The British Sundial Society's Fixed Dial Database

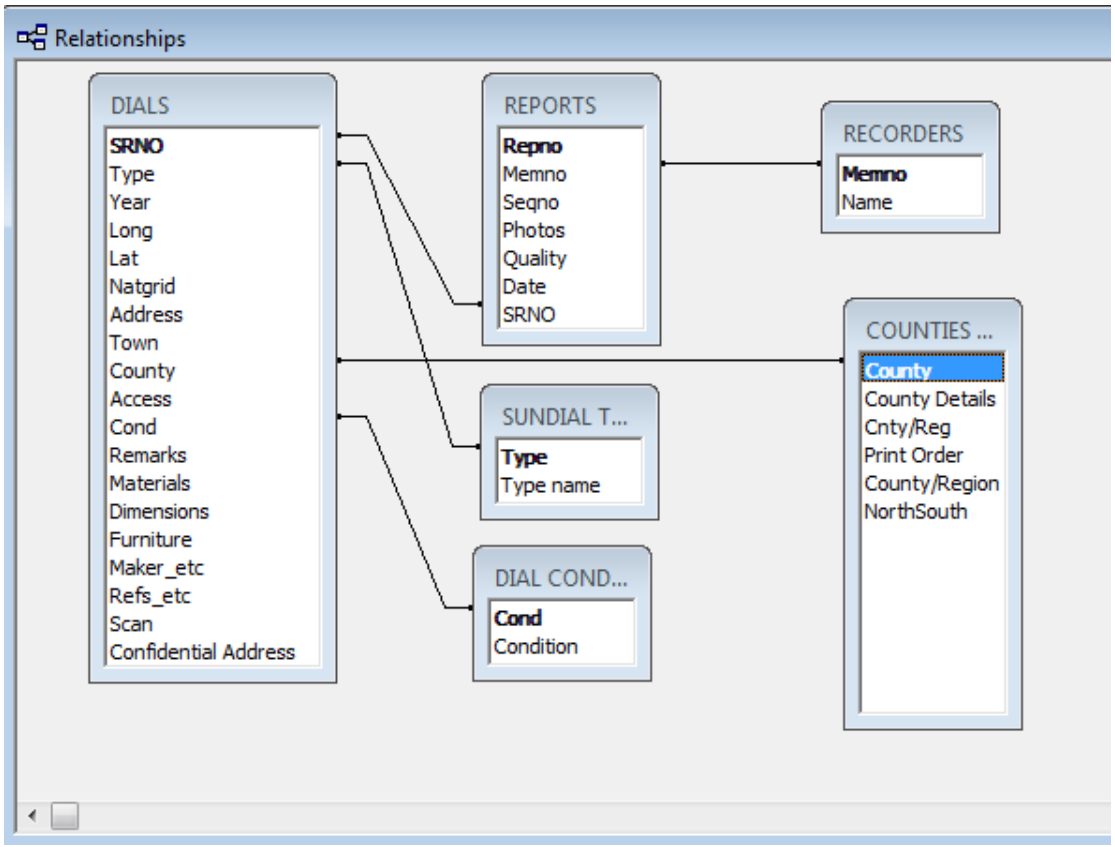
Introduction

The Fixed Dial database (FDR) conforms to the Society's required standards of using all MS software and is a relational database whose development was started by Ian Wootton on MS Access I over ten years ago and which has been subsequently developed and transferred to later versions of Access. It currently runs on MS Access XP (2002) on the Society's PC which now operates under Windows XP (Home). Although it has run on earlier versions of Access, operation now on earlier versions of Access is not likely to be easy. It will therefore be necessary for the new Registrar to use the Society's PC or run it on an equivalent system.

In addition to the main database software access to a scanner (with slide attachment) and to a colour inkjet printer is also needed. The current scanner (Epson 1200 Photo Perfection) together with its software comes with the Society's PC.

Database Structure

The Database uses six tables as shown in the Relationships diagram below. The two main tables are those for Dial details (Dials) and those for Report details (Reports). These provide for the basic requirement that there are in general many reports for any one dial. There is thus a one to many relationship between the Dials table and that for the Reports.



