the modal subordination. The lemma of the modal verb is used as the value for the `modality` attribute of the subordinate event.

Les résultats

```
<EVENT eid="e1" eiid="ei1" class="MODAL" pos="VERB" mood="CONDITIONAL">devraient</EVENT>  
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE" modality="DEVOIR">  
dans les jours qui viennent.
```

Modals which do not have an `<EVENT>` as complement are not to be annotated. For example, the main verb of the subordinate CP in (16) is not an `<EVENT>`, so the modal must not be annotated. Similarly, when the verb *falloir* has a direct object which is not an `<EVENT>`, such as in (17) and (18), it is not to be annotated.

(16) *Il se peut qu'il y ait plus d'unités dans les petits nombres que dans les grands.*

(17) *Il a fallu trois mois pour arriver à ce résultat.*

(18) *La voix du lecteur est si volontairement terne qu'il faut un effort pour le suivre.*

Certain modals are polysemous. Depending on their arguments, verbs such as *devoir* and *savoir*, for example, also have interpretations which are not modal. For example, the verb *savoir* is used with an event interpretation, as in *Jean a su la réponse*, when the verb is conjugated in the passé composé. Here, the direct object, *la réponse* is non-eventive, but when conjugated in this tense, the verb has an event reading and an interpretation akin to that of *apprendre*. In this context it does not qualify as a modal and must not be marked

up as such, but must be marked up as an <EVENT> of class OCCURRENCE.

Jean a

```
<EVENT eid="e1" eiid="e1l" class="OCCURRENCE" pos="VERB" tense="PAST" vform="PASTPART" aspect="PERFECTIVE">su</EVENT>
```

la réponse.

Likewise, *devoir* also has the interpretation of *to owe*, as in *Jean doit cinq euros à Marie*, which expresses a state. The verb is to be marked up in this case, but will not be classified as MODAL.

Jean

```
<EVENT eid="e1" eiid="e1l" class="STATE" pos="VERB" tense="PRESENT">doit</EVENT>  
5 euros à Marie.
```

The subordinating relation between a modal verb and its event complement is realized in the annotation by an SLINK tag. Details of this tag are given in section 4.2.

1.1.2 Impersonal modal expressions

Complex modal expressions may also have an impact on the vericonditional status of events in the propositions they introduce. Certain modalities may also leave the instantiation of events undetermined, such as in *il est possible que Jean vienne*, or yet again express a deontic attitude, as in *il est nécessaire que Jean vienne*. The modal properties of impersonal expressions of the form *il + state verb + modal adjective* must be captured in the annotation². The modal adjectives to be annotated are as follows: *nécessaire*, *possible*, *impossible*, *probable*, *improbable*, *vrai* and *faux*. In the following examples, the modal expression is in bold and the subordinated event instance is underlined.

(19) ***Il était nécessaire que des postes C2 soient comblés à partir du concours.***

(20) ***Il paraît probable que le Congrès adoptera trois grands accords.***

(21) ***Le processus est engagé et il ne semble pas possible de faire marche arrière.***

In these expressions, the modal adjective is to be marked up with the <EVENT> tag. The value of the tag's polarity attribute will be derived from the polarity of the context in which the state verb is found. Tense and aspectual information is also derived from the state verb. The <EVENT> tag of the modal adjective will have values for the tense, aspect and polarity attributes. In the same way, in the following example, the subordinated event complement receives the mood value of SUBJUNCTIVE from the copula in the passive construction. The value of the modality attribute is the lemma of the modal adjective which subordinates the event instance.

Il était

```
<EVENT eid="e1" eiid="e1l" class="MODAL" pos="ADJECTIVE" tense="IMPERFECT">nécessaire</EVENT>
```

que des postes C2 soient

```
<EVENT eid="e2" eiid="e12" class="OCCURRENCE" pos="ADJECTIVE" vform="PASTPART" tense="PAST" mood="SUBJUNCTIVE" modality="NECESSAIRE">comblés</EVENT>
```

à partir du concours.

The relation between an impersonal modal expression and its event complement is realized in the annotation by an SLINK tag. Details of this tag are given in section 4.2.

²The term *state verb* is used here as a translation of the French *verbe d'état*, which is not to be confused with *stative verbs* (*les verbes statifs*). Examples of state verbs are *être*, *sembler*, *paraître* and *avoir l'air*.

1.1.3 Grammatical tense

Verb tense can play a part in determining the eventiveness of verbs. For example, verbs in the passé composé will often acquire an event reading, even if they are not strictly events when conjugated in other tenses. An example is the verb *savoir*, mentioned above in section 1.1.1.

When annotating verbs in compound tenses the participle is annotated with an <EVENT> tag. The tag's tense and polarity attributes (as well as mood in the case of a conditional or subjunctive construction) correspond to the values exhibited by the auxiliary. See section 1.5.2 for details on annotating grammatical verb tense.

1.1.4 The imperative mood

Unlike the indicative and subjunctive, the imperative is not a temporal mood [6]. Verbs in the imperative represent orders, the realization of which may only ever occur in the future (relative to the time of enunciation) without any certainty. Verbs in the imperative are not to be annotated in any case. In the following example, the event-denoting verb in the imperative is in bold.

(22) ***Rappelons** que Madame Yacout a été la première femme à la tête de la direction.*

Even if explicitly modified by a temporal expression, verbs in the imperative mood merely denote hypothetical occurrences. The temporal localization is also hypothetical. In the following example, the event-denoting verb (in bold type) is an order, the temporal expression (underlined) is merely part of the hypothetical situation expressed by the sentence. Event verbs in such cases are not to be annotated.

(23) ***Viens** me voir lundi matin.*

1.1.5 Infinitive verbs

In French two forms of the infinitive are defined, the present infinitive (e.g. *chanter, voter, aller*) and the past infinitive (e.g. *avoir chanté, avoir voté, être allé*). These two forms contrast on an aspectual, rather than temporal, level; the former representing an unaccomplished event, the latter on the other hand, having the properties of accomplished aspect [6].

The infinitive is temporally situated according to the relation it shares with the clause's main verb (in the case of dependant/subordinating constructions). An event denoted by a present infinitive may be temporally situated simultaneous to the main verb, as in (24), or may be subsequent to the main verb, especially when the latter is oriented towards the future, as in (25). In the examples that follow, the infinitive is in bold and the main verb underlined.

(24) *Le seul à **envisager** des sanctions est Nicolas Sarkozy.*

(25) *Il voulait s'**orienter** vers la neurochirurgie.*

The <EVENT> tag for infinitives has the attribute vform with the value INFINITIVE. Verbs in the present infinitive do not have a value for the aspect attribute.

Le seul à

<EVENT eid="e1" eiid="e1l" class="I_STATE" pos="VERB" vform="INFINITIVE">envisager</EVENT>
des sanctions est Nicolas Sarkozy.

The past infinitive can realize a relation of temporal precedence relative to any temporal location expressed by a finite verb tense. For example,

(26) *Le Kenya dément **avoir arrêté** un fugitif recherché pour son implication dans le génocide rwandais.*

(27) *Le RPM regrettera d'**avoir pactisé** avec le diable.*

In the annotation of verbs in the past infinitive, the `aspect` attribute is to have the value `PERFECTIVE`, for example:

Le Kenya dément avoir

`<EVENT eid="e1" eiid="e11" class="OCCURRENCE" pos="VERB" aspect="PERFECTIVE" form="INFINITIVE`
un fugitif recherché pour son implication dans le génocide rwandais.

As a general rule, event infinitives are to be annotated with the `<EVENT>` tag in clauses in which the main verb is finite and is also to be marked up with this tag (examples (28) and (29)), or in which the main verb is a finite copula or stative verb (e.g. when the infinitive has a nominal function and is in a clause in subject position) (30).

(28) *Chávez doit **apprendre** à écouter.*

(29) *L'ex-juge a quitté la magistrature en 2002 pour **devenir** conseillère du gouvernement norvégien.*

(30) ***Préserver** le patrimoine artistique des bombardements, incendies et autres fléaux de guerre était encore insuffisant.*

Annotation guidelines for infinitival complements in causative constructions, such as *faire* + infinitive, are detailed in section 1.1.9.

Infinitives are not to be marked up in cases where the main verb is not considered an `<EVENT>`. In the following example, the infinitive is not to be annotated, as the main verb, *faudrait*, is not an `<EVENT>` in this case (see section 1.1.1 for information on annotation of modal verbs like *falloir*).

