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Subject: Re: Maximum Likelihood processing time  
Posted by [Pepijn Kenter](#) on Wed, 10 Mar 2004 08:46:05 GMT  
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Lorenzo Busetto wrote:

> Does anybody know why it happens ? Is IDL (or ENVI) "storing"  
> somewhere the informations on previous calculations ?  
>

Not IDL but your system does. Data that is recently used is stored in the cache for faster processing. This can be data from your harddisk that is temporarily stored in the main memory. Likewise, data in your main memory can be stored in the CPU memory cache, which is faster than the main memory. This last cache is managed by the hardware, your OS is responsible for the former.

So the second time you run your software, the data is already residing in a faster type of memory, hence the shorter execution time.

> I don't want to have to restart my computer every time I change the  
> number of bands in order to get comparable processing times....  
>

I vaguely recall reading that it's customary to run software twice when measuring execution times; one time to get the data in the cache, the second time to measure the performance.

I never did an actual benchmark, but I know it's not a trivial task. There are many other things to consider, for example: swapping, other running processes, scalability, etc. If I were you I'd google for software metrics or measuring software performance.

You might also want to take a look at the PROFILER procedure in IDL. With this tool you can examine the execution times of the individual procedures and functions.

HTH, Pepijn Kenter.

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