Roadside Survey - The IT Roadmap

The Files

The roadside survey system is and MS Access file split into a ‘frontend’ and a ‘backend’. There is also an Excel template file, a User Manual and this IT manual.

The frontend

The frontend is an mdb file called RoadsideSurvey.mdb

The backend

The backend (or data file) is an mdb file. There is one master and potentially several local files.

Master file

MasterRoadsideSurvey_dat.mdb
One backend file within an organisation will be designated as the Master. The Master will hold all the data for the organisation.

Local files

The default name of the local backend is RoadsideSurvey_dat.mdb
There may be several copies of the backend in use in an organisation. They will be used for data collection and review and may have any name.

Which backend?

When the frontend opens it will continue to use the backend it was using in the previous session. If it can’t find the last used backend it will attach to RoadsideSurvey_dat.mdb in the same folder as the frontend. Failing that it will ask the user to choose a backend.

Versions

Frontend Versions are indicated by a decimal: the integer represents the compatible backend version number. Whenever there is a change to the backend that necessitates a change in the frontend the backend version number is increased by one and the frontend version is increased to the corresponding whole number. If there is a change in the backend that doesn’t affect the frontend (for example increasing the size of a text field from 3 to 4 characters) the backend version number is increased by a decimal amount (e.g. from 1.02 to 1.03) and the frontend version remains unchanged.

When back and frontends are updated, copies of the mdb file should be archived for future reference. It is particularly important to archive the latest version of the frontend when updating to a new version in case old data files need to be retrieved.

Please make complete notes in tblBEVersion when upgrading from one integer version to another – this will assist if old files need to be upgraded to the new version.

Setup

1. Put a copy of the backend database in a folder on the server as the master and rename it ‘MasterRoadsideSurvey_Dat.mdb’.

2. Give read/write folder permissions to the Roadside Survey Administrator. Give read only permissions to other users.

3. If you have data, enter them in the Master.

4. Open the frontend and with the menu:
   Utilities | Change Data File, select the new master database.
   Utilities | Lookup Tables – DataFile, copy the address of the DataFile to the Master File.

5. Close the frontend and the master (if open). Make a copy of the master and rename it 'RoadsideSurvey_Dat.mdb'.

6. Put copies of both front and backend on other computers as necessary. Users will be able to use either the local or server databases.

7. Projects and Transects can only be uploaded to the master after they have been entered into the master database

Checking out a Transect

1. Open the frontend and connect to the Master.

2. Fill in the 'checked out date' and 'checked out by' fields for the transect that you want to check out.

3. Close the frontend. Using windows explorer, make a copy of the server mdb and rename it to either RoadsideSurvey_Dat.mdb or whatever you will. If you wish you may use the frontend to connect to the new backend and delete transects. (Utilities | Delete Transect). Send the new backend to relevant users.

Objects

Queries

One common problem with Access databases is the uncontrolled proliferation of queries; a mature database will tend to have many queries and it is often not clear which are necessary and which are redundant so where practicable, queries are saved as SQL in the object.

Modules

There is a modules for exporting data to Excel for charting.

Action queries are run from SQL rather from complied queries. This avoids the proliferation of queries mentioned above and is very efficient.

Menus

The Access menu system is used.

House Rules

Updating Map Units

Map Units for sites may only be updated in the Master database. Furthermore they may not be updated while a transect is checked out of the Master.

Unusual Elements

Some fields in the main tables that would normally be set to 'required' have a validation rule and validation text set instead. This allows more meaningful messages to be shown to the user.

Further development notes

Some further development would be useful in the following areas

Table of attached tables

Errors will occur on relinking is "foreign" tables are linked into the front end. The code to relink between back ends needs to be modified to use a table containing a list of the required listing the recognised linked.

Date downloaded from Master

Copies downloaded from the Master will become progressively out of synchrony with the Master. For example when a transect is uploaded to the Master, the 'checked out by' and 'checked out date' will be deleted – obviously this won't happen for all other local copies. For this reason it would be useful to know when each local copy was cloned from the Master.

Master / Local flag

It might be useful to add a master/local flag to explicitly distinguish between categories of database. Have to get round the problem of copying the Master to create local backends.

Backup during uploading a transect

At present backup happens before uploading transect. If it happened after the data would be more up to date.
At present backing up occurs before a new transect is uploaded. Obviously if the backing up took place after uploading, then the new data would be included.

New Officers

Officers can be added in the local database. Unless these are in the Master uploading of transect data will fail. Need to write code to trap this. Either check for this and inform user or update the Officer table

Waypoints

Add site waypoints to car waypoints in rptWaypoints

Comment: See J2

To-do list

Updated: 13 September 2009 by Unnat

Updated 21 September 2009 by Justin
Update Ted, 8 October 2009