Subject: sql and idl
Posted by rlayberry on Wed, 03 Nov 2004 16:31:03 GMT
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Hi

I have acquired an MS-Access databse program from someone else which i need to modify/use. It has quite big files, does a few tens of sql queries and outputs some results. The problems are, it often crashes, works differently on different machines, is split up into n subprograms because of filesize and memoery limitations and is overall a bit of a mess.

I was hoping to somehow rewrite in IDL. This should make it stable, easier to debug, on Unix etc. Afterall, it is just manipulation of matrices.

Does anyone have any pointers or has tried this sort of thing before. I have been using idl for a few years and have opened an access database for the first time on monday. It seems to be a microsoft nightmare.

Thanks

Russ

Subject: Re: sql and idl
Posted by Randall Skelton on Thu, 04 Nov 2004 15:34:23 GMT
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Hi Russ,

I'm affraid that I agree with Mike's comments in that you seem to be confusing the 'data' stored in MS-Access with the 'algorithms' required to search for things or do matrix operations? I suspect, the 'data' is in MS-Access and these 'algorithms' are written in VBA or some MS macro language. I certainly agree that this scheme can rapidly become problematic to maintain and, if you already know IDL, it may be worth porting the algorithms. However, where do you envision storing the data? Do you want simple ascii/binary files that are read into IDL or do you need/want a database to hold the data?

If you have a lot of data with many possible relationships, then an SQL database is a good idea. However, SQL may be overkill if you are doing the same search over and over again, whilest the data remains constant. It is worth noting that even a very simple SQL search can prove to be very tricky to impliment with IDL data structures. The IDL 'where'

function is good, but its no database-killer.

Perhaps if you can post a quick example of what the database stores, what you select for in your queries, and what these 'algorithms' do.

To specifically answer your question, one way or another, you need to get your data from MS Access to IDL. There are two options, you can use the IDL dataminer tool ($$$) and perform SQL queries on the MS Access database or you can do a simple table export to your favorite ASCII format and then read all the data into IDL. Once it you have the data in IDL, you can do 'matrix operations' to your heart's content. You mention that the MS Access files are large? Do you know how many rows are in each table? How many tables are there? Is the data in the tables constant? If not, how frequently is it updated and what method do you envision using?

For perspective, I use IDL to manipulate and plot about 4 TB of satellite observations + housekeeping data which is all stored in a PostgreSQL database. Every day, we add another 1-2GB of binary and ascii data. I wrote a custom C module that is roughly equivilent to the IDL dataminer but is specific for PostgreSQL (and free). With this scheme I can rapidly search and plot very complex relationships between our on-orbit performance and the atmospheric results we derrieve from the observations.
