Viabundus 1.2 Database structure

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For the general structure of the Viabundus database, please consult the general documentation file.

Database diagram

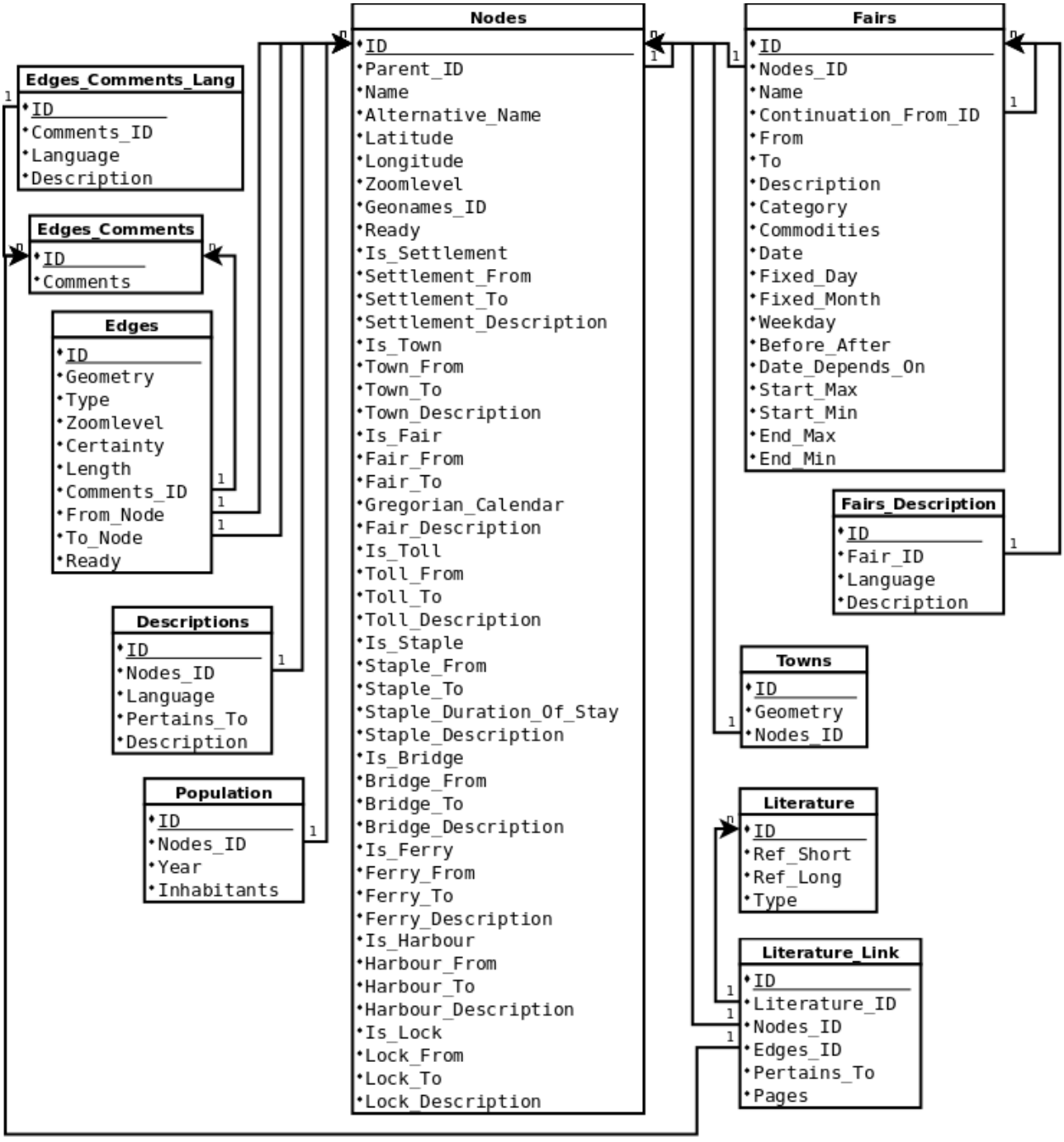

Table descriptions

Tables listed in alphabetical order.

