Changes from Version 1.2 to v.2.01 of the ABCD schema

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General changes

Extensions have mostly been made explicit, i.e. extensions of xs: types have been changed to types (particularly StringL*, StringP*, StringLP* and anyURIP* typed elements).
Representation is the name generally used for all elements distinguishing content by language (SDD). Types end in the suffix Repr.
All elements typed xs:string have been typed String to exclude empty (nullstring) elements (String is length >0).
Types containing enumerations end in the suffix Enum.
All attributes should be in lowercase.

Changes of elements

(incl. attribute additions and changes in bounding and/or type of the element)

AcquisitionSourceText
type changed from AltTextType to xs:string
attribute Language added

AccessionCatalogue
type changed from OpenIDType to xs:string

AspectText
renamed to **Text**

AssociatedUnitID
type changed from OpenIDType to xs:string

AuthorString
deleted

BiotopeClassification
name changed to **ClassificationScheme**

BiotopeData
name changed to **Biotope**

BiotopeMeasurments
renamed to **MeasurementsOrFacts**

BiotopeName
name changed to **Name**

BiotopeText
name changed to **Text**
type changed from AltTextType to xs:stringL

ChronstratigraphicTerms
renamed to ChronostratigraphicTerms

ContinentOrOcean
deleted
(coverd by NamedArea; hat been preserved for compatibility, but DwC now separates Continent from Waterbody)

CountryName
renamed **Name**

CountryNameDerived
renamed **NameDerived**

DatasetDerivations
deleted (rights, statements and contacts are now represented various elements under ContentMetadata)

DateSupplied
deleted, +/- replaced by Version/**DateIssued**

Depth
added attribute datum

FactType
included in **ParameterMeasured**

GatheringAgents
renamed **Agents**

GatheringAgent
added attribute sequence

GatheringAgentsText
made mandatory

GatheringCode
renamed **Code**

GatheringMethod
renamed **Method**

GatheringDateTime
renamed **DateTime**

GatheringSite
deleted (an intermediate container without direct function and clear semantic definition), all elements moved directly under Gathering.

Genus
(in NameBotanicalType, NameZoologicalType, NameBacterialType, and NameViralType)
renamed to **GenusOrMonomial**

Height
added attribute datum

Identification/Identifier/**IdentificationSource**
made bounded
Comment: The IdentificationSource is a reference that actually states the identification, i.e. the entire identification event was taken from literature (or a comparable source). The description of this element was confused with that of the IdentificationReference, which actually is a reference that further circumscribes the taxon identified by the identifier (and thus can act as a "potential taxon's" 'sec.' reference).

Identification/Identifier/**Organisation**
typed Organisation

IdentificationDate
renamed **Date**

IdentificationNotes
renamed **Notes**

IdentificationReference
renamed Identification/**References/Reference**

ImageIPR
renamed **IPR**
typed IPRStatementsRepr

ImageResolution
added
Comment: resolution in dpi.

ImageSize
typed ImageSize
Comment: now only for pixel x pixel size. Filesize covered by new element.

ImageURI
changed to Image/**FileURI** and Image/**ProductURI**

ISO2Letter
renamed to **ISO3166Code**

ISO3Letter
deleted (NOTE: incorporated into **ISO3166Code**!)

LithstratigraphicTerms
renamed to LithostratigraphicTerms

LogoURI
moved to ContactType
explanation added

MeasurementAccuracy
renamed to **Accuracy**

MeasurementAppliesTo
renamed to **AppliesTo**

MeasurementAtomised
renamed MeasurementOrFactAtomised

MeasurementDuration
renamed to **Duration**

MeasurementLowerValue
renamed to LowerValue

MeasurementMethod
renamed to **Method**

MeasurmentText
renamed to **MeasurementOrFactText**
type changed from AltTextType to xs:StringL

MeasurmentScale
renamed to **UnitOfMeasurement**

MeasurementUpperValue
renamed UpperValue

NameAuthorYearString
(in TaxonIdentifiedType)
renamed to **FullScientificNameString**

NamedAreaName
renamed **AreaName**

NamedAreaClass
renamed **AreaClass**

NamedCollection(s)
renamed to **NamedCollectionOrSurvey**

Organization
(in Identification/Identifier)
renamed to Organisation

OriginalSource
deleted (the mandatory dataset identifiers have been moved to the level of the unit, other elements have either been deleted, moved directly under dataset, or are now represented by elements under ContentMetadata.