(31) *Encore en faudrait-il plusieurs pour épuiser le sujet.*

Another context in which infinitives are not to be marked up is when they appear in a complex NP as a nominal complement in a prepositional phrase (typically introduced by the preposition *à*, such as *salle à manger*, *machine à laver* and *presse à mouler* etc.

In French the infinitive may serve the function of imperative, expressing an order or advice. This use typically appears in documents containing instructions (user manuals, recipes, the road code etc.). Such cases, as with verbs in the imperative mood (see section 1.1.4), are not to be annotated. For example,

(32) *Voir aussi la fonction Refaire.*

(33) *Ne pas dépasser les 50km/h en agglomération.*

1.1.6 Complex tenses, aspectual and modal expressions

In addition to grammatical verb tense, certain verbal constructions are used to express various complex tenses and aspectual and modal properties. Verbal constructions consisting of an auxiliary, such as *aller* or *venir*, followed by a verb in the infinitive are to be annotated with specific values for tense and aspect which correspond to the temporal semantics of the construction. Certain prepositional phrases also exhibit particular aspectual properties which must be captured. A number of these points are discussed in this section.

en train de + infinitive

This construction expresses a process which is in progress. It exhibits similar aspectual properties to those apparent in the English present continuous tense (*John is eating fish and chips*), which has a progressive aspectual reading. The prepositional phrase *en train de* appears most frequently as complement of the verb *être* (34) and less frequently as complement to the verb *sembler*. It may also appear in passive constructions as complement to a verbal predicate (but semantic argument of the subject NP) (36), or as an NP complement (37).

(34) *Les Américains **sont en train de perdre** contrôle de l'Irak.*

(35) *À d'autres endroits, en revanche, quelque chose **semble en train de se terminer**.*

(36) *Un salarié a été surpris **en train de fumer** un joint dans l'entreprise.*

(37) *On a **aperçu** Pierre **en train de faire** de l'aqua gym à la piscine des Halles.*

The prepositional phrase *en train de*, a fixed collocation, contains the aspectual information regarding the event. The infinitival complement of this expression is to be marked up with the <EVENT> tag with an aspect attribute of value PROGRESSIVE.

The respective values for the polarity, mood and tense attributes will be derived from the copula or stative verb, in examples such as (34) and (35), where the PP is complement of a copula or stative verb. In passive constructions, such as in example (36), where the main verb of the clause is a verbal predicate and the PP is semantic argument of the subject NP, the values for mood, modality and tense are derived from the main verb. The same applies for cases such as in example (37), where the PP is an NP complement.

Les Américains sont en train de

```
<EVENT eid="e1" eiid="e11" class="OCCURRENCE" pos="VERB" aspect="PROGRESSIVE" tense="PRESENT" vform="INFINITIVE">perdre</EVENT>
```

le contrôle de l'Irak.

en voie de + infinitive

In the expression *en voie de + infinitive*, the infinitive typically denotes a punctual event (an achievement in Vendler's terms) which culminates instantaneously. The expression itself indicates that the event realized by the infinitive will take place in the near future, or that the conditions for the event's occurrence are being fulfilled. In the following example, the aspectual expression is in bold and its infinitival complement is underlined.

(38) *Rien ne permet de prévoir que la découverte et l'invention soient **en voie de** plafonner.*

(39) *Volta, déjà renommé, était **en voie de** découvrir le courant électrique.*

(40) *Les grandes firmes sont **en voie de** négoier une entente.*

The expression *en voie de* is to be annotated with the <EVENT> tag. It will take values for the attributes of tense, mood, modality and polarity from the copula which introduces it as complement. The <EVENT> tag will have the class STATE. The infinitival event complement will be annotated also in the usual way. It will have the value ??? for its aspect attribute to reflect the semantics of the construction. The following is the annotation corresponding to example (40) above.

Les grandes firmes sont

```
<EVENT eid="e1" eiid="e11" class="STATE" pos="PREPOSITION" tense="PRESENT">en voie de</EVENT>
```

```
<EVENT eid="e2" eiid="e12" class="OCCURRENCE" pos="VERB" vform="INFINITIVE" aspect="???">négoier</EVENT>
```

en voie de + N

The interpretation of the expression *en voie de*, when followed by an event nominal complement, depends on the nature of the event realized by the nominal. When the nominal is a punctual event (an achievement), the reading for the aspectual expression is the same as for *en voie de + infinitive*. In this case, the event in question is to occur in the near future, or the conditions for its occurrence are being fulfilled. In the examples the aspectual expression is in bold and its nominal complement underlined. The first set of examples contain event nominals which represent achievements.

(41) *Les vidéocassettes sont **en voie d'**extinction.*

(42) *La fabrication était juste **en voie de** commencement l'est comme l'ouest.*

- (43) *Les structures sociales, modifiées dans le même mouvement que nos économies, sont **en voie de renouvellement**.*

The aspectual expression, with an achievement as complement, is to be annotated with the <EVENT> tag with the class STATE. The tag will take values for the attributes of tense, mood, modality and polarity from the copula which introduces it as complement. The nominal complement will have the value ??? for the attribute aspect.

Les vidéocassettes sont

```
<EVENT eid="e1" eiid="ei1" class="STATE" pos="PREPOSITION" tense="PRESENT">en voie
de</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN" aspect="???">extinction</EVENT>
.
```

On the other hand, if the event realized by the nominal complement is a durative event (an activity or process), the aspectual expression has a different interpretation. In this second case, the event in question is understood to be already underway. the reading is the same as for the expression *en cours de/en plein(e) + N* (see below).

- (44) *Les procédures de financement et de construction des établissements sont **en voie de modification**.*
 (45) *Ces pays sont sensiblement les mêmes que ceux qui sont **en voie de développement** athlétique.*
 (46) *Beaucoup de pays musulmans sont **en voie de modernisation**.*

The expression *en voie de* with a durative event as complement is to be annotated in the same way as above with the <EVENT> tag. The nominal complement, however, will have the value PROGRESSIVE for the attribute aspect, as in the following example.

Beaucoup de pays musulmans sont

```
<EVENT eid="e1" eiid="ei1" class="STATE" pos="PREPOSITION" tense="PRESENT">en voie
de</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN" aspect="PROGRESSIVE">développement</EVENT>
.
```

en cours de/en plein(e) + N

Aspectual expressions of this type characterize events in progress. All three of these constructions often, although not obligatorily, introduce event nominals in the form of nominalizations.

- (47) *Un guide des procédures de gestion **est en cours d'élaboration**.*
 (48) *L'industrie de la biotechnologie **est en plein essor**.*

In such cases the nominal complement of the prepositional construction is to be marked up with the <EVENT> tag. It is to be annotated according to the guidelines for annotating nouns. The tense of the copula is also captured in this tag with the tense attribute. The <EVENT> tag has an aspect attribute with the value PROGRESSIVE.

Un guide des procédures de gestion est en cours

```
d'<EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="NOUN" aspect="PROGRESSIVE"
tense="PRESENT">élaboration</EVENT> .
```

1.1.7 Aspectual auxiliaries

venir de + infinitive

The construction consisting of an inflected form of the verb *venir* followed by an infinitive expresses a recent past tense. This corresponds to the English *to have just* + past participle. This construction also captures a given event immediately after it's final stage, expressing a perfective aspect [6, 253]. This case differs from other complex aspectual expressions (such as *commencer à* and *terminer de*) as the verb *venir* does not have its habitual interpretation.

(49) *Le Parlement vient de voter la loi autorisant la ratification du Traité de Lisbonne.*

The inflected form of the verb *venir* does not have its habitual lexical semantic value in this context. It acts merely as an auxiliary, contributing the syntactic framework necessary to construct the aspectual expression. In this case it may only be conjugated in the present, imperfect or simple future tenses. The event semantic content lies in the verbal infinitive, which denotes the event type in question³. This type of construction exemplifies perfective aspectual properties; the action or event described by the infinitive has been fully terminated. The ISO-TimeML annotation must reflect this.

The instance of the verb *venir* is to be annotated with the <EVENT> tag, as is the infinitival complement. The auxiliary is attributed the class ASPECTUAL and its tense value is set to reflect the conjugation. The infinitive is annotated with the standard attribute values for infinitive verbs (i.e. vform="INFINITIVE"). The aspect attribute of the <EVENT> tag for the infinitive will have the value PERFECTIVE.