Descriptions

The *Descriptions* table contains descriptions in languages other than English for the *Nodes* table.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Nodes_ID	Integer	Links to the *ID* field of the *Nodes* table
Language	String (2)	“DE” for German, “DK” for Danish, “NL” for Dutch
Pertains_To	String	Specifies the attribute to which the description refers (settlement, town, fair, toll, staple, bridge, ferry, harbour or lock)
Description	String	A translation of the corresponding English entry in the *Nodes* table in the specified language

Edges

Contains the geometry and additional information about the edges, i.e. the roads and waterways.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Geometry	WKB	Contains the edge geometry as single linestring in well-known binary (WKB) format. These are converted into the well-known text (WKT) or GeoJSON formats for downloads.
Type	String	Three options: “land”/”water”/”ferry”. Land routes are roads and paths on land; water routes are navigable waterways; ferries are short stretches where land routes are carried across water. Note that the ferry option corresponds with the ferry attribute in the *Nodes* table.
Zoomlevel	Integer (1)	A number between 1 and 4 that marks at which level an edge is shown on the map. Edges with zoomlevel 1 are displayed at all times, those with higher number only when zoomed in further. Although usually roads connecting larger towns will receive lower zoomlevel numbers, and zoomlevel 4 is mostly used for local side roads shorter than 2 km, this property should not be equated to a categorisation in primary/secondary/tertiary roads. It has been tried to avoid such a categorisation, as this mostly comprises of a modern interpretation of the road system.
Certainty	Integer (1)	A number between 1 and 3 that marks the accuracy of reconstruction. 1: very certain; the edge drawn is exactly at the location of the pre-modern road. Used almost exclusively inside towns where the pre-modern street plan is preserved. 2: mediocre; the edge drawn is more or less at the location of the pre-

		modern road. Due to the unpaved character of pre-modern roads and difficulties in their reconstruction, this is the case in most instances. 3. uncertain: a road is known from (written) sources, but cannot be easily reconstructed with later maps, or a number of parallel tracks are visible on the map between which it is impossible to discern a main road. This is often the case in regions where the landscape has changed considerably in modern times (e.g. industrial regions) or on sandy terrain where road bundles develop easily. These edges are displayed with a dashed line on the map.
Length	Integer	The length of the edge in metres. Used for routing calculations.
Comments_ID	Integer	Links to the *ID* field of the *Edges_Comments* table for descriptions of single route segments.
From_Node	Integer	Contains the *ID* number of the *Nodes* that connects to the start of the linestring contained in the *Geometry* field. Used by the routing algorithm.
To_Node	Integer	Contains the *ID* number of the *Nodes* that connects to the end of the linestring contained in the *Geometry* field. Used by the routing algorithm.
Ready	String (1)	A “y” in this field indicates that the edge has been corrected for historical accuracy; empty fields indicate rough digitisations from *Hansische Handelsstraßen*.

Edges_Comments

Contains descriptions for single road segments in the *Edges* table.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Comments	String	A description of a route segment in English. Description in other languages are included in the *Edges_Comments_Lang* table.

Edges_Comments_Lang

Contains translations in languages other than English for the *Edges_Comments* table.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Comments_ID	Integer	Links to the *ID* field of the *Edges_Comments* table.
Language	String (2)	“DE” for German, “DK” for Danish, “NL” for Dutch
Description	String	A translation of the corresponding English entry in the *Edges_Comments* table in the specified language

