

The Event Ontology

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Introduction

This document describes the Event ontology developed in the [Centre for Digital Music](#) in [Queen Mary, University of London](#). The first draft of the ontology was written in October, 2004. Further details about the Event ontology, related ontologies, and the technologies on which this ontology is founded, please see the [reference section](#).

This ontology is centered around the notion of *event*, seen here as the way by which cognitive agents classify arbitrary time/space regions, which is essentially the view expressed by [Allen and Fergusson](#):

[..] events are primarily linguistic or cognitive in nature. That is, the world does not really contain events. Rather, events are the way by which agents classify certain useful and relevant patterns of change.

This ontology has already been proven useful in a wide range of context, due to its simplicity and usability: from

talks in a conference, to description of a concert, or [chords](#) being played in a Jazz piece (when used with the [Timeline ontology](#)), [festivals](#), etc. Relevant references are given in the [reference section](#). Some tools to manipulate data from this ontology can be found in the [motools project on Sourceforge](#).

This documentation page is a first draft. All feedback on either the ontology or this page is welcomed! The best place to do so is the [Event ontology mailing list](#). Or feel free to email the authors mentioned aboved.

The design and layout of this ontology document is based on the [Music Ontology](#) and [FOAF Vocabulary](#) specification documents.

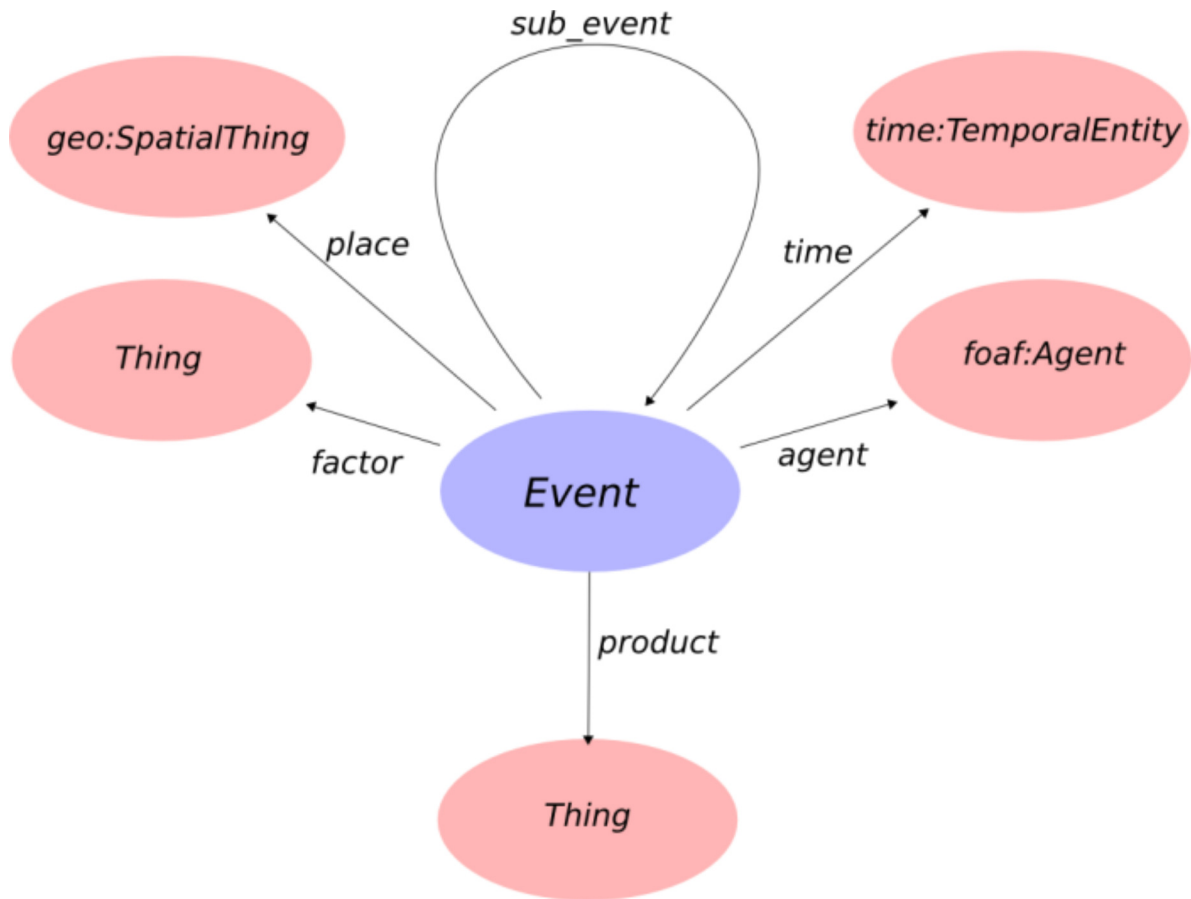
Namespaces

Several namespaces will be assumed to have been defined for the remainder of this document. These are as follows :

Prefix	XML Namespace	Description
event	http://purl.org/NET/c4dm/event.owl#	The Event Ontology
time	http://www.w3.org/2006/time#	OWL-Time
geo	http://www.w3.org/2003/01/geo/wgs84_pos#	The WGS84 Geo Positioning Ontology

The Event Model

This ontology deals with the notion of reified events. It defines one main **Event** concept. An event may have a location, a time, active agents, factors and products, as depicted below.



