The Audio Effect Ontology

IRI:
> https://w3id.org/aufx/ontology/1.0#

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Other visualisation:
> Ontology source

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Introduction

The Audio Effect Ontology (AUFX-O) provides concepts and properties for describing audio effects in the context of music production in a studio environment. It provides means for describing effect implementations and their application within a music production project.

Classes

AAX   Audio Unit   Device   DSSI   Effect   Implementation   Index Parameter   LADSPA   LV2   Model   Numeric Parameter   Operating System   Parameter   Parameter Setting   PlugIn   PlugIn API   Preset   Preset Bank   Product   Product Family   Software Implementation   Transform   VST

AAX^c   back to ToC or Class ToC

IRI: https://w3id.org/aufx/ontology/1.0#AAX

AAX Plugin API.

- -

has super-classes
> PlugIn API^c

Audio Unit^c   back to ToC or Class ToC

IRI: https://w3id.org/aufx/ontology/1.0#AudioUnit

A concept for an audio effect implemented as an Audio Unit plugin.

- -

has super-classes
> PlugIn API^c

- -

Device^c   back to ToC or Class ToC

IRI: https://w3id.org/aufx/ontology/1.0#Device

An instance of an implementation.

has super-classes
    device^c
    agent^c
is in range of
    device^{op}, device^{op}
is disjoint with
    Effect^c, Implementation^c, Model^c

DSSI^c

IRI: https://w3id.org/aufx/ontology/1.0#DSSI

DSSI Plugin API.

has super-classes
    PlugIn API^c

Effect^c

IRI: https://w3id.org/aufx/ontology/1.0#Effect

An audio effect conceptualised as an abstract physical phenomenon.

has super-classes
    phenomenon^c
is in domain of
    implementation^{op}, model^{op}
is disjoint with
    Device^c, Implementation^c, Model^c

Implementation^c

IRI: https://w3id.org/aufx/ontology/1.0#Implementation

Current version:
    testing

An implementation of an effect model.

has super-classes
    implementation^c
has sub-classes
    Software Implementation^c
is in domain of
    developer^{op}, device^{op}, has parameter^{op}, has preset^{op}, implements model^{op}, operating system^{op}, plugin api^{op}, preset bank^{op}, product^{op}, version^{dp}
is in range of
    implementation^{op}
is disjoint with
    Device^c, Effect^c, Model^c

Index Parameter^c

IRI: https://w3id.org/aufx/ontology/1.0#IndexParameter

An effect parameter set with values from an indexed list .

has super-classes
    Parameter^c

LADSPA^c

IRI: https://w3id.org/aufx/ontology/1.0#LADSPA

LADSPA plugin API.

has super-classes
> PlugIn API^C

LV2^C

IRI: https://w3id.org/aufx/ontology/1.0#LV2

LV2 plugin API.

---

has super-classes
> PlugIn API^C

Model^C

IRI: https://w3id.org/aufx/ontology/1.0#Model

An algorithm or mechanism that reproduces an effect can be described as a model that approximates the perceived effect.

---

has super-classes
> model^C

is in range of
> implements model^{op}, model^{op}

is disjoint with
> Device^C, Effect^C, Implementation^C

Numeric Parameter^C

IRI: https://w3id.org/aufx/ontology/1.0#NumericParameter

An effect parameter set with numeric values.

---

has super-classes
> Parameter^C

is in domain of
> unit^{op}

Operating System^C

IRI: https://w3id.org/aufx/ontology/1.0#OperatingSystem

Current version:
> testing

The operating system for a software implementation.

---

is in domain of
> version^{dp}

is in range of
> operating system^{op}

Parameter^C

IRI: https://w3id.org/aufx/ontology/1.0#Parameter

A variable parameter to control the effect.

---

has sub-classes
> Index Parameter^C, Numeric Parameter^C

is in domain of
> default value^{op}, maximum value^{op}, minimum value^{op}

is in range of
> has parameter^{op}, parameter^{op}

Parameter Setting^C

IRI: https://w3id.org/aufx/ontology/1.0#ParameterSetting

An effect parameter setting.

is in domain of
  parameter^{op}
is in range of
  parameter setting^{op}

PlugIn^C

IRI: https://w3id.org/aufx/ontology/1.0#PlugIn

Current version:
  testing

A software plugin implementation of an effect model.

has super-classes
  Software Implementation^C

PlugIn API^C

IRI: https://w3id.org/aufx/ontology/1.0#PlugInAPI

the plugin API of a software plugin implementation .

has sub-classes
  AAX^C, Audio Unit^C, DSSI^C, LADSPA^C, LV2^C, VST^C
is in domain of
  version^{dp}
is in range of
  plugin api^{op}