Fairs

Contains information about individual fairs related to the *Nodes* table. General information for the fairs of specific nodes is included in the *Fairs_Description* field in the *Nodes* table.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Nodes_ID	Integer	Links to the *ID* field in the *Nodes* table
Continuation_From_ID	Integer	Links to another entry via the *ID* field in case a fair is modified, e.g. its duration or its date. A new fair is then added which is marked as a continuation of the old fair. Note that this has implications for the *From* and *To* fields of the two connected fairs.
Name	String	The name of the fair, only if it is known under a specific own name (e.g. “Kieler Umschlag”). In most cases, this field will remain empty.
From	Integer(4)	A year from which the fair exists
To	Integer(4)	A year in which the fair stopped being organised
Description	String	Description of the individual fair in English. Any general remarks about the market situation of the described node and the relation between the various fairs to each other is included in the general *Fair_Description* field of the corresponding node.
Category	String	This field has three options: “local”, “regional” or “interregional”. It describes the economic importance of the fair and its geographical scope. Local fairs are defined as fairs that predominantly serve the economic needs of the surrounding region of the marketplace. Merchants would usually not have to travel for more than a day to arrive at the fair, and the duration was usually limited to one or a few days. Interregional fairs are the large fairs that drew an “international” public, often from a range of hundreds of kilometres. They often lasted multiple weeks. Examples are the fairs of Frankfurt, Leipzig and the herring fairs of Scania. The “regional” category covers everything in between. Of course, it is often hard to distinguish in which category a fair fits, especially if there is no evidence for the place of origin of the visitors. In this case, the duration of a fair is taken as indicator: fairs with a duration of a few days are placed in the local, those over a week in the regional category. The *Category* field is used to filter fairs for display in the fair calendar.
Fields that describe the date on which the fair took place		
Date	String	Three options: “fixed”, “movable” and “unknown”. A fixed date is a date that is each year on the same day. These were usually defined as (a certain number of days before or after) a saint’s day. In many other cases, the date for a fair was set on a movable day, i.e. a day that had a different date each year. In most cases, these are dates that are defined in relation to a Sunday of the Easter cycle. Since the exact date of Easter was related to the moon cycle, these dates took place

		on a different date each year. Similarly, movable dates are days that are defined as a certain weekday before or after a fixed day, e.g. Monday after St Martin's Day. The option "unknown" is included for fairs for which it is unknown on which date they took place. In most cases, however, these fairs will only be described in the general description of the fair attribute and not be included as a separate fair.
Fixed_Day	Integer	The day of the month in case that *Date* is set to "fixed" or *Date* = "movable" and *Date_Depends_On* = "Fixed date".
Fixed_Month	Integer	The number of the month in case that *Date* is set to "fixed" or *Date* = "movable" and *Date_Depends_On* = "Fixed date".
Weekday	String	In case that *Date* is set to "movable", this field can contain a name of a weekday (i.e. Monday - Sunday) on which the fair took place before or after the reference date.
Before_After	String	In case that *Date* is set to "movable" and *Weekday* is defined, this field defines whether the fair took place on the selected weekday either "before" or "after" the referenced day.
Date_Depends_On	String	In case that *Date* is set to "movable", this field indicates which day as reference day to relate the date to. It can be set to "Fixed day" if the referenced day is a fixed day, as in "Monday after St Martin's Day", in which case *Fixed_Day* and *Fixed_Month* contain the fixed date. In cases of dates relative to the Easter cycle, this field contains the name of one of the feast days of the Easter cycle, i.e. "Easter" for Easter Sunday, "Ash" for Ash Wednesday, "Ascension" for Ascension Day, "Pentecost", "Sacramentum" for Corpus Christi, "Sacred heart", "Cicumded" for Circumdederunt/Septuagesima, "Exurge" for Exurge/Sexagesima, "Esto mihi" for Esto mihi/Quinquagesima, "Invocavit", "Reminiscere", "Oculi", "Letare", "Judica", "Palmarum" for Palm Sunday, "Quasimodo" for Quasimodogeniti, "Misericordia", "Jubilate", "Cantate", "Vocem" for Vocem iucunditatis/Rogate, "Exaudi" and "Trinitatis" for Trinity Sunday.
Fields that describe the duration of the fair (can be left blank if unknown)		
Start_Max	Integer	A negative number for the earliest possible day before the set date that the fair could take place. If the duration of a fair is certain or constant, this field remains blank.
Start_Min	Integer	A negative number for the number of days before the set date on which the fair began. If the fair only lasted one day, this field remains blank.
End_Min	Integer	A positive number for the number of days after the set date on which the fair ended. If the fair only lasted one day, this field remains blank.
End_Max	Integer	A positive number for the latest possible day after the set date that the fair could take place. If the duration of a fair is certain or constant, this field remains blank.