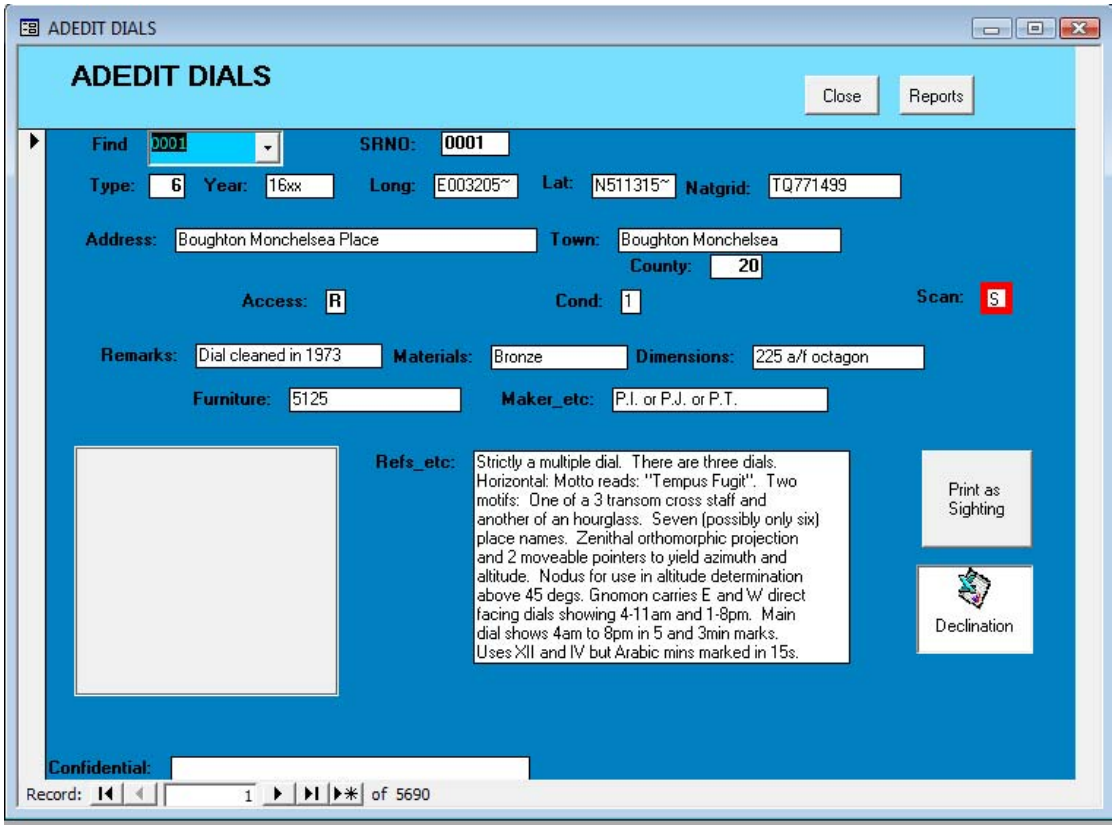
Subsidiary tables (their names in brackets in what follows) are provided by which to identify Recorders names from their Membership number (Recorders), The textual Sundial Type from an entered code (Type), the Dial Condition from a code of 1-5 (Condition) and the County or Region again from a unique entered code. (Counties). These subsidiary tables ensure that misspellings of names for different conditions types and counties etc are not accepted.

The majority of the database is text based. This is deliberate and it provides a back stop protection such that the data may be more easily transferred to any other alternative in the future. The only table which is numeric is that for Reports which operates under Autonumbering. Although not an essential aspect for the type of database here this is nevertheless useful in order to ensure consistency of recording and to prevent confusion between Report and Dial numbers. Thus a dial SRN number may have leading zeroes but a Report number cannot.