Preset^C

IRI: https://w3id.org/aufx/ontology/1.0#Preset

A parameter settings preset.

is in domain of
  name^{dp}, parameter setting^{op}
is in range of
  bank preset^{op}, has preset^{op}, preset^{op}

Preset Bank^C

IRI: https://w3id.org/aufx/ontology/1.0#PresetBank

Parameter settings presets may be bundled in a preset bank.

is in domain of
  bank preset^{op}, name^{dp}
is in range of
  preset bank^{op}

Product^C

IRI: https://w3id.org/aufx/ontology/1.0#Product

A Product for the distribution of audio effect devices.

is in domain of
  name^{dp}, product family^{op}, publisher^{op}, version^{dp}
is in range of
  product^{op}

Product Family^C

IRI: https://w3id.org/aufx/ontology/1.0#ProductFamily

A unified family of products.

---

is in domain of
    name^{dp}, publisher^{op}, version^{dp}
is in range of
    product family^{op}

Software Implementation^C

IRI: https://w3id.org/aufx/ontology/1.0#SoftwareImplementation

Current version:
    testing

A software implementation of an effect model.

---

has super-classes
    Implementation^C
has sub-classes
    PlugIn^C

Transform^C

IRI: https://w3id.org/aufx/ontology/1.0#Transform

An audio transformation applied to a signal by an audio effect.

---

has super-classes
    transform^C
    activity^C
is in domain of
    device^{op}, input signal^{op}, output signal^{op}

VST^C

IRI: https://w3id.org/aufx/ontology/1.0#VST

VST PlugIn API.

---

has super-classes
    PlugIn API^C

Object Properties

bank preset   default value   developer   device   device   device of   has parameter   has preset   implementation   implementation of   implements model   input signal   maximum value   minimum value   model   operating system   output signal   parameter   parameter setting   plugin api   preset   preset bank   product   product family   publisher   unit

bank preset^{op}

IRI: https://w3id.org/aufx/ontology/1.0#bank_preset

Associates a preset bank with a containing preset.

---

has domain
    Preset Bank^C
has range
    Preset^C

---

default value^{op}

IRI: https://w3id.org/aufx/ontology/1.0#default_value

Specifies the default value of an effect parameter.

---

has characteristics: functional

has super-properties
    value^{op}
has domain
    [Parameter](#)^c
has range
    quantity value^c

---

developer^{op}

IRI: https://w3id.org/aufx/ontology/1.0#developer

Associates an implementation with a developer

---

has domain
    [Implementation](#)^c
has range
    agent^c

---

device^{op}

IRI: https://w3id.org/aufx/ontology/1.0#device

Associates an Implementation with a Device.

---

has super-properties
    exemplar^{op}
has domain
    [Implementation](#)^c
has range
    [Device](#)^c
is inverse of
    [device of](#)^{op}, [implementation of](#)^{op}

---

device^{op}

IRI: https://w3id.org/aufx/ontology/1.0#effect

Associates an Implementation with a Device.

---

has super-properties
    effect^{op}
    was associated with^{op}
has domain
    [Transform](#)^c
has range
    [Device](#)^c

---

device of^{op}

IRI: https://w3id.org/aufx/ontology/1.0#device_of

Associates an Implementation with a Device.

---

is inverse of
    [device](#)^{op}

---

has parameter^{op}

IRI: https://w3id.org/aufx/ontology/1.0#has_parameter

Associates an Implementation with a Parameter.

has domain
 Implementation^c
has range
 Parameter^c

---

has preset^{op}

IRI: https://w3id.org/aufx/ontology/1.0#has_preset

Current version:
 testing

Associates an audio effect implementation with a preset.

---

has domain
 Implementation^c
has range
 Preset^c
has sub-property chains
 preset bank^{op} o bank preset^{op}

---

implementation^{op}

IRI: https://w3id.org/aufx/ontology/1.0#implementation

Associates an Effect with an Implementation.

---

has domain
 Effect^c
has range
 Implementation^c

---

implementation of^{op}

IRI: https://w3id.org/aufx/ontology/1.0#implementation_of

Associates an Implementation with an Effect.

---

is inverse of
 device^{op}

---

implements model^{op}

IRI: https://w3id.org/aufx/ontology/1.0#implements_model

Associates an Implementation with a Model.

---

has domain
 Implementation^c
has range
 Model^c

---

input signal^{op}

IRI: https://w3id.org/aufx/ontology/1.0#input_signal

Associates an Transform with the input signal.

---

has super-properties
 consumed signal^{op}
 used^{op}
has domain
 Transform^c
has range
 signal^c

maximum value^{op}

IRI: https://w3id.org/aufx/ontology/1.0#maximum_value

Specifies the maximum value of an effect parameter.