Fairs_Description

Contains translations in languages other than English for the *Description* field of the *Fairs* table.

Name	**Type**	**Description**
ID	Integer	A unique identifier
Fair_ID	Integer	Links to the *ID* field of the *Fairs* table
Language	String (2)	“DE” for German, “DK” for Danish, “NL” for Dutch
Description	String	A translation of the corresponding English entry in the *Fairs* table in the specified language

Literature

Entries for secondary literature and primary sources. The *Literature_Link* table connects the *Literature* entries as references for descriptions of edges and nodes.

Name	**Type**	**Description**
ID	Integer	A unique identifier
Ref_Short	String	Short reference. For published books and articles, this consists of the names of the authors and the year of publication, e.g. “Bruns; Weczerka 1962”.
Ref_Long	String	The complete reference to the source or literature. The <cite> and <q> HTML tags are used to display titles in *italics* or in “quotation marks”.
Type	String	“secondary” for secondary literature, “edition” for edited primary sources, “archival” for unedited primary sources

Literature_Link

The *Literature_Link* table connects the *Literature* entries as references for descriptions of edges and nodes.

Name	**Type**	**Description**
ID	Integer	A unique identifier
Literature_ID	Integer	Links to the *ID* field of the *Literature* table.
Nodes_ID	Integer	Links to the *ID* field of the *Nodes* table in the case that a reference is made to a node. In case a reference is made to the description of an edge, this field remains blank (NULL).
Edges_ID	Integer	Links to the *ID* field of the *Edges_Comments* table in the case that a reference is made to a description of an edge. In case the reference refers to a node, this field remains blank (NULL).

Pertains_To	String	Optionally specifies which specific attribute of a node is being referred to. Currently only in use for the toll, staple and fair attributes.
Pages	String	Specifies the specific page number or other locator in the work linked in the *Literature_ID* field (optional)

Nodes

Contains information about the places (nodes) in the database. The *Nodes* table is the central table in the database, to which most other tables refer.

Name	**Type**	**Description**
ID	Integer	A unique identifier
Name	String	The name of the node according to the modern official name in the national language. This name is shown on the map. For names in non-Latin scripts, the standard English transliteration is entered. Optionally, an addition is placed between brackets to discern the place from another one in the database with the same name, e.g. Frankfurt (Oder).
Alternative_Names	String	All other names for the node, either modern spelling variants, official names in other languages, official names in non-Latin scripts and historical names and spellings. These are separated with a semicolon.
Latitude *Longitude*	Floating point number	The Latitude and Longitude fields contain the coordinates in the WGS 84/EPSG:4326 coordinate reference system.
Geonames_ID	Integer	The ID number of the place in the Geonames database (geonames.org).
Parent_ID	Integer	Links to the *ID* field of another node in the database in the case that the node is a child node.
Ready	String (1)	A “y” in this field indicates that the information for this node can be considered correct and complete. This is indicated with a green check mark on the Viabundus website. Nodes that are not indicated as ready can be considered a work in progress. Of course it is possible that information can be changed for or added to nodes that are marked as ready. It is merely an indicator of the state of research for the selected node.
Is_Settlement	String (1)	A “y” in this field indicates that the node is a settlement.
Settlement_From	Integer (4)	A year in which the settlement first appears. Usually, this is the year in which the settlement is first mentioned in written sources. However, in many instances there is good reason to choose another date. This will be specified in the *Settlement_Description* field. For inexact dates (e.g. “first mentioned in the 12th century”,