ObservationMethod
deleted (now covered by Gathering/GatheringMethod)

PalUnit*
Renamed: removed prefix PalUnit

ParameterMeasured
renamed to **Parameter**
typed StringL

PalaeontologicalUnit/**Preservation/***
renamed, Preservation prefix removed.

PreviousCollectionName
(in SpecimenUnit/SpecimenUnitHistory/.. / PreviousUnit/)
renamed to **PreviousSourceID**

PreviousUnit
added attribute sequence

PreviousUnitID
type changed from OpenIDType to xs:string

ProvenanceCategory
(in BotanicalGardenUnitType)
Added enumeration of ITF standard codes.

Rank
(in NameAtomised/Botanical)
assigned type RankAbbreviationType

RecordBasis
type changed from xs:string to RecordBasisType

RecordRights
renamed Unit/**IPRStatements**
type changed to IPRStatementsRepr

ReferenceCitation
renamed **TitleCitation**

ReferenceDetail
ranamed **CitationDetail**

ScientificNameString
deleted

NameBotanical/**SecondEpithet**
renamed to InfraspecificEpithet

SiteCoordinates
added attributes ‘begin’, ‘end’, ‘original’

SiteFeatures
deleted (entire structure)

Slope
deleted
(accommodated by BiotopeData/BiotopeMeasurments)

SortPersonName
(in PersonNameType)
renamed to **PersonNameLastFirst**

SourceExpiryDate
Renamed to **ExpiryDate**
Moved from enumeration under deleted element OriginalSource one level up (directly under Dataset)

Changed annotation, refers now to (potential) content of file, not to original database)

SourceInstitutionCode
renamed to **SourceInstitutionID**.
moved to UnitType

SourceLastUpdatedDate
deleted
replaced by Date_Modified (note: this Darwin Core element refers now to content of the xml document, not necessarily to the original database)

SourceName
renamed to **SourceID**
moved to UnitType

SourceNumberOfRecords
deleted (referred to database, however, that reference becomes fuzzy once intermediate storage and/or processing is involved).

SourceVersion
deleted (may be re-introduced if the SDD project construct is to be used)

SourceWebAddress
deleted (is now represented by the AdministrativeContact of the DataSet or, if present, the AdministrativeContact for the Unit)

SpecimenUnitHistory
renamed **History**

SpecimenUnitMark(s)
renamed **Mark(s)**

SpecimenUnitOwner
renamed **Owner**

SpecimenUnitPart
renamed **KindOfObject**
moved from SpecimenUnit to Unit

Strain
(in NameBacterialType)
deleted (because it is not a name element under the respective Code of Nomenclature)

StratigraphyText
type changed from AltTextType to StringLType

Supplier
deleted
replaced by **TechnicalContact**

TaxonIdentified
made optional (because of introduction of alternative MaterialIdentified)

TypifiedName
(in NomenclaturalTypeDesignation)
type changed to ScientificNameType

UnitAssociation
renamed **Association**

UnitAssemblages
renamed **Assemblages**

UnitCollectionDomain
deleted (innecessary container element)

UnitDescription
renamed **Notes**

UnitFacts/*
deleted (covered by Unit/MeasurementAndFacts)

UnitID
type changed from OpenIDType to xs:string

UnitMeasurements/*

deleted (covered by Unit/MeasurementAndFacts)

UnitPreparations
renamed Preparation(s)

UnitPreparation
attribute sequence added
renamed Preparation

UnitReference
added attribute source

UnitStateDomain
deleted (innecessary container element)

UnitStatements
deleted

URLS/URL
(in ContactType)
changed to URIS/**URI**

ReferenceType/URL
changed to ReferenceType/**URI**

ZoologyAge
renamed **Age**
moved directly under unit

ZoologyPhase
renamed **PhaseOrStage**
made unbounded, introduced container

ZoologySex
renamed **Sex**
typed BasicSexCodeEnum
moved directly under unit

New elements

Datasets/Dataset/TechnicalMetadata/**TechnicalContact** [MicroAgent]
Datasets/Dataset/TechnicalMetadata/**ContentContact** [MicroAgent]
Datasets/Dataset/TechnicalMetadata/**OtherProviders/OtherProvider** [UUID]
DateTime/**TimeZone**
BotanicalGardenUnit/**Cultivation**
BotanicalGardenUnit/**Propagation**
BotanicalGardenUnit/**Perennation**