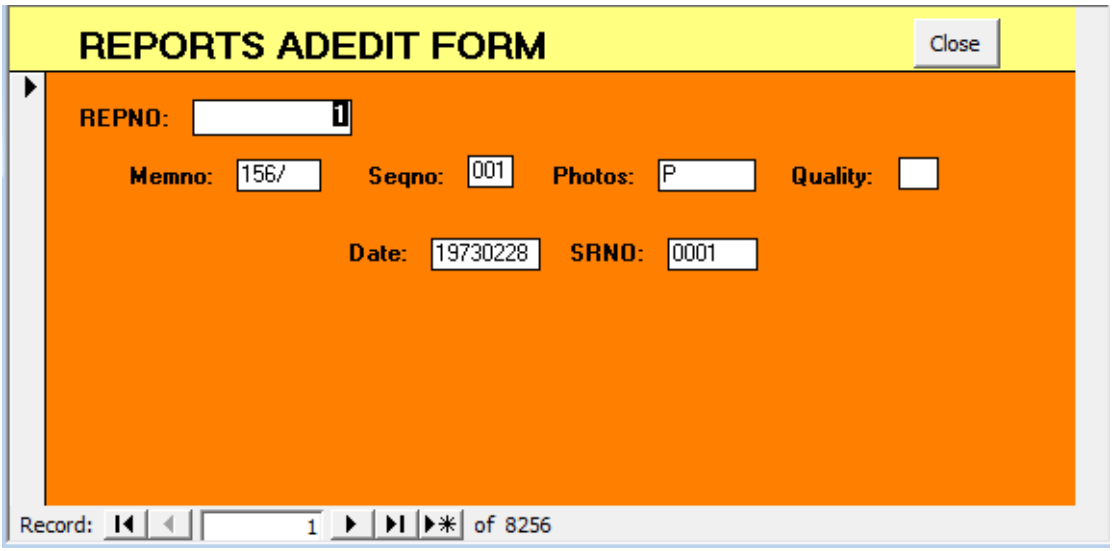
Database integrity ensures that Report details cannot be entered until after a Dial and its details have been entered. Similarly an entry cannot be deleted until the Report data pointing to it has first been deleted.

Database Operation

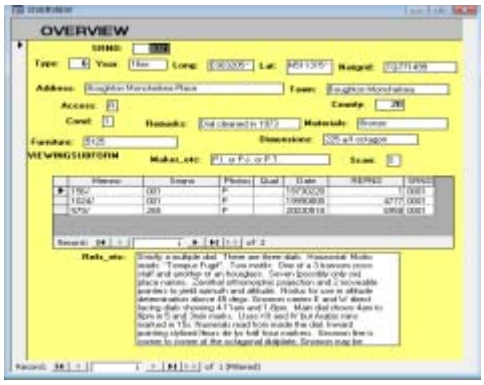
On screen forms are used to enter details of dial data and Report data and pre-stored Access queries together with their linked Reports are used to provide listings of data for most purposes and for all of the Registers. Output of current Register formats (Full printed, Abridged printed and CD versions) are all available from single queries.



The Dial Entry form is shown above – though without an image being displayed here in the white box on the bottom left. The absence of this image is only a consequence of the fact that the database has not been set up on the newly repaired society computer. Certain anomalies in field naming convention still exist from early days. Thus SRNO is the field name for the Sundial reference number which is now referred to as the Dial's SRN and the section initially designated for References (Field name Refs_etc) is now used for the full description since it is an unlimited text field.



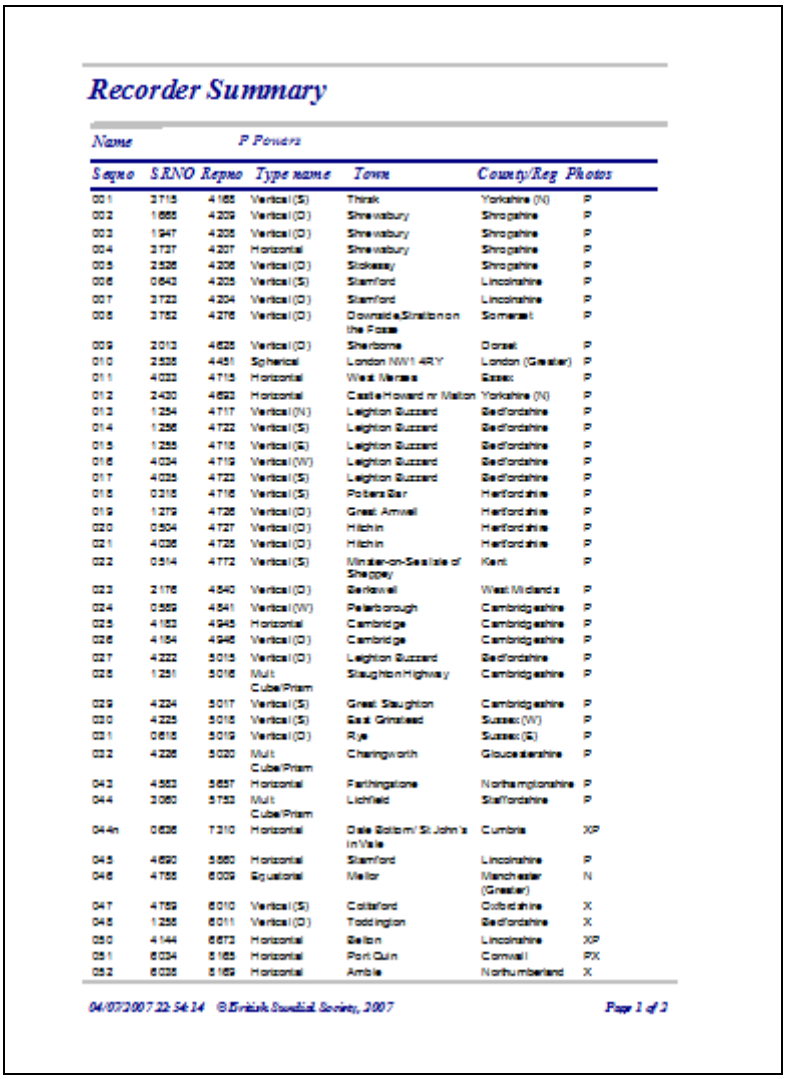
Report details are entered in a form like that above and other forms like that below display information needed in the ordinary day to day operation of the database. In this display all reports pertaining to a particular dial are listed together with all of the dial data.