		"constructed between 1365 and 1388"), the first possible year is included and the elaboration included in the Description. The *Settlement_From* field can be left blank (NULL), in which case it is assumed that the settlement existed from at least 1350 onwards.
Settlement_To	Integer (4)	The first year in which the settlement did not exist anymore. Can be left blank (NULL), in which case it is assumed that the settlement existed at least until 1650.
Settlement_Description	String	A short characterisation of the settlement in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Town	String (1)	A "y" in this field indicates that the node is a town.
Town_From	Integer (4)	See *Settlement_From.* Usually, the acquisition of town rights is taken as the *Town_From* year.
Town_To	Integer (4)	See *Settlement_To.*
Town_Description	String	A short characterisation of the town in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Fair	String (1)	A "y" in this field indicates that the node is a fair.
Fair_From	Integer (4)	The year in which fairs were first organised at the selected node. See *Settlement_From.*
Fair_To	Integer (4)	The first year in which fairs were not organised anymore at the selected node. See *Settlement_To.*
Gregorian_Calendar	String	Indicates the year when the Gregorian calendar was introduced in the given settlement. This field usually remains blank since it is not currently used by the Viabundus web map. Might be used in the future to calculate conversions between the Gregorian and Julian calendars for the fair calendar.
Fair_Description	String	A short characterisation of the fair(s) of the selected node in English. Descriptions in other languages are included in the *Descriptions* table. More detailed information about individual fairs is included in the *Fairs* table.
Is_Toll	String (1)	A "y" in this field indicates that the node is a toll station.
Toll_From	Integer (4)	See *Settlement_From.*
Toll_To	Integer (4)	See *Settlement_To.*
Toll_Description	String	A short characterisation of the toll in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Staple	String (1)	A "y" in this field indicates that the node is a staple market.
Staple_From	Integer (4)	See *Settlement_From.*
Staple_To	Integer	See *Settlement_To.*

	(4)	
Staple_Duration_Of_Stay	Floating point number	The number of days (or part of days) that merchants were forced to stay in town and offer their commodities for sale on the local market. In the case that there existed no compulsory duration of stay, this field is set to zero (0.0). In the case that no information is available, the field is left blank (NULL).
Staple_Description	String	A short characterisation of the staple market in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Bridge	String (1)	A “y” in this field indicates that the node is a bridge.
Bridge_From	Integer (4)	See *Settlement_From.*
Bridge_To	Integer (4)	See *Settlement_To.*
Bridge_Description	String	A short characterisation of the bridge in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Ferry	String (1)	A “y” in this field indicates that the node is a ferry.
Ferry_From	Integer (4)	See *Settlement_From.*
Ferry_To	Integer (4)	See *Settlement_To.*
Ferry_Description	String	A short characterisation of the ferry in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Harbour	String (1)	A “y” in this field indicates that the node is a harbour.
Harbour_From	Integer (4)	See *Settlement_From.*
Harbour_To	Integer (4)	See *Settlement_To.*
Harbour_Description	String	A short characterisation of the harbour in English. Descriptions in other languages are included in the *Descriptions* table.
Is_Lock	String (1)	A “y” in this field indicates that the node is a shipping lock.
Lock_From	Integer (4)	See *Settlement_From.*
Lock_To	Integer (4)	See *Settlement_To.*
Lock_Description	String	A short characterisation of the lock in English. Descriptions in other languages are included in the *Descriptions* table.

Population

The population data for cities included in the *Nodes* table is derived from the dataset “European urban population, 700-2000” (https://www.doi.org/10.17026/dans-xzy-u62q) by Eltjo Buringh.

Name	**Type**	**Comments**
ID	Integer	A unique identifier
Nodes_ID	Integer	Links to the *ID* field in the *Nodes* table
Year	Integer(4)	Year for which the estimated population is valid. Only the population data for the years 1300, 1400, 1500, 1550, 1600 and 1650 have been copied from the original dataset.
Inhabitants	Integer	The estimated population figure for the selected node in thousands

For more information, see Eltjo Buringh, “The Population of European Cities from 700 to 2000”, *Research Data Journal for the Humanities and Social Sciences* (3-9-2021), https://www.doi.org/10.1163/24523666-06010003.

Towns

Contains the geospatial town outlines for towns in the *Nodes* table for the 16th century.

Name	**Type**	**Comments**
Nodes_ID	Integer	Links to the *ID* field in the *Nodes* table
Geometry	WKB	Contains the geometry of the town outline as single polygons in well-known binary (WKB) format. These are converted into the well-known text (WKT) or GeoJSON formats for downloads. For town outlines consisting of multiple polygons, a separate entry for each individual polygon is created.