Proposal of a database scheme for Gipsa-lab's Experiments Database

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This document is a database scheme proposal for the database of experimentations realized in the Gipsa-lab.

1 Tables

A list of notations is given in Tab. 1.

Table 1 – Notations

Name	Description
PI	principal investigator
AI	stands for associate investigator
int	integer
str	string
id	principal identifier. id are mandatory
!	mandatory
Prop.	properties
YYYYMMDD	string with year on 4 characters (YYYY), month on 2 (MM) and day on 2 (DD), for example 20130624

The different tables, after analysis of the different entities and relations between them, are given in Tab. 2.

If multiple identifiers are authorized in the database, ID can be replaced by the proposition given in column description.

LIST_SOMETHING are transcriptions of the associations of kind N-N into the database scheme. This results in tables of multiple links between one thing and another. For example, the list of files {F1, F2} for a dataset DS1 will be recorded with the two entries : (DS1.ID, F1.ID), (DS1.ID, F1.ID) in the table LIST_FILE.

Modality can have the same name but a different description. For example an "EEG" "with 16 channels" or an "EEG" "with 32 channels". An another possibility is to use TITLE and SUBTITLE and keep DESCRIPTION for more advance text.

Tables

Name	Prop.	Type	Description
TEAM			
.NAME	id	str	
.COMMENT		str	comments about the team
INVESTIGATOR			
.ID	id	int	can be FIRSTNAME + LASTNAME
.FIRSTNAME	!	str	
.LASTNAME	!	str	
.REFTEAM		str	ref to team name TEAM.NAME
EXPERIMENT			
.ID	id	int	
.NAME	!	str	name of the experiment, some experiments can have the same name
.DESCRIPTION		str	description of the experiment
.COMMENT		str	comments about the experiment
.REFPI	!	int	ref to principal investigator PI.ID
.DATEBEG		YYYYMMDD	date of the beginning of the experiment
.DATEEND		YYYYMMDD	date of the end of the experiment
LIST_AI			
.ID	id	int	can be REFEXPERIMENT + REFAI
.REFEXPERIMENT	!	int	ref to experiment EXPERIMENT.ID
.REFAI	!	int	ref to associate investigator INVESTIGATOR.ID
LIST_DATASET			
.ID	id	int	can be REFDATASET + REFEXPERIMENT
.REFEXPERIMENT	!	int	ref to experiment EXPERIMENT.ID
.REFDATASET	!	int	ref to dataset DATASET.ID
LIST_MODALITY			
.ID	id		can be REFFILE + REFMODALITY
.REFFILE	!	int	ref to file FILE.ID
.REFMODALITY	!	int	ref to modality MODALITY.ID
LIST_FILE			
.ID	id		can be REFDATASET + REFFILE
.REFDATASET	!	int	ref to dataset DATASET.ID
.REFFILE	!	int	ref to file FILE.ID
LIST_TAG			
.ID	id		can be REFTAG + REFMODALITY
.REFTAG	!	str	ref to tag TAG.NAME
.REFMODALITY	!	int	ref to modality MODALITY.ID
FILE			
.ID	id	int	can be URL to discuss
.NAME		str	short filename, can be given by the last part of the url if it is a path, a file or a web location
.URL	!	str	url of the file
.KIND	!	int	Path (0) or File (1) for example
.COMMENT		str	
.SIZE		int	size in octets, absolute size if possible, independant of the disk format
.DATE		YYYYMMDD	approximative date, not necessary
MODALITY			
.ID	id	int	can be NAME + DESCRIPTION to discuss
.NAME	!	str	name of the modality
.DESCRIPTION		str	
.COMMENT		str	
TAG			
.NAME	id	str	one word or a small group of words
DATASET			
.ID	id	int	
.REFSUBJECT		int	reference to a subject if needed SUBJECT.ID

.COMMENT		str	comment about the dataset
SUBJECT			
.ID	id	int	
.CODENAME	!	str	The name of the subject must be coded or crypted
.AGE		int	age of the subject in years at the date of inclusion
.SEXE		int	Female (0) or Male (1)

2 Relations

Relations between entries are given in Fig. 1.

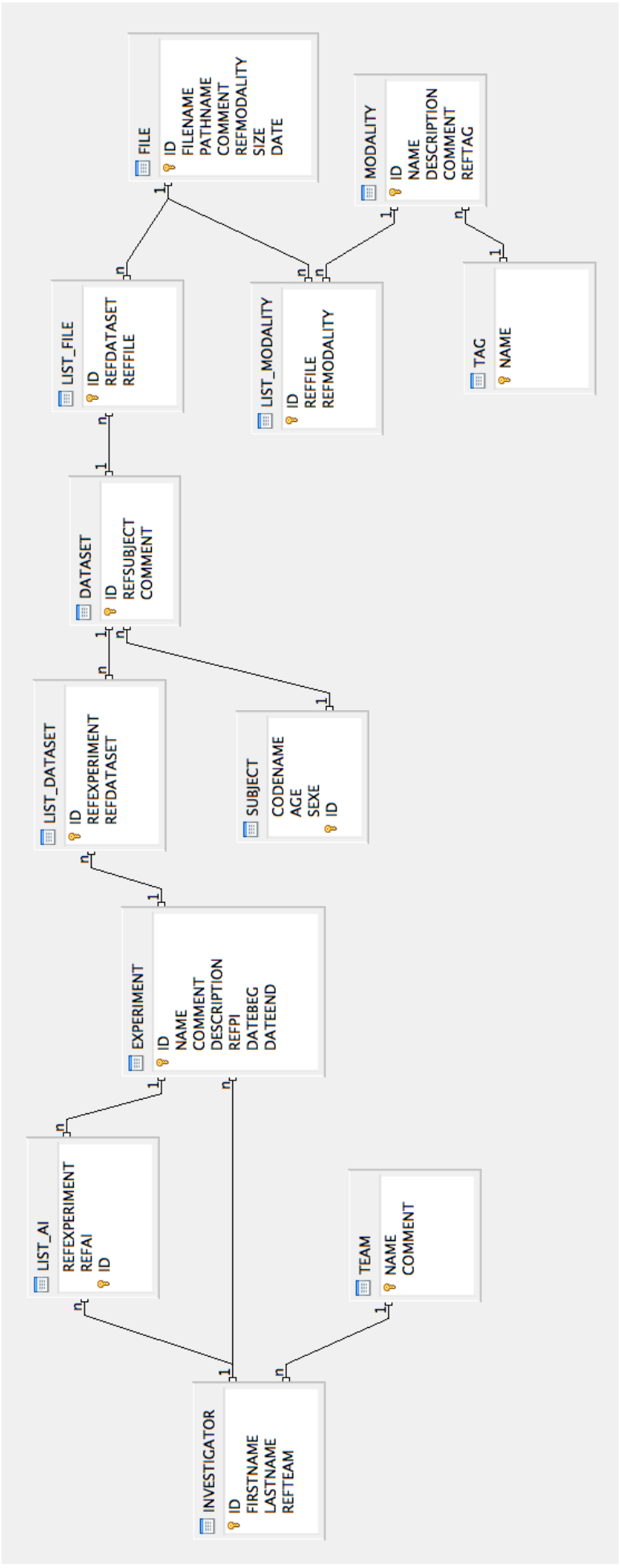

FIGURE 1 – Relations between entries