Le parlement

```
<EVENT eid="e1" eiid="ei1" class="ASPECTUAL" pos="VERB" tense="PRESENT">vient</EVENT>
de
```

```
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" aspect="PERFECTIVE" vform="INFINITIVE">
la loi autorisant la ratification du Traité de Lisbonne.
```

aller + infinitive

This construction represents an event at the stage before the beginning of its realization. The verb *aller*, as an aspectual auxiliary, may only appear conjugated in the imperfect or present tense. The infinitival complement describes an event that has not yet commenced. Depending on the tense of the auxiliary, the event is either to be realized in the near future, in which case the auxiliary is in the present (*Jean va venir*), or possibly not realized at all, in which case it takes the imperfect (*Jean allait venir*).

(50) *L'Iran allait franchir le "point de non-retour" dans son programme nucléaire.*

(51) *Honda va introduire de nombreuses nouveautés aérodynamiques à sa monoplace.*

Annotations will depend on the tense of the auxiliary. In the case of a near future tense construction, where the auxiliary is in the present tense, only the infinitive is to be marked up, the auxiliary is not. The value of the tense attribute for the <EVENT> tag is FUTURE. The tag's other attributes are to be set appropriately according to the general verb annotation guidelines.

Honda va

```
<EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="VERB" tense="FUTURE" vform="INFINITIVE">introduire</EVENT>
de nombreuses nouveautés aérodynamiques à sa monoplace.
```

If the auxiliary *aller* is conjugated in the imperfect tense, it plays the role of an aspectual auxiliary. It is to be marked up with the <EVENT> tag and given the value ASPECTUAL for its class attribute. The aspect attribute of this tag is to have the value IMPERFECTIVE.

L'Iran

```
<EVENT eid="e1" eiid="ei1" class="ASPECTUAL" pos="VERB" tense="IMPERFECT" aspect="IMPERFECTIVE">allait</EVENT>
franchir</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE" aspect="NONE">franchir</EVENT>
```

³References here.

le "point de non-retour" dans son programme nucléaire.

It is important to note that the verb *aller* in these constructions may have either a purely functional reading (as an auxiliary, (52)) or a lexical reading (as a lexical verb (53)).

(52) *La défaite **allait** provoquer un incendie volontaire de toutes ces embarcations.*

(53) *Pour le petit-déjeuner, on **va** manger au réfectoire ou bien dehors s'il fait beau.*

Sufficient context is usually available for ambiguity to be minimal and the human annotator will in the majority of cases be able to decide which reading to attribute. In automated text processing, many contextual elements may aid with disambiguation, or at least indicate a preferred reading. For the verb *aller* the following contextual elements, if present, indicate a preference for a functional reading :

A subordinate clause is present expressing a condition that stops or hinders the action in the main clause.

(54) *Jean **allait** manger un champignon vénéneux quand Robert l'a arrêté.*

The verbal complement (underlined) of the verb *aller* is a stative or copula verb, such as *devenir*, *paraître*, *sembler*, *être*, *etc* in an adjectival or nominal predication.

(55) *Mme De Rênal crut sincèrement qu'elle **allait** devenir folle.*

(56) *Lewis Hamilton **va** être champion du monde de la Formule 1 cette année.*

The subject (underlined) of the verb *aller* is inanimate.

(57) *Cette raideur politique **allait** provoquer la naissance d'une opposition clandestine.*

The infinitival complement (underlined) can only take an inanimate subject.

(58) *La crise économique **va** durer assez longtemps et va avoir des conséquences très graves pour le pays.*

The infinitive complement (underlined) is only used in impersonal constructions.

(59) *Il **allait** pleuvoir.*

(60) *Il **va** falloir se battre pour sauver l'environnement vert et rural de Mennecy.*

On the other hand, the following contextual elements will most likely indicate a preference for a lexical reading of the verb *aller*:

A temporal quantifier expression (underlined), such as *tous les jours*, *chaque fois*, *souvent* etc., modifies the verb *aller* (it is possible that the quantified expression modify the infinitival complement, but the preference is nonetheless for modification to apply to the verb *aller*). This is particularly applicable when *aller* is conjugated in the *imparfait*.

(61) *Lucile **allait** arpenter l'avenue du bois tous les matins.*

(62) *Les gens plus scolarisés **allaient** souvent voir le député ou l'organisateur pour faire accélérer leur engagement.*

A locative prepositional phrase (underlined) modifies the verb *aller*.

(63) *Le mannequin se lève et **va** à la fenêtre regarder ce qui passe dans la rue.*

(64) *Le soir il **allait** à la bibliothèque travailler.*

The verb *aller* is employed in its pronominal use (*s'en aller*).

(65) *Il s'en **allait** chercher des insectes.*

1.1.8 Verbs of causation

Verbs such as *causer*, *engendrer*, *mener à*, *provoquer*, *entraîner*, etc indicate a causal relation, and thus a temporal ordering, between their arguments, which are typically events. These verbs are not events in themselves, but provide important information pertaining to the temporal ordering of their event arguments.

(66) *L'essor industriel a **provoqué** la naissance des musées d'arts décoratifs.*

(67) *La rotation de la fusée **engendre** le glissement de celle-ci sur le coussinet.*

```
L'<EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="NOUN">essor</EVENT>industriel  
a<EVENT eid="e2" eiid="ei2" class="CAUSE" pos="VERB" tense="PAST">provoqué</EVENT>  
la<EVENT eid="e3" eiid="ei3" class="OCCURRENCE" pos="NOUN">naissance</EVENT>  
des musées d'arts décoratifs.
```

Although the semantic arguments of these verbs are events, the syntactic argument positions may not be occupied by events. Some of these verbs, like *causer* and *provoquer* may have non-eventive subjects, for example :

(68) *Jean a causé un incendie dans la cuisine.*

(69) *Les fortes pluies ont provoqué une inondation.*

In such cases the causal relation is syntactically realized between an individual and an event, rather than between two events. As proposed in [8] an event instance (represented by *ei3* in the following example) is introduced to represent the underlying unspecified event in the causation relation. The class attributed to this event instance is *OCCURRENCE*, the default event class.

```
Jean a<EVENT eid="e1" eiid="ei1" class="CAUSE" pos="VERB" tense="PAST">causé</EVENT>  
un<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">incendie</EVENT>dans la cui-  
sine.  
<EVENT eid="e3" eiid="ei3" class="OCCURRENCE" tense="NONE" aspect="NONE"/>
```

1.1.9 Causative constructions

Constructions of the type NP + *faire* + infinitive + (NP), in which *faire* is used as a support verb introducing an infinitival complement, express a causal relation in which the subject of the matrix verb is the causer of the event expressed by the infinitive. The nested infinitive may appear without a subject. Semantically, these constructions denote two events - a causing event, realized by the verb *faire* and a resulting event realized by the infinitive. The verb *faire* leaves the actual semantics of the causal event underspecified. For example:

(70) *Jean fait pleurer Marie.*

Here it is not explicit how the event realized by the verb *pleurer* is brought about, merely that *Jean*, the agent of the event expressed by the verb *fait*, is the instigator. In cases where the infinitive appears without a subject, it denotes an event with an indeterminate agent.

(71) *Ce produit fait dormir.*

(72) *Jean fait relire son travail.*

When the subject of the verb *faire* and the infinitival complement are coreferential, the object of the infinitive is realized by a reflexive pronoun, which is placed before the main verb.

(73) *Jean s'est fait embaucher par Marie.*

Annotation of causative constructions of the type described above is to capture both the causative verb *faire* and its infinitival event complement. The verb *faire* in these constructions is to have the value *CAUSE* for its

class attribute. The infinitival event complement is to be classified according to its semantics and the ISO-TimeML classification for events. In the examples below the nested event instance is of class OCCURRENCE.

Jean fait pleurer Marie.

Jean <EVENT eid="e1" eiid="ei1" class="CAUSE" pos="VERB" tense="PRESENT">fait</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE">pleurer</EVENT>
Marie.

Jean fait bouillir de l'eau.

Jean <EVENT eid="e1" eiid="ei1" class="CAUSE" pos="VERB" tense="PRESENT">fait</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE">bouillir</EVENT>
de l'eau.

Jean s'est fait embaucher par Marie.

Jean s'est <EVENT eid="e1" eiid="ei1" class="CAUSE" pos="VERB" tense="PAST" vform="PASTPART">fait</EVENT>
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE">embaucher</EVENT>
par Marie.

1.1.10 Temporal discourse verbs

This section will deal with verbs which indicate a temporal ordering, such as *précéder*, *suivre*, *s'ensuivre*, *coïncider* etc. These verbs express a temporal relation between two events. They do not themselves denote events in the strict sense of the term, but require attention as any temporal modifiers or complements they may have, as well as the verbs' own tense, are likely to determine the temporal location of their event arguments. As stated in [2], these verbs lexicalize discourse relations akin to those realized by discourse connectives such as *ensuite*, *puis*, *avant*, *après* etc, which are annotated with the SIGNAL tag. Annotating these verbs with the SIGNAL tag is not feasible as this tag does not have the necessary attributes to capture the important tense, aspectual and mood information of verbs. The <EVENT> tag is therefore to be used in order to annotate these verbs. The class attribute of the <EVENT> tag is to have the value TEMPORAL.

