

## Proposed changes to HRC Member Database – 5 July 2020

I have made progress on replacing the old “HRC-Live” system with something new. I am presented with at least four major tasks to complete. These would be replacing the database file that contains all of our membership data, replacing the associated user interface and logic system, replacing the reporting capabilities from the old system, and converting the data from old system to new system. I will present my present thinking for these tasks below.

1. DB File - The old system was based on Microsoft Access, a relational database management system (RDBMS), available from Microsoft. As I said before, I have recently experienced problems with this software being run on different PCs because of a difference between 32-bit and 64-bit versions of the basic software and Operating System. It is a situation that has vexed a lot of users for a couple of years with no solution from Microsoft. In looking at alternatives, I looked for something I could learn quickly and that would meet our needs. I have settled on SQLite, a small, fast and reliable database engine in use worldwide. Follow [this link for more information](#). I believe this task to be virtually complete.
2. Screens & Logic - The old system was built within MS Access, relying on Access queries, screen forms and reports, which hardly anyone knows about anymore. I have chosen to write the code in the C# language, a much more current and robust language. I will have more to say about this below.
3. Reporting - I have found a third-party reporting engine specifically designed to query databases and report that data. I believe this to be a good solution because it separates the data maintenance function from the reporting function. This is good because it allows the maintenance function to be deployed to a select few people to make additions and changes to our membership data, while allowing the reporting to be deployed to a larger audience for their various needs. I have produced one of the more complex reports in the new engine with only minor difficulties. I think this will serve us well.
4. Conversion - Data conversion from old system to new system is a special task that will be performed only once and has no life after that. In thinking about this task, I have added a new column to the conversion table I presented in the last update. This new column shows the specific conversion rules for each data item to be brought into the new system. In general, most rules suggest that the old data will be copied directly from the old file and saved in the new file. There is some minor reformatting necessary for dates and Boolean elements, but I don't think it is overly complex. I have saved the conversion table in a separate file, named HRC-DataConversionTable that you can review separately..

Regarding the user interface and logic task, I have found that there are three major capabilities to replace: Add a new member to the database, Change membership data for a member already in the database, and recording Log entries for those performing club business and making changes to member data. I have three separate modules for these functions, each with a user interface screen and the logic behind the screen. This allows for each screen to

specifically address the data requirements for the function, and for the logic to specifically address the requirements for the that dataset and function. The screens are available for your review in a separate file named 5 July Screen Update. I've got more work to do on all three screens and even more to do on the three logic files. However, I did package it all up and run it on the office PC last Thursday, and it did run. Obviously, the problem with that test is that I wrote it and I wouldn't do anything that would break it.

So, progress is being made. I expect to have more to report in the future.

George