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Subject: `init_` and `GLOBAL_` changes

Posted by [mirek](#) on Tue, 17 Apr 2007 07:44:11 GMT

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In process of refining MT issues, I had to deal with "`GLOBAL_`" variables concept and "Registration" issues.

The problem there is that in order to achieve good performance of MT application, it is critical to reduce mixing reads and writes.

In case of various registration facilities, like registration of Value types or Image encoding formats, it looks like ideal solution to allow registration only before the first Thread starts (usually, it is done in `INITBLOCK` anyway) - this way, accesses in MT will be read only and no locking is required.

In order to make this transparent, I have introduced new "keyword" `init_` to mark functions/methods that are allowed to be called in this initialization ST phase. Function `AssertST` can be used to check inside registration function to check this in debug mode too.

Similar issue are various singleton classes, like those defined in `Convert.h`. Originally, they were initialized using double-checked pattern, but new `GLOBAL_*_INIT` macros are able to initialize them in st-init phase too, so again no further checking/locking is required.

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