Typically, the instances of temporal discourse verbs which are to be annotated are those which have events in argument positions. In the following examples, the temporal discourse verb is in bold face and its event arguments are underlined.

(74) *La salaison a **précédé** le séchage et le saurissage.*

(75) *En Angleterre, l'ouverture du British Museum **concide** avec la première publication de l'encyclopédie de Chambers.*

(76) *Il s'**ensuivrait** de coûteux transbordements.*

The corresponding annotation for the first example above is as follows:

La <EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="NOUN">salaison</EVENT>
a <EVENT eid="e2" eiid="ei2" class="TEMPORAL" tense="PAST">précédé</EVENT>
le <EVENT eid="e3" eiid="ei3" class="OCCURRENCE" pos="NOUN">séchage</EVENT>
et le <EVENT eid="e4" eiid="ei4" class="OCCURRENCE" pos="NOUN">saurissage</EVENT>.

1.1.11 Event containers

Event containers (after [9]) are predicative contexts which require the presence of an event in argument position. Verbs which fall into this category are *arriver*, *se passer*, *avoir lieu*, *survenir*, *se dérouler* and *se produire*, which take an event in subject position, *manquer* and *rater*, which take an event as direct object, and *assister à* and *être témoin de*, which take an event in oblique object position [4]. The arguments of these

verbs are typically events in (pro-)nominal form.

These verbs are not events in themselves, but rather predicate existential properties of events. They may also link their event arguments to linguistic markers of temporal (and spatial) localization, such as temporal adverbials.

(77) *De nombreuses manifestations ont eu lieu dans la journée de dimanche 21 avril.*

(78) *Le Président n'assistera pas à la cérémonie de commémoration demain matin.*

These verbs must be annotated with the <EVENT> tag in order to capture the important tense, aspectual, modality and polarity information they may contain. The `class` attribute for such verbs is to have the value `EVENTIVE`.

Le Président n'<EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="FUTURE" polarity="NEG">assistera</EVENT> pas
à la <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">cérémonie</EVENT>
de commémoration demain matin.

As a general rule, only instances of event containers which have an explicit nominal event argument are to be annotated as `EVENTIVE`. Uses of the same verbs without event nominal arguments will typically be attributed another class or will not be annotated. In the following examples, the verb in question may or may not be annotated with another event class. In example (79), the verb *produit* should be annotated with the class `OCCURRENCE` as its subject is a human entity as opposed to an event. The verb *arrivait* in (80) should be annotated with the class `I_ACTION`, as it describes an intensional action which has an event complement. In example (81) the verb *manqué* takes the class `STATE` to capture coherently the reading of the verb in this context.

(79) *Depuis ses débuts, le groupe s'est produit sur plus d'une centaine de scènes partout au Québec.*

(80) *Il n'arrivait pas à trouver une commune mesure.*

(81) *Les offensives ont manqué de réalisme ce qui fait que le match s'est terminé sur un score nul.*

Some event containers may appear in impersonal constructions, with the pronoun *il* as subject and an event nominal (82) or a complementizer phrase (headed by the preposition *de* or by the relative pronoun *que*) (83) and (84) in direct object position. In such cases, the event container and its <EVENT> argument are to be annotated. Care must be taken, however, in the annotation as some cases may, even in this configuration, be ambiguous (see example (85)).

(82) *En 1999 il est **arrivé** un événement où les camionneurs ont fait une grève qui a contrôlé tout l'accès à la région.*

En 1999 il est <EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="PAST">arrivé</EVENT>
un <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">événement</EVENT>
où les camionneurs ont fait une grève qui a contrôlé tout l'accès à la région.

(83) *Il leur **arrivait** de se baigner dans la mer.*

Il leur <EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="IMPERFECT">arrivait</EVENT>
de se <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE">baigner</EVENT>
dans la mer.

(84) *Il **advient** que l'analyse parapsychologique échoue.*

Il <EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="PRESENT">advient</EVENT>
que l'analyse <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" tense="PRESENT" mood="SUBJUNCTIVE">échoue</EVENT>.

In the following example, the verb *manqué*, which appears in an impersonal construction, has an event NP as direct object. The verb is, however, not an event container (at least pragmatically) in this context and its reading is the same as that in (81) above. The verb here indicates the lack or non-occurrence of an event, which is best captured with the class *STATE*. The verb *manqué* in this example must be marked up with the *<EVENT>* tag with this value for its *class* attribute.

(85) *Il a manqué une guerre pour que la terre soit détruite.*

Il a <EVENT eid="e1" eiid="ei1" class="STATE" pos="VERB" tense="PAST" vform="PASTPART">manqué</EVENT>
une <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">guerre</EVENT>
pour que la terre soit détruite.

Furthermore, when the context is even more reduced, it will be necessary to resort to broader contextual indicators in order to resolve ambiguities. The following example, which is similar to (85), but without the subordinate clause, is ambiguous due to the fact that the pronoun *il* may possibly be anaphoric.

(86) *Il a manqué une guerre.*

In the case the pronoun is indeed an anaphor, the verb *manqué* will have the semantics of an event container and will be marked up with the class *EVENTIVE*. If the verb turns out not to be anaphoric, the annotation of the verb *manqué* will be as in example (85) above. This highlights the importance of wider context in determining the class of certain event verbs. The decision in such a case may be fairly straightforward for a human annotator as the ambiguity may be merely virtual. This may make decision-making more problematic during an automatic annotation procedure and specific preprocessing, for example pronominal anaphora resolution, may be required.

1.1.12 Impersonal existential expressions

This section contains annotation guidelines for the impersonal existential expression *il y + avoir*. This construction is followed by an NP whose referent is introduced into the discourse (whence the term existential expression). The verb *avoir* (in bold in the following examples) in this construction may be conjugated in all tenses and its instances are to be annotated with the *<EVENT>* tag when its NP complement (underlined in the following examples) is headed by an event nominal.

(87) *Il y **aura** tous les ans un exercice public en présence du corps municipal.*

(88) *Il y avait la vente d'un vieil hôtel qu'ils se sont acharnés à disputer aux créanciers.*

(89) *Les dirigeants de la mission sont contents qu'il n'y ait pas **eu** le moindre conflit dans la zone est depuis quelques jours.*

Similarly to event containers, discussed in section 1.1.11, these constructions predicate the existence of an event represented by a nominal. The *class* attribute of the *<EVENT>* tag is to be attributed the value *EVENTIVE*. The following is the annotation for the sentence in (87).

Il y <EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="FUTURE">aura</EVENT>
tous les ans
un <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">exercice</EVENT>
public en présence du corps municipal.

Values for *polarity*, *modality* and *mood* attributes are derived as usual. The annotation for example (89) is as follows.

Les dirigeants de la mission sont contents qu'il n'y ait pas

<EVENT eid="e1" eiid="ei1" class="EVENTIVE" pos="VERB" tense="PAST" mood="SUBJUNCTIVE" vform="PASTPART" polarity="NEG">eu</EVENT>

le moindre <EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="NOUN">conflict</EVENT>
dans la zone depuis quelques jours.

1.1.13 Fixed verbal collocations

Fixed verbal collocations are expressions which consist of a support verb, such as *faire*, *donner*, *mettre*, *rendre* etc., combined with a noun, adjective or prepositional phrase to construct a complex form functionally equivalent to a verb. The combinations of verb + complement in question are typically co-occurring.

- (90) *Il doit être fait appel au peuple pour sanctionner le vote sur le jugement du roi.*
(91) *La petite troupe se mit en branle dans la campagne.*
(92) *Il fait lourd, une chaleur énervante et malsaine.*

In annotating fixed collocations of this type, it is the verbal head of the event-denoting expression which is to be annotated with the <EVENT> tag. For example,

La petite troupe se <EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="VERB" tense="PAST">mit</EVENT>
en branle dans la campagne.

In cases where the support verb's complement is an event nominal, the nominal in question is not to be annotated, as it is part of the fixed collocation, in which the support verb is the element to be annotated. For example,

Il doit être <EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="VERB" tense="PAST" modality="DEVOIR">fait
appel au peuple pour sanctionner le vote sur le jugement du roi.

