
Subject: IDL and sqlite

Posted by [Michi](#) on Mon, 10 Nov 2008 09:56:19 GMT

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Hello all,

I frequently have to deal with large amounts (~10000) of DICOM-files. More specific, I have to query all these files for certain DICOM-tags such as image number, echo time, series name, series UID, acquisition time and pick some files that match certain criteria. ATM, this is done by reading in the whole directory. This is tedious if it has to be done more than once.

I came up with the idea, that this is a perfect job for a sqlite-database (www.sqlite.org), that is kept entirely in one file with no need to have a server running such as with mysql (This is essential for our application, since we distribute it as a virtual machine to physicians, and you can't expect them to install a mysql-server).

There are many language bindings for sqlite, but I haven't found one for IDL.

Does anybody have experience with using sqlite from IDL? This would just be the perfect tool for this job...

Best regards,

Michi

Subject: Re: IDL and sqlite

Posted by [Michi](#) on Wed, 12 Nov 2008 08:28:03 GMT

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Thanks for the answers!

Too bad - I was hoping for an implementation such as in python, where you can just connect to a database and do queries and insertions from the program.

All in all, the more I use IDL, the more I have the impression that it is outdated.

I keep wondering if I couldn't do the same stuff in a modern language, save a lot of \$\$\$ and have more features...

Subject: Re: IDL and sqlite

Posted by [Robbie](#) on Fri, 14 Nov 2008 21:53:03 GMT

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I agree that database adapters should be considered a core component

of the IDL suite.

The lack of an adapter encourages programmers to use IDL in complicated ways. For example, I have used lock files to attempt to block access to shared files over a network drive. I also had work out a way to merge the contents of save files when two people are trying to write at the same time. Needless to say, it was a complete disaster.

I've see a few free database adapters floating around, but many of them miss important features such as type conversion and string escaping. I am concerned that this is going to make IDL look bad in the longer term, because there will be a whole heap of applications in the user community which are written poorly.

However, Michi, in your particular case I cannot see how you will have a problem. AFAIK, you are simply implementing a patient selector for DICOM files. I can't see why you have a problem simply caching DICOM tags in a sav file. I have done this myself and it seems to work reasonably well for a single user situation. If I were implementing the same thing in Python then I would consider using freeze/thaw in preference to SQLite.

If you are doing anything beyond a patient selector then you would probably need a database.

Robbie

Subject: Re: IDL and sqlite

Posted by [R.Bauer](#) on Fri, 14 Nov 2008 22:15:01 GMT

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Robbie schrieb:

- > I agree that database adapters should be considered a core component
- > of the IDL suite.
- > The lack of an adapter encourages programmers to use IDL in
- > complicated ways. For example, I have used lock files to attempt to
- > block access to shared files over a network drive. I also had work out
- > a way to merge the contents of save files when two people are trying
- > to write at the same time. Needless to say, it was a complete
- > disaster.

You can buy IDL DataMiner. Don't forget idl is not FOSS.

The IDL DataMiner is an Open Database Connectivity (ODBC) interface that allows IDL users to access and manipulate information from a variety of database

<http://www.itvis.com/portals/0/pdfs/idl/datamine.pdf>

Subject: Re: IDL and sqllite

Posted by [Rick Towler](#) on Fri, 14 Nov 2008 23:54:03 GMT

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I agree with Robbie, an improved dataminer should be part of the standard IDL library. Database connectivity is critical to a number of things I do every day and I end up using MATLAB or Python* for these tasks, even though IDL would in other ways be a perfect fit.

I'm surprised that no one has mentioned dataminer. I believe that it ships with ODBC drivers for the major platforms. I've played around with it a bit and while it was a little awkward it works. It costs money, but it may be a viable solution to your problem.

In MATLAB I wrote a db interface using MS ADODB via MATLAB's COM interface which works fantastically (better than their expensive database toolbox IMHO). ADODB is windows only, but I thought I would try the same in IDL and while it works it is very limited because of IDL's lack of built-in data structures (IDL's COM interface cannot return mixed type data which is just about any row of any database ever conceived). I stopped development because performance was a requirement and the thought of breaking queries based on the type of the returned data and assembling the output after the fact was ludicrous (and there were what I thought were bugs in the COM interface). BUT, this might work for you, especially since you can design the tables around these limitations. And if I understand what you want to do you could do it all with using all char typed columns. Possibly a solution if you can stomach the windows only aspect.

I'd be happy to share the prototyping code I have which would get you started.

-Rick

* We've talked about this a lot lately but this exemplifies the trade-off ITTVIS is playing with when they focus so much of their development on point-and-click analysis tools like the iTools at the cost of additions to core functionality. They may be drawing in more users who are uncomfortable with programming and like the features of the iTools but they're losing developers who want a "smart and full featured" language (whatever that is, you get the idea).

They probably don't see this in sales yet as most shops have lots of legacy code that is still floating around but 75% of the production code

I am writing now is in Python+Numpy+Scipy+pyQt. At some point I will not be able to justify the cost of my IDL license as more and more code is retired.

And maybe they **are** seeing this in sales as there are 10 new users for every one like me so IDL sales will only grow. That's good, although I guess I am a little disappointed to see what may be the beginning of the end of a personal era.