Many other forms are provided for the purposes of extracting data but of course the full facilities of Access are available for specific and unique queries.

One of the advantages of Access over a simple spreadsheet is that such queries may be stored for reuse at a later date and they may be combined with the Reporting function to produce printed lists or other data.

One example of these built in reports is that which lists a Members sightings one page of which is shown below.



Recorder Summary

Name P Powers

Sequo	S.RNO	Repno	Type name	Town	County/Reg	Photos
001	3715	4165	Vertical (S)	Thirsk	Yorkshire (N)	P
002	1665	4209	Vertical (D)	Shrewsbury	Shropshire	P
003	1947	4205	Vertical (D)	Shrewsbury	Shropshire	P
004	3737	4207	Horizontal	Shrewsbury	Shropshire	P
005	2526	4206	Vertical (D)	Stokesay	Shropshire	P
006	0643	4205	Vertical (S)	Stamford	Lincolnshire	P
007	3723	4204	Vertical (D)	Stamford	Lincolnshire	P
008	3752	4276	Vertical (D)	Downside,Stratton on the Fosse	Somerset	P
009	2013	4625	Vertical (D)	Sherborne	Dorset	P
010	2535	4451	Spherical	London NW1 4RY	London (Greater)	P
011	4033	4715	Horizontal	West Mersea	Essex	P
012	2430	4593	Horizontal	Castle Howard nr Malton	Yorkshire (N)	P
013	1254	4717	Vertical (N)	Leighton Buzzard	Bedfordshire	P
014	1256	4722	Vertical (S)	Leighton Buzzard	Bedfordshire	P
015	1255	4716	Vertical (E)	Leighton Buzzard	Bedfordshire	P
016	4034	4719	Vertical (W)	Leighton Buzzard	Bedfordshire	P
017	4035	4723	Vertical (S)	Leighton Buzzard	Bedfordshire	P
018	0318	4716	Vertical (S)	Potters Bar	Hertfordshire	P
019	1279	4726	Vertical (D)	Great Amwell	Hertfordshire	P
020	0504	4727	Vertical (D)	Hitchin	Hertfordshire	P
021	4036	4725	Vertical (D)	Hitchin	Hertfordshire	P
022	0514	4772	Vertical (S)	Minster-on-Sea Isle of Sheppey	Kent	P
023	2176	4540	Vertical (D)	Berkswell	West Midlands	P
024	0569	4541	Vertical (W)	Peterborough	Cambridgeshire	P
025	4153	4945	Horizontal	Cambridge	Cambridgeshire	P
026	4154	4946	Vertical (D)	Cambridge	Cambridgeshire	P
027	4222	5015	Vertical (D)	Leighton Buzzard	Bedfordshire	P
028	1251	5016	Mult Cube/Prism	Slaughton Highway	Cambridgeshire	P
029	4224	5017	Vertical (S)	Great Staughton	Cambridgeshire	P
030	4225	5018	Vertical (S)	East Grinstead	Sussex (W)	P
031	0618	5019	Vertical (D)	Rye	Sussex (E)	P
032	4226	5020	Mult Cube/Prism	Charingworth	Gloucestershire	P
043	4563	5657	Horizontal	Farthingstone	Northamptonshire	P
044	3060	5753	Mult Cube/Prism	Lichfield	Staffordshire	P
044n	0636	7310	Horizontal	Dale Bottom/ St John's in Vale	Cumbria	XP
045	4590	5560	Horizontal	Stamford	Lincolnshire	P
046	4755	6009	Equatorial	Mellor	Manchester (Greater)	N
047	4759	6010	Vertical (S)	Coltsford	Oxfordshire	X
048	1258	6011	Vertical (D)	Toddington	Bedfordshire	X
050	4144	6673	Horizontal	Belton	Lincolnshire	XP
051	6034	5165	Horizontal	Port Quin	Cornwall	PX
052	6035	5169	Horizontal	Amble	Northumberland	X

