Database layout:

File Table:

|  |  |  |
| --- | --- | --- |
| fileID | Integer | Primary Key. Used as a foreign key in other tables |
| filename | String | Filename of the file, no directory structure |
| path | String | path to file. Relative to root of storage volume |

Create row in table when file first ingested. Never delete the rows. Things in this table should be mostly static. This serves mostly to provide the master key reference for files in the storage.

DiskFile Table:

|  |  |  |
| --- | --- | --- |
| diskFileID | Integer | Primary Key. Used as a foreign key in other tables |
| fileID | Integer | Foreign Key - References File:FileID |
| present | Bool | Indicates file should be present on disk as described |
| cCRC | Integer(?) | CRC checksum of file. As used by CADC in GSA |
| size | Integer | File size in bytes |
| lastmod | Timestamp with TZ | Last modification time of file when this entry was created |
| entrytime | Timestamp with TZ | Timestamp when this database entry was created |
| source | String | Where the file came from. |

Entries in this table refer to a specific version of a file on disk. Whenever we ingest a dataset, or a dataset is noticed to have been modified, we create a new row in this table to reflect the latest version of the file, and we set the Present flag on other rows for this fileID to false. Thus we have some kind of history of when (we noticed) a file was modified. We never delete rows from this table.

Header Table:

|  |  |  |
| --- | --- | --- |
| headerID | Integer | Primary Key. |
| diskFileID | Integer | Foreign Key – References DiskFile:diskFileID |
| progid | String | Program ID from header |
| obsid | String | Observation ID From header |
| datalab | String | Data label From header |
| telescope | String | From header |
| instrument | String | From header |
| obsdatetime | Timestamp | Composite of date-obs and time-obs From header |
| obstype | String | From header – object, dark, flat, etc. |
| expTime | Real | Exposure time in seconds (coadded? Or add a coadds col?) |
| filter | String | Filter Name. This will need to be derived. Astrodata? |
| object | String | Object name from header |
| observer | String | Observer name from header |
| ssa | String | SSA name from header |
| ra | Real | RA from header |
| dec | Real | Dec from header |
| az | Real | Az from header |
| el | Real | El from header |
| crpa | Real | Crpa from header |
| waveleng | Real | Wavelength from header |
| rawiq | String | RAWIQ header |
| rawcc | String | RAWCC header |
| rawwv | String | Rawwv header |
| rawbg | String | Rawbg header |
| rawpireq | String | Rawpireq header. Should be a bool? |
| rawgemqa | String | Rawgemqa header |
| utstart | Timestamp | Utstart header |
| utend | Timestamp | Utend header |

This table summarizes the FITS headers from the file. Anything that we would like in the *summary* web pages should be in this table, but we shouldn’t aspire to a full header list. This current list is obviously incomplete, get feedback from DASs as to what’s missing. Some of these will be better calculated (astrodata or DIY?) – eg filters compared to the raw filter wheels for example.

Tape Table:

|  |  |  |
| --- | --- | --- |
| ID | Integer | Primary Key. Internal reference |
| label | String | What you wrote on the paper label and stuck to the tape |
| firstwrite | Timestamp | Date/Time tape was first written to |
| lastwrite | Timestamp | Date/Time tape was last written to |
| lastverified | Timestamp | Date/Time tape was last verified as readable |
| location | String | Physical Location of the Tape |
| lastMoved | Timestamp | Date/Time it was put at this location |
| active | Bool | Is the tape currently in use (ie not retired) |
| fate | String | If not active, this is the reason why |

Self explanatory, I think. One row per tape. Never deleted.

TapeFile:

|  |  |  |
| --- | --- | --- |
| ID | Integer | Primary Key, internal reference |
| tapeID | Integer | References Tape:TapeID |
| diskFileID | Integer | References DiskFile:DiskFileID |
| tapeWriteID | Integer | References TapeWrite:TapeWriteID |

A row in this table represents a file written to tape. We create these when we successfully write to tape. We never delete or update them after the fact.

TapeWrite Table:

|  |  |  |
| --- | --- | --- |
| ID | Integer | Primary Key, internal reference |
| tapeID | Integer | References Tape:TapeID |
| startDate | Timestamp | Date/Time of start of tape write |
| endDate | Timestamp | Date/Time of completion of tape write |
| command | String | Command that carried out the write |
| commandStatus | Integer | Exit status of command that did the tape write |
| beforeStatus | String | Output of mt status before the write started |
| afterStatus | String | Output of mt status after the write completed |
| hostname | String | Hostname where this write was carried out |
| drivemodel | String | Tape drive vendor and model names |
| driveserial | String | Tape drive serial number |
| notes | String | Any notes, especially wrt failed writes. |

A row in this table represents a tape writing session, typically a tar command.