1.1.14 Generic event sentences

This section gives guidelines for the annotation of sentences (or, more precisely, syntactic propositions) which consist of a generic event description⁴. Generic sentences express generalizations about objects or situations in the world. The *existence* of the properties they express is not temporally delimited. Generic event sentences express generalizations about things that occur in the world, without expressing the temporal bounds during which the event takes place or reoccurs. They may have a habitual interpretation, as in (93), where the (optional) presence of a temporal quantifier in the form of the adverb *souvent* exaggerates the habitual nature of the event. In (94), a sentential modifier in the form of the adverb *d'habitude*, expresses the fact that the event described by the main clause is a generality.

- (93) *Marie boit (souvent) de la bière.*
(94) *D'habitude, c'est la question qui précède la réponse.*

Other adverbials which have a similar effect and make for generic event sentences include *rarement*, *peu*, *parfois*, *couramment*, *en général*, *ordinairement*, etc.

Generic event sentences in French appear typically in the present tense and their main event verb is not modified by a precise temporal expression, such as *ce matin*, *le 4 février*, *jeudi*. One notices the difference between the first of the following sentences, which describes a generic event, and the following two, which describe punctual event instances. Example (95) contains a present tense main verb with no temporal modifiers. The sentence describes a general property of romanian students, holding over time. The main verb in example (96) contains a verb in the passé composé, which forces an instance reading on the event. Example (97), in which a temporal expression modifies the event verb, further specifies the temporal location of the event instance.

- (95) *Les étudiants roumains parlent français.*

⁴These notes draw on the page on genericness in the Sémanticopédie : <http://www.semantique-gdr.net/dico/index.php/Généricité>

- (96) *Les étudiants roumains ont parlé français.*
 (97) *Les étudiants roumains ont parlé français ce matin.*

Generic event sentences are not to be marked up as they do not have a specific temporal localization, but rather describe properties which hold throughout time. For the human annotator generic sentences are relatively easy to detect. A number of indicators, mentioned below, can be used in identifying such sentences, which should provide heuristics implementable in automated systems based on a reasonable syntactic and morphological analysis.

- A temporal adverb, such as *souvent*, *généralement*, *rarement* or *d'habitude* modifies the verb.
- The event verb is in the present tense.
- The main verb is not modified by an explicit temporal expression, such as *ce matin*, *dimanche 24 mars* or *dans une heure*, which would attribute a temporal localization to the event.
- The subject of the event verb is a definite NP (see section 1.2.1 for a discussion of generic noun phrases) or a proper noun.

1.2 Annotating Nouns

Nouns to be annotated are typically either nominalizations (e.g. deverbal or deadjectival nouns) or non-derived nouns which have an event interpretation (event-denoting nouns).

- (98) *Le congrès du Brésil exige le **rapatriement** des brésiliens vivant en Haïti.*
 (99) *Il est malheureux de constater un tel **cafouillage** sur un sujet aussi sensible.*
 (100) *Une faille dans le système de distribution d'énergie serait à l'origine de la **panne**.*
 (101) *Les juges chargés de l'**affaire** n'entendent pas faciliter la vie de l'accusé.*

These nouns are often polysemous and (in or out of context) may be ambiguous between two or more different type readings. For example, *présentation* may have an event interpretation (the act of presenting) as well as an objet reading (a file on a computer) (see [7] for an account). As mentioned in the core ISO-TimeML guidelines (see [5]), nominals which do not have an event reading in the text are not to be marked up.

There are also other situations in which event nominals must not be marked up, notably, when they exhibit a generic or kind reading, rather than an instance reading (see section 1.2.1). This may depend on the semantics and/or the argument structure of the predication in which the nominal appears, or the configuration of the NP, for example the absence of a determiner (see section 1.2.2).

As a general rule, the annotator should aim to mark up all event nominals which are able to be temporally located. An event nominal may be temporally located either with respect to the verbal predicate to which it is argument or with respect to a temporal expression which explicitly localizes the event in time (often associated with a `SIGNAL`). The following is the annotation for the event nominal in example (100).

Une faille dans le système de distribution d'énergie serait à l'origine de la <EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="NOUN">panne</EVENT>.

1.2.1 Generic event NPs

Generic NPs are those which refer to a kind of entity rather than a particular instance of that kind. Generic event NPs refer to a kind of event as opposed to any particular occurrence. The following examples illustrate generic event NPs (in bold):

- (102) ***La guerre** est un conflit armé, opposant au moins deux groupes sociaux organisés.*
 (103) ***Les séismes** sont un phénomène géologique qui de tout temps a terrorisé les populations qui vivent dans certaines zones du monde.*

- (104) ***La dépossession** est l'action qui consiste à priver quelqu'un d'un bien par un moyen coercitif.*

Nominal reference to a kind, in French, as in other romance languages, is made by use of a definite NP, as can be seen in the above examples. In these sentences, reference to the kind is imposed by the predicate, which does not allow for a specific (i.e. instance) reading of the subject NP. These types of sentences describe properties of a particular kind of event and are typical of definitions (e.g. from a dictionary or encyclopedia).

Generic event nominals, such as those in the above examples, are not to be annotated, as they do not denote instances which can be attributed a specific temporal localization. The properties attributed in such sentences are true of the generic NP irrespective of time.

Generic event NPs can also appear in argument position of verbal predicates describing a punctual event, provided the event has a particular significance for the kind in question. In the following examples the generic event NP is in bold face and the event predicate to which it is argument is underlined.

- (105) ***L'usage de la lingette** est apparu en France en 1994.*
(106) *Le gouvernement a interdit **le mariage par échange**.*
(107) *Universal Music veut tester **la vente de musique en ligne**.*

As in the previous examples, in these types of sentences, the generic nominal is not to be annotated. Again, it is not possible to attribute a particular temporal location to the generic nominal itself, although the verbal predicate to which it is complement may be temporally located.

It is important to note that the genericness of an event NP depends on its definiteness. In the case of an indefinite NP, the generic NP reading is no longer applicable (although see section 1.1.14 for details on generic sentences). In the following example, the indefinite NP refers to a particular event instance which is temporally located with respect to the main verbal predicate of which it is argument. The event nominal which heads this NP is to be annotated according to the standard guidelines for annotating event nominals (see sections 1.2 and 1.2.4). In the following example, the non generic event NP is in bold and the main verbal predicate is underlined.

- (108) *Le gouvernement a interdit **un mariage par échange**.*

Le gouvernement a interdit

un <EVENT eid="e1" eiid="e1" class="OCCURRENCE" pos="NOUN">mariage</EVENT>
par échange.

1.2.2 Bare nominals

In French, as in other Romance languages, bare nominals (nouns appearing without a determiner), typically represent a set of properties, a type [3]. Bare event nominals denote an event type rather than a particular event instance. This means that they do not have an explicit spatio-temporal localization and, as a general rule, are not to be annotated.

- (109) *Un des prisonniers de **guerre** a été libéré.*
(110) *Des centaines de personnes ont rendu **hommage** au poète.*
(111) *L'absence de preuve matérielle nous avertit en effet sans **hésitation** possible d'un "changement de temps".*

Bare event nominals appearing as nominal complement in a predicative PP in *de*, such as in (109), are not to be annotated. The nested event nominal does not refer to a particular event, but rather restricts the type of the subordinating nominal (*prisonniers* in this example).

Bare event nominals in fixed collocations, such as in example (110), are not to be annotated. They form part of a more or less fixed expression, along with a support verb, and are not to be annotated separately. See section 1.1.13 for details on annotation of fixed verbal collocations.

Bare nominals appearing as complement of the preposition *sans*, as in example (111), are not to be annotated either.

When an event nominal is introduced by a prepositional phrase which forms a fixed collocation, such as *en cours de réalisation*, the extent of the expression must be annotated. See section 1.1.6 for details.

There are certain contexts in which bare event nominals are to be annotated. In the following situations, the bare event nominal is to be marked up:

- if explicitly temporally anchored, by a temporal expression (SIGNAL or TIME3) (112)
- if appearing in argument position of a verb which subcategorizes an event argument, e.g. *avoir lieu, se passer, se produire, assister à* etc. (113)
- if introduced in argument position by a partitive *de* or *des* (114)

(112) *Deux sympathisants de l'opposition ont été tués lors d'**affrontements** avec des partisans du gouvernement.*

(113) *De violents **séismes** ont secoué l'Asie en 1997.*

(114) *Le monde a été témoin de **destructions** causées par le tsunami de 2004.*

For a more detailed description of contexts which impose an event reading on lexically ambiguous nominals, see section 1.2.4.