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Foibles of the present Database

The historical way in which the database has been developed has left its mark – in comparison with that developed recently for the Mass Dial Database which is much more consistent and which uses menus for the selection of almost all options. The FDR on the other hand has a limited menu approach – which it is intended to improve before handover – but several of the pre-stored queries and the reporting options are not specifically tied to menu choices and have to be executed individually. This is no problem, indeed it makes it rather easier to tailor any one of them for a particular purpose, but it does make system operation less easy for anyone not interested to understand more about Access.

Some of the forms in the FDR are designed around constraints of earlier versions of Access and could now be rewritten to be more compact and easier to use. For example in the Mass Dial register the data entry form for both Dials and Reports is combined into the one screen. All this could be done in the FDR though it hasn't been thought necessary so far.

One other aspect which can be said to be non-standard is the way in which older queries and reports do not utilise what is the current naming conventions for tables, queries and forms etc. Thus the main dial data table is named "Dials" whereas modern day convention would require it to be named with a three letter lowercase identifier thus "tblDials". The more rigorous conventions have been used for more recent developments but rarely has time been spent to go back and 'modernise' earlier aspects. Similarly the use of change control – in use with the Mass Dial Register – has never been applied to the FDR. There are several other more minor aspects that set some aspects of the system aside but these are better discovered and discussed as a result of hands on training and learning.

Dial Recording Process

The dial recording process is as follows:

New sighting received and opened and the Database checked to see if the dial is already recorded

If it is already recorded then the form is examined to see if it contains any new or more reliable facts. If so then the entry for the dial is amended accordingly and a new report form entry made to record the BSS recorder and his sighting details.

If the dial is hitherto unknown then the next available SRN is entered together with all appropriate data about the dial and again the Reporting details are noted.

The dial number and the report number are then entered on the top of the original paper form (the former in black and the latter in red so as to avoid confusion) and the whole recording form is scanned into the forms folder using the report number for its file name as R1234.pcx. PCX black and white images have historically been used since they frequently use less memory.

One or occasionally more of the submitted photographs are then scanned and the image cropped to that of the dial, the image reduced to a max file size of ~500kB and the image is stored in the pictures folder under a file name of the form S2345.jpg. If more than one image is stored then the file names are allocated as S2345a, S2345b etc. Note that single images are not allocated the name S2345a. The use of a suffixing letter is provided as a marker to allow other code to deduce that more than one image exists.

The complete submitted material, form and photos are then filed in a plastic folder in Report number order. When 250 such forms have been so entered these are then boxed and archived to the Society's storage facility. Earlier society records separated the photos from the forms whenever a batch of 250 had been recorded. Forms were then bound by Ian Wootton into volumes for their protection and the photos were then filed in SRN order and by County. This process proved to be very time consuming and, given the little use of the archives by Members, the new much easier system was adopted in its place. However no effort has been made to go back and change the

formats of the archived material. Consequently archive searching is now rather more time consuming than before. However it is an infrequent task.

Handover plans

The recent hard drive failure – and the oddities that preceded it – have ensured that there is a considerable backlog of data waiting to be entered. It is proposed that after a new Registrar has been appointed that only newly submitted sightings should be handled by the new Registrar as a form of introduction and training and the backlog entered into a copy database by me for later consolidation into the whole. This sort of consolidation will require careful control (and should be done by me) but it should allow quicker handover and at the same time ensure that there is sufficient ongoing interaction so as to overcome problems and mistakes etc.

Patrick Powers
July 2007