Sheesh. Now I am starting to sound like David. ;)

Michi wrote:

> Hello all,
>
> I frequently have to deal with large amounts (~10000) of DICOM-files.
> More specific, I have to query all these files for certain DICOM-tags
> such as image number, echo time, series name, series UID, acquisition
> time and pick some files that match certain criteria. ATM, this is
> done by reading in the whole directory. This is tedious if it has to
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> There are many language bindings for sqlite, but I haven't found one
> for IDL.
> Does anybody have experience with using sqlite from IDL? This would
> just be the perfect tool for this job...
>
> Best regards,
>
> Michi

Subject: Re: IDL and sqlite

Posted by [David Fanning](#) on Sat, 15 Nov 2008 00:45:17 GMT

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Rick Towler writes:

> And maybe they **are** seeing this in sales as there are 10 new users for
> every one like me so IDL sales will only grow

Any conspiracy buffs out there?

I got to thinking about Rick's last post as I was folding my laundry and trying to calm down after that crack about "sounding like David". Here is the interesting thing: every time I am around an ITTVIS person I ask the question, "Who are you selling this...well, let me say, "stuff"... to?" And I have yet to receive an answer.

Now, I find that interesting. ITTVIS seldom fails to answer my questions, but this is one I have started to ask more pointedly as I have noticed it is never answered. Last week I got the answer "Maybe ITTVIS doesn't want you to know who their customers are."

Now, that might be a pretty good answer, if I was competing with them for business, like I used to, but it doesn't much apply anymore. And, heck, I don't want to do any business with anyone buying IDL for iTools anyway, so...

And then, as I was folding my underwear and thinking it might be time to help the economy out by making a few purchases, it all became clear to me...

The last time I was up to ITTVIS I had a very hard time getting inside. No one even answers the phone when you call the company. If you don't know the name of the person you want to talk to, you are SOL. All black ops and recorded messages. And then someone mentioned that part of the second floor was off limits even to ITTVIS employees. Some kind of super-secret deal going on behind closed doors.

Plus, I was talking to the organizers of the IDL User's Group meeting, and they mentioned they were doing another meeting just like it in the Washington area, but that it was closed to the public. The only way to get in was to have a Secret Clearance.

So, here is what I think. Homeland Security has a HUGE contract with ITTVIS to produce some super-secret software (probably with ENVI). Those hapless souls don't have a clue about software and probably lap the iTool stuff up. (I think I mentioned earlier that "software consulting" was the fastest growing part of ITTVIS's business.) Do you see where I am going with this? They don't need us. They aren't even selling this stuff to us. And they don't want us to know WHO they are selling it to.

Boy, it's all clear now!

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL and sqlite

Posted by [Rick Towler](#) on Sat, 15 Nov 2008 01:09:49 GMT

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David Fanning wrote:

> Rick Towler writes:

>

>> And maybe they *are* seeing this in sales as there are 10 new users for

>> every one like me so IDL sales will only grow

>

> Any conspiracy buffs out there?

>

<snip>

> So, here is what I think. Homeland Security has a HUGE contract

> with ITTVIS to produce some super-secret software (probably with

> ENVI).

I've suspected something like this for a while. The few notable core features they have added recently to IDL are image processing and analysis routines. I haven't been to the Boulder office in years so I am completely unaware of the changes there but even I could put together

IDL + IMINT = big money for ITTVIS

(<http://en.wikipedia.org/wiki/IMINT>). And I'm not a big conspiracy theorist (except for those fake moon landings :)

I guess we can hope that some of that money is directed into developing generally useful additions to IDL's core that everybody benefits from.

-Rick

Subject: Re: IDL and sqlite

Posted by [David Fanning](#) on Sat, 15 Nov 2008 01:16:31 GMT

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Rick Towler writes:

- > I guess we can hope that some of that money is directed into developing
- > generally useful additions to IDL's core that everybody benefits from.

At the very least, we have a chance to feel patriotic as we write that check to ITTVIS for IDL "maintenance".

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL and sqlite

Posted by [R.Bauer](#) on Sat, 15 Nov 2008 08:09:42 GMT

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Rick Towler schrieb:

- > I agree with Robbie, an improved dataminer should be part of the
- > standard IDL library. Database connectivity is critical to a number of
- > things I do every day and I end up using MATLAB or Python* for these
- > tasks, even though IDL would in other ways be a perfect fit.
- >
- > I'm surprised that no one has mentioned dataminer.

I did two hours before.

Reimar

Subject: Re: IDL and sqlite

Posted by [Mike\[2\]](#) on Mon, 17 Nov 2008 15:34:35 GMT

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On Nov 14, 7:45 pm, David Fanning <n...@dfanning.com> wrote:

- > Rick Towler writes:
- >> And maybe they *are* seeing this in sales as there are 10 new users for
- >> every one like me so IDL sales will only grow
- >
- > Any conspiracy buffs out there?

[...]

> Boy, it's all clear now!

Makes sense to me - time to start wearing my IDL hat:
<http://people.csail.mit.edu/rahimi/helmet/>

This is even more important if you live at high altitudes like
Colorado (closer to the satellites) ;-)

Subject: Re: IDL and sqlite
Posted by [Rick Towler](#) on Mon, 17 Nov 2008 16:24:47 GMT
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Reimar Bauer wrote:
> Rick Towler schrieb:
>> I'm surprised that no one has mentioned dataminer.
>
> I did two hours before.

I type slow :)