1.2.3 Negative polarity NPs

Event NPs with negative polarity determiners, such as *aucun(e), pas un(e) seul(e), même pas un(e), pas le/a moindre, etc.* are to be annotated with the <EVENT> tag. The polarity attribute of the tag must be given the appropriate value, NEG.

(115) *Aucune **arrestation** n'a eu lieu pendant la saisie vendredi.*

(116) *En trois quarts de siècle, pas la moindre **fuite** ne s'est produite.*

Aucune<EVENT eid="e1" eiid="ei1" class="OCCURRENCE" pos="NOUN" polarity="NEG">arrestation</EVENT>
n'a<EVENT eid="e2" eiid="ei2" class="EVENTIVE" pos="VERB" tense="PAST" polarity="NEG">eu</EVENT>
lieu pendant la saisie vendredi.

As is the case in the above two examples, the non-predicative adverb of negation *ne* precedes the verb of which the negative polarity NP is subject. As the semantic scope of the negation covers only the NP, and not the verb, the *polarity* attribute of the verb remains the default value POS.

1.2.4 Contextual indicators for event nominals

It is sometimes difficult to determine whether a lexically ambiguous nominal has an event interpretation or not. However, certain elements appearing in the context may give indications as to the appropriate reading. This section details some linguistic elements which may impose an event reading on ambiguous nominals.

As mentioned in section 1.1.11, event containers are verbs which take event nominals as arguments. A nominal in subject position of a verb such as *arriver, se passer, se produire* or *avoir lieu*, for example, is likely to be an event. The verbs *manquer, louper, rater* and *assister à, être témoin de* take events in direct object and oblique object positions respectively [4, 1]. Lexically ambiguous nominals (potentially having an event reading) in argument position of these verbs will have an event reading and must be annotated. The following examples illustrate two possible readings of such nominals, as object (a) and event (b). Event containers are underlined.

(117) a. *Les dignitaires ont eu droit à un somptueux repas de 18 services.*

- b. *Un repas provençal aura lieu ce week-end à la mairie de Grasse.*
- (118) a. ***La présentation** a été réalisée avec l'utilisation de la classe Beamer.*
- b. *Cécilia, malade, a manqué **la présentation** de son mari.*
- (119) a. *Les particuliers peuvent placer **une annonce** dans ce quotidien.*
- b. *De nombreux experts ont assisté à **l'annonce** officielle.*

In the absence of lexicalized markers allowing for disambiguation of a given nominal, the annotator may ask whether the nominal in this context could appear in argument position of one of these predicative contexts. The idea is that if the nominal in question designates something which is going to happen or come about, then it has an event interpretation in context.

Lexically ambiguous nominals which appear as complements of temporal prepositions, such as *avant*, *après*, *pendant*, *depuis*, *dès* and *lors de*, are also likely to have an event reading. Again, the following examples illustrate two different possible readings for each nominal, namely as object. The lexically ambiguous NPs are in bold and temporal prepositions are underlined.

- (120) a. ***Un tsunami** est créé lorsqu'une grande masse d'eau est déplacée.*
- b. *Lors du tsunami, l'évacuation a été une opération colossale.*
- (121) a. ***L'envoi** doit être placé sous double enveloppe.*
- b. *Le logiciel permet de redimensionner les photos avant **l'envoi**.*

The presence of an agentive complement (introduced by the preposition *par*) is another good indicator that a lexically ambiguous nominal has an event reading. The first example, repeated from above, exhibits an object reading. The second example, with an agentive complement (underlined) introduced by *par* exhibits an event reading. The patient is often also expressed at the same time and is introduced by the preposition *de*.

- (122) a. ***La présentation** a été réalisée avec l'utilisation de la classe Beamer.*
- b. *Cécilia, malade, a manqué **la présentation** du plan par son mari.*

The general schema for an event nominal with these two arguments realized is NP *de* NP *par* NP.

If no elements in the local context are available for disambiguation, it may be possible for the annotator to resolve ambiguities in nominals by referring to a wider context. For example, if the nominal in question is used elsewhere in the same text in a non-ambiguous context and is coreferent with the supposedly ambiguous instance, the local ambiguity may be resolved. However, if this is not the case and the ambiguity remains, the annotator may choose to annotate the nominal in order to capture a maximum of information.

1.3 Annotating Adjectives

Adjectives, which typically denote states, are to be marked up when they have a predicative function, appearing in a construction with a copula or state verb. For example,

- (123) *Les trois candidats étaient **favorables** à un durcissement des sanctions.*
- (124) *Le Président réélu semble **prêt** pour un nouveau mandat.*

Apart from modal adjectives (see section 1.1.2), modal adjectives are not to be annotated in impersonal constructions. The following examples illustrate cases in which adjectives must not be marked up.

- (125) *Il n'est donc pas surprenant que les deux anciens du Canadiens croient aux chances des Sénateurs.*
- (126) *Il est difficile de chiffrer la valeur de Souray étant donné qu'il peut être joueur autonome à compter du 1er juillet.*
- (127) *C'est indigne qu'il ait tenu de tels propos envers le Tricolore.*

In the annotation, the tense of the copula or state verb is to be stored in the `tense` attribute of the `<EVENT>` tag. Similarly, any aspectual, negative polarity or modality markers are to be captured in the `aspect`, `polarity` and `modality` attributes of this tag.

Le Président réélu ne semble pas

`<EVENT eid="e1" eiid="e11" class="STATE" pos="ADJECTIVE" tense="PRESENT" polarity="NEG">prêt</EVENT>`
pour un nouveau mandat.

Past participles which have a predicative adjectival function are also to be marked up with the `<EVENT>` tag.

(128) *Presque la moitié des vols internes d’Air France seront **annulés**.*

Presque la moitié des vols internes d’Air France seront

`<EVENT eid="e1" eiid="e11" class="STATE" pos="ADJECTIVE" vform="PASTPART" tense="FUTURE">annulés</EVENT>`
.

(129) *Leur position était **affaiblie** par le fait qu’ils avaient été associés.*

Leur position était

`<EVENT eid="e1" eiid="e11" class="STATE" pos="ADJECTIVE" vform="PASTPART" tense="IMPERFECT">a</EVENT>`
par le fait qu’ils avaient été associés.

Any adjective explicitly qualified by a temporal expression must also be marked up, regardless of its function. This is in accordance with the guidelines for annotating states in general. In the following example the adjective in question is in bold type, the temporal expression is underlined.

(130) *Le cadavre d’un homme **mort** depuis six mois a été retrouvé dans sa maison.*

Le cadavre d’un homme `<EVENT eid="e1" eiid="e11" class="STATE" pos="ADJECTIVE">mort</EVENT>`
depuis six mois a été retrouvé dans sa maison.

Adjectives with an attributive function (adjectives which are part of an NP) are **not** to be annotated, as they do not denote states which have explicitly defined temporal boundaries or localization.

(131) *La **grande** plateforme sera présentée dans le cadre des activités du congrès.*

1.4 Annotating Prepositional Phrases

Prepositional phrases which have a predicative adjectival function (e.g. if introduced as complement of a state verb such as *être*, *sembler* or *paraître*) are to be marked up with the `<EVENT>` tag. The tense of the state verb is captured in the `tense` attribute of the `<EVENT>` tag.

(132) *La relance de l’économie est **en panne** avec un chômage oscillant entre 25% et 50%.*

(133) *Les 29 personnes qui étaient **à bord** du navire ont survécu.*

La relance de l’économie est `<EVENT eid="e1" eiid="e11" class="STATE" pos="PREPOSITION" tense="PRESENT">en panne</EVENT>`
avec un chômage oscillant entre 25% et 50%.

As with adjectives, prepositional phrases with an attributive function, such as in *le moteur en panne*, are not to be annotated, unless explicitly qualified by a temporal expression, as in the following example.

(134) *Le président français Nicolas Sarkozy aura fort à faire pour relancer le processus européen **en panne** depuis 2 mois.*

Le président français aura fort à faire pour relancer le processus européen

<EVENT eid="e1" eiid="e11" class="STATE" pos="PREPOSITION">en panne</EVENT>

depuis 2 mois.

1.5 Attributes for EVENT

1.5.1 Attribute class

Required attribute, as detailed in [5, Annex A.2.1.3, clause B.].

NOTE The verbs provided as examples of each class may have multiple senses, some of which may not belong to that particular class.

