Documentation of database attributes

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1 images table

The images table is used to model the important information in an image.

Attribute	Type	Description	NULL	UNIQUE
id_images	SERIAL	Image's id	NOT NULL	UNIQUE
t0	timestamp	Start date of image capture	NOT NULL	-
t1	timestamp	End date of image capture	NOT NULL	-
image	VARCHAR	Name of the image	NOT NULL	-
origine	VARCHAR	Indicates whether the image is film or not	NOT NULL	-
qualite	INT	Indicates the quality of the image	-	-
resolution_moy	FLOAT	Average image resolution	-	-
resolution_min	FLOAT	Minimum image resolution	-	-
resolution_max	FLOAT	Maximum image resolution	-	-
footprint	Multipolygon	Footprint of the image	NOT NULL	-
size_image	Point	Image size	NOT NULL	-

2 sources table

An image has a source, and a source can be used to find batches of images. This table contains all the information such as access urls to the resource, to the view or to the credits of the image.

Attribute	Type	Description	NULL	UNIQUE
id_sources	SERIAL	Source's id	NOT NULL	UNIQUE
credit	VARCHAR	1uthor of the image	NOT NULL	-
home	VARCHAR	Home page of the source site	NOT NULL	-
url	VARCHAR	Link to the source of the image	NOT NULL	UNIQUE
viewer	VARCHAR	Link to image view	-	
thumbnail	INT	?	NOT NULL	-
lowres	FLOAT	?	-	-
highres	FLOAT	?	-	-
iip	FLOAT	?	-	-
footprint	Multipolygon	Footprint of a set of images	-	-

3 masks table

An image has a single mask. However, a mask can be used for several images. The masks table identifies each mask with an associated url.

Attribute	Type	Description	NULL	UNIQUE
id_masks	SERIAL	masks's id	NOT NULL	UNIQUE
url	VARCHAR	url of the image mask	NOT NULL	UNIQUE

4 point_appuis table

An image will have support points as it is used. An image can have several support points. The aim of the support point table is to store both 2D and 3D support points.

Attribute	Type	Description	NULL	UNIQUE
id_points	SERIAL	id of support points	NOT NULL	UNIQUE
point_2D	POINT*	support points of the imported image	-	-
point_3D	POINTZ*	support points on the georeferenced map	-	-

*POINT is used to designate a point in two dimensions. For a point in three dimensions, the designation POINTZ is used

5 Table georefs

Each image will be associated with a georeferencing, however an image can have several georeferencing. The georeferencing table will allow access to the user who georeferenced the image, the date of its creation and to determine if this georeferencing is the main one of an image.

Attribute	Type	Description	NULL	UNIQUE
id_georefs	SERIAL	georeferencing's id	NOT NULL	UNIQUE
user_georef	VARCHAR	user creating the georeferencing	NOT NULL	
date	timestamp	creation date	NOT NULL	-
georef_principal	BOOL	main georeferencing of the image	NOT NULL	-

6 externe table

The externe table stores the external georeferencing parameters of an image. These are ?, the quaternion and the SRID of the image.

Attribute	Type	Description	NULL	UNIQUE
id_externe	SERIAL	id of the external georeferencing parameters	NOT NULL	UNIQUE
point	POINTZ	designates the centre of the camera (position)	NOT NULL	-
quaternion	POINTZ	point for rotation	NOT NULL	-
SRID	INT	SRID of the georeferencing	NOT NULL	-

7 interne table

The interne table stores the internal georeferencing parameters of an image. These include the camera fulcrum, the focal, the skew and the image distortion.

Attribute	Type	Description	NULL	UNIQUE
id_interne	SERIAL	id of the internal georeferencing parameters	NOT NULL	UNIQUE
pp	POINTZ	point of support of the camera	NOT NULL	-
focal	POINTZ	focal point of the sensor	NOT NULL	-
skew	FLOAT	deviation	NOT NULL	-
near*	Point	Closest point to the camera	NOT NULL	-
distortion	ARRAY	distortion matrix	NOT NULL	-

near* or near_frustum_camera is the closest point to the camera at the time the image was taken

8 transfo2D table

The transfo2D table stores the information related to the georeferencing of the image, i.e. the image matrix from the 2D georeferencing.

Attribute	Type	Description	NULL	UNIQUE
id_transfo2D	SERIAL	id of the transformation	NOT NULL	UNIQUE
image_matrix	ARRAY	image matrix	NOT NULL	-

9 transfo3D table

The transfo3D table stores the information related to the georeferencing of the image, i.e. the image matrix from the 3D georeferencing.

Attribute	Type	Description	NULL	UNIQUE
id_transfo3D	SERIAL	id of the transformation	NOT NULL	UNIQUE
image_matrix	ARRAY	image matrix	NOT NULL	-