BotanicalGardenUnit/**BreedingSystem**
BotanicalGardenUnit/**LocationInGarden**
ContentMetadata/Description/*
ContentMetadata/IconURI
ContentMetadata/Scope/*
ContentMetadata/Version/*
ContentMetadata/RevisionData/*
ContentMetadata/Owners/*
ContentMetadata/IPRStatements/*
CultureCollectionUnit/**OrganismType**
CultureCollectionUnit/**InfrasubspecificName**
CultureCollectionUnit/**FormOfSupply**
CultureCollectionUnit/**Serovar**
CultureCollectionUnit/**Mutant**
CultureCollectionUnit/**Genotype**
UnitCollectionDomain/**PlantGeneticResourcesUnit**
PGRUnit/*
Sequence/*
Gathering/**Permits/Permit**
Gathering/**SiteMeasurementsOrFacts/SiteMeasurementOrFact**
Gathering**/SiteImages/SiteImage** [Multimedia Type]
HerbariumUnit/**DuplicatesDistributedTo**
HerbariumUnit/**LoanIdentifier**
HerbariumUnit/**LoanSequenceNo**
HerbariumUnit/**LoanDestination**
HerbariumUnit/**LoanForBotanist**
HerbariumUnit/**LoanDespatchMethod**
HerbariumUnit/**LoanDate**
HerbariumUnit/**LoanReturnDate**
Identifications/../TaxonIdentified/**ScientificName**
Identifications/Identification/**Method**
Identifications/Identification/**References** [as container]
Identifications/Identification/**Result**
Identifications/Identification/Result/**MaterialIdentified**
Identifications/Identification/**ResultRole**
Identifications/Identification/**Identifiers**
Identifications/Identification/Identifiers/**IdentifierText**
Identifications/Identification/Identifiers/**IdentifierRole**
Identifications/Identification/**NonFlag**
Identifications/Identification/**PreferredFlag**
Identifications/Identification/**StoredUnderFlag**
Identifications/Identification/**VerificationLevel**
IPRStatements**/Citations/Citation**
MultiMediaObject/**FileURI**
MultiMediaObject/**ProductURI**
MultiMediaObject/**CreatedDate**
MultiMediaObject/**Creator**
MultiMediaObject/**CaptureEquipment**
MultiMediaObject/**Resolution**
MultiMediaObject/**FileSize**

MultiMediaObject/**ImageColorSpace**
MultiMediaObject/**ImageSize/***
MeasurementsAndFacts/MeasurementAtomised/**MeasurementReference** [ReferenceType]
MeasurementsAndFacts/MeasurementAtomised/**MeasuredBy**
MeasurementsAndFacts/MeasurementAtomised/**MeasurementTime**
MeasurementsAndFacts/MeasurementAtomised/**IsQuantitative**
NameBacterial/**NameApprobation**
NameBotanical/CultivatedPlantNameElements/**TradeDesignationNames** [container]
NameViral/**Acronym**
DateTime/**PeriodExplicit**
SpecimenUnit/**SpecimenUnitOwner** [ContactType] (was formerly covered by Rights Type)
SpecimenUnit/Acquisition/**AcquiredFrom** [ContactType]
SpecimenUnit/SpecimenUnitHistory/**PreviousUnits** (Wrapper for PreviousUnit)
SpecimenUnit/SpecimenUnitHistory/**PreviousUnitsText**
SpecimenUnit/SpecimenUnitHistory/PreviousUnits/**PreviousUnitText**
SpecimenUnit/SpecimenUnitHistory/PreviousUnits/**PreviousSourceInstitutionID**
SpecimenUnit/**UnitPreparations** [container for now repeatable element]
SpecimenUnit/UnitPreparations/UnitPreparation/**PreparationAgent** [Contact]
TaxonIdentified/**Code** [xs:name]
Unit/**UnitContentContacts/UnitContentContact** [Contact]
Unit/**RecordURI**
Unit/**UnitExtension**
Unit/**GUID** [String]
Unit/**Owner** [Contact]

Simple types

AltTextType
deleted
Comment: The idea behind this type was to have a "consists of" relationship of the free text entry with the corresponding atomised data items. At least in the present phase of standard development this seems to be overly prescriptive, furthermore, xml does not support this kind of relationship between elements.