REPORTING: *affirmer, annoncer, dire, expliquer, raconter*

- (135) a. *Le porte-parole a dit que la convention avait été approuvée.*
b. *L'actuel numéro deux mondial, a affirmé hier qu'il est très motivé.*

PERCEPTION: *apercevoir, voir, entendre, observer, sentir*

- (136) a. *Des personnes conduisant leur véhicule le soir certifient avoir **vu** des fantômes.*
b. *Il a **entendu** trois tirs, qui provenaient du garage.*

ASPECTUAL:

Initiation: *commencer, lancer, initier*
Reinitiation: *recommencer, reprendre, rentamer*
Termination: *arrêter, cesser, terminer, interrompre*
Culmination: *accomplir, finir, compléter*
Continuation: *continuer, poursuivre*

A few examples:

- (137) a. *L'avion a **commencé** à voler plus bas et il a percuté un palmier.*
b. *Le service a **poursuivi** la mise en place de mesures de sécurité.*
c. *L'Union européenne **relance** la procédure contre Boeing devant l'OMC.*
d. *Le fait que l'État n'**interrompt** pas ce projet est très positif.*

I_ACTION: In the following examples, the I_ACTION events are in bold face and their arguments are underlined.

a) **essayer, tenter, chercher à**

- (138) *Des companies comme Microsoft **essaient** de monopoliser l'accès à Internet.*

b) **examiner, enquêter**

- (139) *La FIA a chargé un avocat britannique d'**enquêter** sur le scandale sexuel touchant son président.*

c) **reporter, remettre, retarder, gêner, entraver**

- (140) *Cependant, le lancement au niveau national a été **reporté** au 10 décembre prochain.*

d) **éviter, empêcher, annuler**

- (141) *La candidate socialiste voulait ces derniers mois **empêcher** l'Iran d'accéder au nucléaire civil.*

e) **demander, ordonner, persuader, supplier, autoriser, inciter**

(142) *Au départ, l'agression contre le Liban avait **persuadé** la population israélienne de soutenir l'offensive.*

f) **promettre, proposer, assurer, décider**

(143) *Sarkozy aurait **promis** à Jacques Chirac de mettre en oeuvre une amnistie en faveur du chef de l'Etat s'il est élu.*

g) **jurer, certifier**

(144) *Il a juré de dire la vérité.*

h) **nommer, déclarer, désigner**

(145) *L'actuel directeur général sera **nommé** président-directeur général du groupe à compter du 30 juin prochain.*

i) **prétendre, alléguer, suggérer**

(146) *Une famille **prétend** avoir vu plusieurs apparitions et entendu d'étranges voix.*

I_STATE: As above, the I_STATE events are in bold face and their subordinated event arguments are underlined.

a) **savoir, coire, penser, imaginer, soupçonner, douter, être concevable, être certain**

(147) *Il n'est pas **concevable** que le législateur ait oublié cette situation bien réelle.*

b) vouloir, désirer, avoir envie, aimer, adorer

NOTE These verbs are only considered I_STATES when they introduce a subordinated event argument. For example, the verb *aime* in the sentence *Jean aime Marie* is not an I_STATE.

(148) *Et les intellectuels, comme les autres, n'ont **voulu** que s'en mettre plein les poches.*

c) espérer, s'attendre à, aspirer, planifier, viser

(149) *Nous **visons** à collaborer étroitement avec les organismes représentant d'autres domaines de l'industrie.*

d) craindre, avoir peur, détester, s'inquiéter

(150) *Les agences **craignent** que les vendeurs n'anticipent trop la hausse des prix.*

e) nécessiter, avoir besoin, requérir

(151) *Cette procédure ne **necessite** que l'estimation de regressions.*

f) être prêt, être préparé, avoir hâte, être pressé

(152) *La rapide croissance de cette jeune industrie attire des régulateurs **pressés** de la contrôler.*

g) pouvoir, être capable/incapable

(153) *Le BST dit être **incapable** d'expliquer pourquoi les membres d'équipage n'ont pas corrigé la course du traversier.*

STATE: Several kinds of states are to be marked up. In the following examples, the states to be annotated are in bold type.

a) States that are identifiably changed over the course of the document being marked up.

- (154) a. *Tous les 75 passagers à **bord** l'avion sont morts.*
 b. *Le nombre de **blessés** n'a pas été précisé.*
 c. *Pour la première fois, une **pénurie** de cocane a été observée dans 38 villes.*

b) States that are directly related to a temporal expression.

This criterion includes all states that are linked to a TIMEX3 markable by means of a TLINK (see [5, A.2.2, A.3.1]). Two examples are given here, where the state is in bold face and the temporal expression associated with it is underlined.

- (155) a. *Chirac fut **Président** pendant 12 ans.*
 b. *Ils ont **habité** dans des camps de réfugiés pendant 2 ans et demi.*

c) States that are introduced by an I_ACTION, an I_STATE, or a REPORTING event. The event introducing the state is underlined.

- (156) a. *Le pays a réussi à éviter une **situation** de crise.*
 b. *Saddam Hussein cherchait la **paix** sur d'autres fronts.*
 c. *Har-Shefi a dit à la police que Rabin était un **traître**.*

d) Predicative states the validity of which is dependent on the document creation time.

- (157) a. *Le sénateur congolais Alphonse Gondzia est actuellement **en visite** en Chine.*
 b. *Les actions ont augmenté de **3,6 milliards** de dollars en août à **3,7** en septembre.*

CAUSE: Verbs of causation fall into this class. This includes all verbs which indicate a causal relation between two events. Cases in which the agent of the verb of causation is an individual are also to be annotated. In the following examples the causative verb is in bold type and its event argument(s) are underlined.

- (158) a. *Cet acte a **causé** un remaniement des formules juridiques d'authentification.*
 b. *L'essor industriel a **provoqué** la naissance des musées d'arts décoratifs.*
 c. *Les fortes pluies ont **provoqué** une inondation.*

MODAL: This class contains the modal verbs *devoir* and *falloir*, which are to be marked up when they introduce an event complement.

- (159) a. *Les résultats **devraient** paraître dans les jours qui viennent.*
 b. *Il a **fallu** mettre l'armée en état d'alerte et mobiliser les unités de police.*

OCCURRENCE: This class includes all the many other kinds of events describing situations that happen or occur in the world.

- (160) a. *Le système bancaire a **souffert** des **pertes** graves des prêts **employés** pour **acheter** la propriété.*
 b. *Les All Blacks ont **remporté** le **match** contre les Springboks 31 à 27.*
 c. *Il a **exprimé** son admiration pour les grands **exploits réalisés** par ce pays dans son **édification** économique et son **progrès** social.*
 d. *Les organisateurs ont **compté** plus de 60 000 manifestants **sortis** contre la **réforme** portuaire.*

1.5.2 Attribute `tense`

The following table outlines the correspondence between the classical grammatical tense classification for French and the ISO-TimeML values for the `tense` attribute.

| Grammatical tense classification | ISO-TimeML tense value |
|----------------------------------|------------------------|
| plus-que-parfait | PAST |
| passé antérieur | PAST |
| passé simple | PAST |
| passé composé | PAST |
| imparfait | IMPERFECT |
| présent | PRESENT |
| futur simple | FUTURE |
| futur antérieur | FUTURE |

1.5.3 Attribute *aspect*

Required. Similar to tense, it captures standard distinctions in the grammatical category of semantic aspect. It can have values PROGRESSIVE, PERFECTIVE, IMPERFECTIVE, or NONE.

1.5.4 Attribute *mood*

Required. Captures the mood of the event. It can have the following values:

CONDITIONAL: signals the conditional mood, which is realized in French by morphological verb inflection. This mood is used when describing an event the realization of which is subject to some precondition, in particular, but not exclusively, in conditional clauses.

(161) *Il a promis qu'il **mettrait** en place le programme du Revenu de solidarité active (RSA)*

The conditional is also used to express a modality of uncertainty, especially in journalistic texts. See section 1.5.6 on modality for details on annotating the journalistic conditional.

SUBJUNCTIVE: in French the subjunctive is used to talk about hypothetical, uncertain or envisaged events, or opinions and desires, as opposed to the indicative, which denotes certainty.

- (162) a. *Il est possible que les augmentations des taux d'intérêt n'**empêchent** la reprise économique.*
b. *Il voulait que tout mérite s'**effaçât**.*
c. *Nasrallah avait regretté que son organisation **ait mené** une attaque.*

NONE: if no inflectional morphology is present to indicate mood then the value is NONE.

1.5.5 Attribute *vform*

Required. Encodes information pertaining to verb forms. Its possible values are INFINITIVE, PASTPART, PRESPART, GERUNDIVE and NONE.

1.5.6 Attribute *modality*

This attribute is used to capture the different degrees of modality, mainly epistemic or deontic, governing an event. This attribute is to be given a value in the presence of modal verbs such as *devoir*, *pouvoir* and *falloir* and their paraphrases. It is also to be used in the presence of complex modal expressions (see section 1.1.2).