---

has characteristics: functional

has super-properties
>   value^{op}

has domain
>   Parameter^c

has range
>   quantity value^c

---

minimum value^{op}

IRI: https://w3id.org/aufx/ontology/1.0#minimum_value

Specifies the minimum value of an effect parameter.

---

has characteristics: functional

has super-properties
>   value^{op}

has domain
>   Parameter^c

has range
>   quantity value^c

---

model^{op}

IRI: https://w3id.org/aufx/ontology/1.0#model

Associates an Effect with a Model.

---

has super-properties
>   representation^{op}

has domain
>   Effect^c

has range
>   Model^c

---

operating system^{op}

IRI: https://w3id.org/aufx/ontology/1.0#operating_system

Associates an implementation to an operating system.

---

has characteristics: functional

has domain
>   Implementation^c

has range
>   Operating System^c

---

output signal^{op}

IRI: https://w3id.org/aufx/ontology/1.0#output_signal

Associates an Transform with the output signal.

---

has super-properties
>   generated signal^{op}
>   generated^{op}

has domain

Transform[c]

has range
signal[c]

---

parameter[op]

IRI: https://w3id.org/aufx/ontology/1.0#parameter

Associates an Transform with the output signal.

---

has domain
Parameter Setting[c]

has range
Parameter[c]

---

parameter setting[op]

IRI: https://w3id.org/aufx/ontology/1.0#parameter_setting

Current version:
testing

Associates a device state or implementation preset to a parameter setting.

---

has domain
Preset[c]

has range
Parameter Setting[c]

is also defined as
annotation property

---

plugin api[op]

IRI: https://w3id.org/aufx/ontology/1.0#plugin_api

Associates a software plugin implementation with its plugin API.

---

has characteristics: functional

has domain
Implementation[c]

has range
PlugIn API[c]

---

preset[op]

IRI: https://w3id.org/aufx/ontology/1.0#preset

Current version:
testing

Associates a device state with a preset.

---

has range
Preset[c]

is also defined as
annotation property

---

preset bank[op]

IRI: https://w3id.org/aufx/ontology/1.0#preset_bank

Associates a preset bank with an audio effect implementation.

---

has domain
Implementation[c]

has range

Preset Bank^c

---

product^{op}

IRI: https://w3id.org/aufx/ontology/1.0#product

Associates an Implementation with a Product.

has domain
> Implementation^c

has range
> Product^c

---

product family^{op}

IRI: https://w3id.org/aufx/ontology/1.0#product_family

Associates a Product with a Product Family.

has domain
> Product^c

has range
> Product Family^c

---

publisher^{op}

IRI: https://w3id.org/aufx/ontology/1.0#publisher

Associates a product or product family with a publisher, for instance an individual or a company.

has domain
> Product^c
> Product Family^c

has range
> agent^c

---

unit^{op}

IRI: https://w3id.org/aufx/ontology/1.0#unit

Associates a numeric effect parameter with its specified (standard) unit.

has domain
> Numeric Parameter^c

has range
> unit^c

Data Properties

---

name^{dp}

IRI: https://w3id.org/aufx/ontology/1.0#name

Specifies the given name of a product family, product, preset, preset bank or implementation.

has domain
> Preset^c
> Preset Bank^c
> Product^c
> Product Family^c

---

version^{dp}

IRI: https://w3id.org/aufx/ontology/1.0#version

Specifies a version number.

----

has characteristics: functional

has domain
>   Implementation^c
>   Operating System^c
>   PlugIn API^c
>   Product^c
>   Product Family^c

Annotation Properties

parameter setting   preset

parameter setting^{ap}

IRI: https://w3id.org/aufx/ontology/1.0#parameter_setting

Current version:
>   testing

Associates a device state or implementation preset to a parameter setting.

----

has domain
>   state
is also defined as
>   object property

----

preset^{ap}

IRI: https://w3id.org/aufx/ontology/1.0#preset

Current version:
>   testing

Associates a device state with a preset.

----

has domain
>   state
is also defined as
>   object property

Namespace Declarations

default namespace
>   https://w3id.org/aufx/ontology/1.0#

0-1
>   http://xmlns.com/foaf/0.1/

dc
>   http://purl.org/dc/elements/1.1/

device
>   http://purl.org/ontology/studio/device/

mo
>   http://purl.org/ontology/mo/

ontology
>   https://w3id.org/aufx/ontology/1.0#

owl
>   http://www.w3.org/2002/07/owl#

prov
>   http://www.w3.org/ns/prov#

qudt
>   http://qudt.org/schema/qudt#

rdf
　　http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs
　　http://www.w3.org/2000/01/rdf-schema#
studio
　　http://purl.org/ontology/studio/
terms
　　http://purl.org/dc/terms/
xsd
　　http://www.w3.org/2001/XMLSchema#