For example, the following RDF/N3 code deals with an performance event, involving one performer and an instrument (the Santur) in London, the 15th of October 2007 at noon, and lasting an hour.

```

@prefix event: <http://purl.org/NET/c4dm/event.owl#>.
@prefix mit: <http://purl.org/ontology/mo/mit#>.
@prefix foaf: <http://xmlns.com/foaf/0.1/>.
@prefix tl: <http://purl.org/NET/c4dm/timeline.owl#>.
@prefix xsd: <http://www.w3.org/2001/XMLSchema#>.

:performance
  a event:Event;
  event:factor mit:Santur;
  event:agent [
    a foaf:Person;
    foaf:name "P. H.";
  ];
  event:place <http://sws.geonames.org/2643744/>;
  event:time [
    a tl:Interval;
    tl:at "2007-10-15T12:00:00"^^xsd:dateTime;
    tl:duration "PT1H"^^xsd:duration;
  ];
.

```

This ontology defines two further concepts: **Product**, **Factor** and **Agent**. However, they are not covered in this documentation: they are not supposed to be used directly. They are *defined classes*: using this ontology, one can infer that ever person involved in an event is an **Agent**.

Overview of Terms

An alphabetical index of the ontology terms, divided into classes, properties and individuals. All the terms are hyperlinked to their detailed description for quick reference.

Classes: | [Event](#) | [Factor](#) | [Product](#) |

Properties: | [agent](#) | [agent_in](#) | [factor](#) | [factor_of](#) | [hasAgent](#) | [hasFactor](#) | [hasLiteralFactor](#) | [hasProduct](#) | [hasSubEvent](#) | [isAgentIn](#) | [isFactorOf](#) | [literal_factor](#) | [place](#) | [producedIn](#) | [produced_in](#) | [product](#) | [sub_event](#) | [time](#) |

Individuals: |

Ontology Terms

Classes

Class: event:Event - stable -

Event - An arbitrary classification of a space/time region, by a cognitive agent. An event may have actively participating agents, passive factors, products, and a location in space/time.

in-range-of: [sub_event](#)

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in-domain-of: [place](#) [time](#) [sub_event](#) [product](#) [literal_factor](#) [factor](#) [agent](#)

Class: event:Factor - stable -

Factor - Everything used as a factor in an event

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Class: event:Product - stable -

Product - Everything produced by an event

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Properties

Property: event:agent - stable -

agent - Relates an event to an active agent (a person, a computer, ... :-))

Domain: [Event](#) [Event](#)

Range: [foaf:Agent](#)

Inverse-of: [event:isAgentIn](#)

Property: event:factor - stable -

factor - Relates an event to a passive factor (a tool, an instrument, an abstract cause...)

Domain: [Event](#) [Event](#)

Range:

Inverse-of: [event:isFactorOf](#)

Property: event:literal_factor - stable -

literal_factor - Relates an event to a factor which can be described as a literal. This property should not be used as-is, but should be subsumed by other, more specific, properties (like an hypothetic :weatherCelsius, linking an event to a temperature).

Domain: [Event](#) [Event](#)

Range:

Property: event:place - stable -

place - Relates an event to a spatial object.

Domain: [Event](#) [Event](#)

Range: [geo:SpatialThing](#)

Property: event:product - stable -

product - Relates an event to something produced during the event---a sound, a pie, whatever...

Domain: [Event](#) [Event](#)

Range:

Inverse-of: [event:producedIn](#)

Property: event:sub_event - stable -

sub_event - This property provides a way to split a complex event (for example, a performance involving several musicians) into simpler ones (one event per musician).

Domain: [Event](#) [Event](#)

Range: [Event](#) [Event](#)

Property: event:time - stable -

time - Relates an event to a time object, classifying a time region (either instantaneous or having an extent). By using the Timeline ontology here, you can define event happening on a recorded track or on any media with a temporal extent.

Domain: [Event](#) [Event](#)

Range: [time:TemporalEntity](#)

References

1. Semantic Web Information
 1. [W3C Semantic Web Activity](#)
 2. [Primer: Getting into RDF & Semantic Web using N3](#)
2. Related projects
 1. [Music Ontology](#)
 2. [Chord Ontology](#)
 3. [Timeline Ontology](#)
 4. [Bibliographic Ontology](#)
 5. [Friend of a Friend](#)
3. (Somehow) related publications
 1. [The Music Ontology, ISMIR2007](#)
 2. [An ontology-based approach to information management for music analysis systems](#)