(163) *Les réfugiés **devront** abandonner leurs maisons.*

Les réfugiés

```
<EVENT eid="e1" eiid="ei1" class="MODAL" pos="VERB" tense="FUTURE">devront</EVENT>
```

```
<EVENT eid="e2" eiid="ei2" class="OCCURRENCE" pos="VERB" vform="INFINITIVE" modality="DEVOIR">
leurs maisons.
```

Journalistic conditional: in French, the conditional is often used, without specifying a precondition, to relate uncertain information. This is especially common in journalistic texts when the veracity of an assertion is not guaranteed. It is used in written and spoken press to disown responsibility for reported events. This use of the conditional expresses a modality of uncertainty, rather than being simply a verbal mood and is to be marked up using the `modality` attribute with the value `UNCERTAINTY`.

- (164) a. *Le porte-parole de la LCR **aurait** été espionné par une officine privée de renseignement durant plusieurs mois.*
 b. *Selon nos informations, Airbus **serait** en mesure de battre son rival américain.*

Le porte-parole de la LCR aurait été

```
<EVENT eid="e1" eiid="eil" class="OCCURRENCE" pos="VERB" tense="PAST" vform="PASTPART"
mood="CONDITIONAL" modality="UNCERTAINTY">espionné</EVENT>
par une officine privée de renseignement durant plusieurs mois.
```

1.5.7 Attribute `mod`

We propose an attribute for the `<EVENT>` tag to capture the semantic contribution of aspectual modifiers which may be used with event nominals. This is akin to the attribute of the same name used for `<TIMEX3>`. Aspectual modifiers such as *au début de*, *au commencement de* and *à la fin de* represent different stages (respectively the beginning and the end) in an event's history. The `mod` attribute may take the values `START` and `END` accordingly.

- (165) *Au début de la guerre, les généraux opposés s'attendaient à des victoires rapides.*

Au début de la `<EVENT eid="e1" eiid="eil" class="OCCURRENCE" pos="NOUN" mod="START">guerre</EVENT>`, les généraux opposés s'attendaient à des victoires rapides.

2 The `TIMEX3` tag

The `<TIMEX3>` tag is used to annotate temporal expressions of several types.

Dates:

- numeric dates - *10.11.07, 2002.07.03, 19/11/1929*
- days - *lundi 15 janvier 1979, le 8 avril 1979, vendredi dernier, samedi, le jour de l'an*
- weeks - *la semaine prochaine, la dernière semaine d'août*
- months - *novembre 2009, le mois prochain, septembre*
- years - *2002, l'année dernière, l'an 2000*
- seasons - *l'été, cet hiver, l'automne prochain*
- decades, centuries, millenia - *les années 80, le 20ème siècle, le 2ème millénaire*

Times:

- numeric times - *10:30.32, 13h42*
- literal times - *midi, deux heures moins dix, l'après-midi, le soir, ce matin*

Durations: *deux ans, trois heures, quelques millisecondes, ces derniers jours*

Sets: *tous les jours, chaque mois, certains mardi*

The <TIMEX3> tag used for annotation of temporal expressions in French is as described in [5, A.2.2.2] and [5, A.2.2.3].

2.1 Annotation Criteria

The full extent of the annotation of a temporal expression must correspond to one of the following syntactic categories:

- Noun phrase - *lundi, le 2 février, cette période, la veille*
- Adjective phrase - *journalier, hebdomadaire, mensuelle, estival*
- Adverbial phrase - *hier, désormais, hebdomadairement*

Prepositions preceding a temporal expression are to be excluded from annotation (see section 3 for details on annotation of these makers).

(166) *pendant la journée*

pendant <TIMEX3 tid="t1" type="TIME" value="TDT">la journée</TIMEX3>

(167) *avant lundi*

avant <TIMEX3 tid="t1" type="DATE" value="XXXX-WXX-1">lundi</TIMEX3>

All pre- and post-modifiers of temporal expressions must be included in the scope of the tag, with the exception of those describing an event, as in (170). Modifiers which have values corresponding to the possible mod attribute values (see [5, 7.2.2] for the BNF and possible values) are to be included within the tag's scope, for example (171) and (172).

(168) *il y a deux ans*

<TIMEX3 tid="t1" type="DATE" temporalFunction="TRUE" valueFromFunction="2006">il y a deux ans</TIMEX3>

(169) *pas moins d'une heure*

<TIMEX3 tid="t1" type="DURATION" value="P1H">pas moins d'une heure</TIMEX3>

(170) *3 heures de vol*

<TIMEX3 tid="t1" type="DURATION" value="P3H">3 heures</TIMEX3> de <EVENT>vol</EVENT>

(171) *plus de trois ans*

<TIMEX3 tid="t1" type="DURATION" value="P3Y" mod="MORE_THAN">plus de trois ans</TIMEX3>

(172) *environ 10 secondes*

<TIMEX3 tid="t1" type="DURATION" value="P10S" mod="APPROX">environ 10 secondes</TIMEX3>

When two temporal expressions are in a specification relation (as described in [5, A.2.2.1]), they are to be marked up with a single <TIME3> tag if:

- the two expressions belong to the same class (specified in Table 6 of [5, A.2.2.1.B]). For example, *vendredi 11 juillet 2008, 11h du matin*
- the two expressions are part of the same syntactic constituent. In the following examples, single constituents are underlined. In (173), the 2 temporal expressions are part of the same constituent, whereas in (174) they are not (see [5, A.2.2.1.B] for further details).

(173) *Les deux équipes s'affronteront à 11h, le 3 janvier 2005*

(174) *Les deux équipes s'affronteront le 3 janvier 2005 à 11h*

- the second expression is introduced by the preposition *de* and represents a definite temporal specification:

(175) *le matin du 20 juin, le mois d'octobre de 1969, janvier de cette année*

Similarly to Italian, in French it is important to distinguish temporal expressions of the form NP + PP, where the PP is headed by *de* from cases where the preposition is *à*. In the former case, the expressions are viewed as being part of the same constituent, while in the latter the temporal expression expressed by the PP may be attached to the preceding NP or another higher-level syntactic constituent, such as the VP. For example, in the sentence *il est venu à la soirée de mardi à 11h*, the PP containing the expression *11h* is attached to the VP headed by the verb *venu*.

Two temporal expressions in an anchoring (176) or conjunction (177) relation are to be marked up using two separate <TIME3> tags.

(176) *deux semaines à partir de demain*

(177) *six mois ou un an*

3 The SIGNAL tag

The general definition and annotation instructions for this tag are in [5, A.2.3.2]. In French prepositional compounds exist in which a preposition, *de* or *à*, is combined with the masculine definite article *le* to form *au*, *aux*, *du* or *des*. The SIGNAL tag is to be used as follows to annotate these compounds:

<SIGNAL sid="s1">du</SIGNAL> 1er janvier <SIGNAL sid="s2">au</SIGNAL> 27 septembre

<SIGNAL sid="s1">jusqu'au</SIGNAL> 23 août

In the case where automated preprocessing of the text separates the constituents of these compounds, the general guidelines are to be followed. That is, only the preposition is to be annotated, omitting the article, as follows:

<SIGNAL sid="s1">de</SIGNAL> le 1er janvier <SIGNAL sid="s2">à</SIGNAL> le 27 septembre

3.1 Underspecified Temporal Expressions

Certain temporal expressions are not able to be attributed a specific normalized value. Vague expressions such as *plus tôt*, *plus tard* and *en même temps (que)* are temporal functions which cannot be attributed a

specific value. They do, nonetheless, provide useful information regarding the temporal location of events, namely whether an event occurs respectively before, after or simultaneous to the temporal focus. They are therefore to be annotated with the <SIGNAL> tag.

(178) *Un peu **plus tard** d'autres services furent créés par Hachette.*

Un peu <SIGNAL sid="s1">plus tard</SIGNAL> d'autres services furent créés par Hachette.

(179) *Il partirait beaucoup **plus tôt** qu'il ne pensait.*

Il partirait beaucoup <SIGNAL sid="s1">plus tôt</SIGNAL> qu'il ne pensait.

(180) *Une soutenance de thèse marque l'achèvement d'une formation professionnelle **en même temps que** le couronnement des études.*

Une soutenance de thèse marque l'achèvement d'une formation professionnelle <SIGNAL sid="s1">en même temps que</SIGNAL> le couronnement des études.

4 The LINK tags

4.1 The <ALINK> tag

4.2 The <SLINK> tag

4.3 The <TLINK> tag

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