OpenIDType
deleted

PGRUnit/*
created

RankAbbreviation
created
enumeration added

RankType
renamed to **HigherTaxonRank**
enumeration added
Comment: The type is used for the attribute of HigherTaxonType, i.e. taxon names of a rank above generic level.

RecordBasis
created
enumeration added

GenusType
renamed to **Monomial**

String
normalised string required to be at least 1 character long (i. e. either element/attribute may be optional, but if they are required the content must not be an empty string) [Taken from SDD]

String255
normalised string restricted to 1..255 character length (i. e. required, may not be empty string). [Taken from SDD]

Complex types

AgentType
removed
Comment: AgentType was used only once (for GatheringAgent) and actually consisted only of a combination of two other complex types (PersonNameType and OrganisationType) with a free text field. It is thus superfluous and has been removed. The elements were moved into a sequence under GatheringAgent; the type extension for PrimaryCollectorFlag became a simple attribute of the element GatheringAgent.

anyUriP
created (xs:anyURI extended with Preferred attribute)

SexCodeEnum
added

ContactType
renamed **Contact**
added element LogoURI (from former StatementsType)

CountryType
renamed **Country**
removed attribute derived (already contains element CountryNameDerived)

DateTimeType
renamed **DateTime**
added element TimeZone

PGRUnit
created

HigherTaxonType
renamed **HigherTaxon**
added sequence with name and rank instead of extension with rank attribute.

IdentificationType
renamed **Identification**
Identifier/IdentificationSource made bounded.
Rearrangement: Inserted element **IdentificationResult** and added a **CHOICE** under which the elements TaxonIdentified and the MaterialIdentified were placed.

ImageType
renamed **MultiMediaObject**
deleted attribute Original
added several new elements (see above)

IPRStatements
created (replaces RightsType and StatementsType).

Label
created (from SDD/UBIF)
includes representation for different languages

LabelRepr
created (from SDD/UBIF)

MicroAgent
created (from SDD/UBIF)

NamedArea
added attribute for sequence

OrganizationType
renamed to **Organisation**
contents changed

RightsType
deleted (replaced by IPRStatements)

ScientificName
created (converted to type, see TaxonIdentified)

ScientificNameIdentified
created (converted to type, see TaxonIdentified)

StatementsType
deleted (replaced by IPRStatements)

StringL
created (String type for xs:string of minimal lenght 1, extended with language attribute)

StringL255
created (string255 type, i.e. xs:string of length of 1 to 250 characters, extended with language attribute

StringLP
created (String type for xs:string of minimal lenght 1, extended with language and preferred attribute)

StringLP255
created (string255 type, i.e. xs:string of length of 1 to 250 characters, extended with language and preferred attribute

StringP
created (String type for xs:string of minimal lenght 1, extended with preferred attribute)

StringP255
created (string255 type, i.e. xs:string of length of 1 to 250 characters, extended with preferred attribute

TaxonIdentifiedType
renamed **TaxonIdentified**
Rearrangement of elements:
Unchanged: InformalNameString and HigherTaxa
All other elements rearranged under an added **CHOICE** between InformalNameString (unchanged element) and the added element **ScientificName.** Further elements formerly arranged in sequence unter TaxonIdentified are now in the ScientificNameIdentified, which in turn is an extension (for ABCD) of the ScientificName, which consists only of the name elements adhering strictly to the codes of nomenclature, namely:

- NameAuthorYearString (now renamed FullScientificNameString)

- NameAtomised (entire container)

FullScientificNameString is now mandatory.
The extension ScientificNameIdentified includes the non-Code items

- NameAddendum
- IdentificationQualifier

Comment: The arrangement allows to make FullScientificNameString mandatory if (and only if) a scientific name is given as the result of an identification event. It also facilitates the replacement of the ScientificName type or its use in other standards.

TelephoneDevice
created (LStringType restricted to list of devices that can be reached by telephone number, e.g. voice, fax, voice/fax)

UnitAssemblageType
changed from complex type to sequence of elements under UnitAssemblage

UnitAssociationType
changed from complex type to sequence of elements under UnitAssociation

UnitDataType
Renamed to **Unit**