

## Re: C# Image

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<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.general/2006-09/msg00204.html>

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- *From:* Rickard <[rniocskpaarmd@xxxxxxxxxxxxxxxxxxx](mailto:rniocskpaarmd@xxxxxxxxxxxxxxxxxxx)>
  - *Date:* Thu, 07 Sep 2006 15:51:37 +0200
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Maybe this is similar to your problem?

[http://groups.google.se/group/microsoft.public.dotnet.framework.performance/browse\\_frm/thread/7c8105ef7431cac9/](http://groups.google.se/group/microsoft.public.dotnet.framework.performance/browse_frm/thread/7c8105ef7431cac9/)

LT.Ang wrote:

Thanks for the response.

1. Sorry the question was not too clear. It's true JPEG is compressed while on disk. The JPEG file size was only about 1.5MB. But once it is opened as a Bitmap, the expected memory usage should be width x height x 4 bytes – the size noted for the bitmap loaded from JPEG was quite close [slightly smaller] to the expected but the BMP is almost double (and that is the puzzle). The current workaround used is...

```
Image image1 = new Bitmap("sample.bmp"); //use ~200MB
Image image2 = new Bitmap(image1); //use ~100MB
image1.Dispose();
// use image2 from this point onwards.
```

Having to use this method has its drawback – more memory is used while both image1 and image2 are opened so this decreases the largest image size possible. This is the reason why I am trying to understand what is happening with line 1.

2. The user is allowed to draw on or edit the image just like a picture editor. Is there any way to avoid dealing with chunks of the image even if that is possible in this application? Like -- probably a way to maximize the memory usage. A 32 bit machine should allow up to 4GB memory usage but the current ceiling seems to be around 1GB.

LTAng

"Kevin Spencer" wrote:

Re: C# Image

1. When the program opens a BMP image, the amount of memory used seems to be larger for BMP files than JPEGs with the same pixel dimensions. For example, 5200 x 5000 pixels image -- increase in Mem Usage is about 80MB for JPEG, but 200MB for BMP (with Task Manager). The Mem Usage is noted before and after the following command:  
Image image = new Bitmap(filename);  
Is there something going on here? While this does not really matter normally, it leads to the second question below.

Yes, there's something going on. JPG format supports compression, while BMP does not.

2. I am getting "Out of Memory" exceptions if I open a large enough image or a few large images. (I notice that this happens when the Mem Usage exceeds 1GB for the process when checked with Task Manager – the PC used has 2.5GB RAM). Is there any setting that is needed to enable the application to deal with such large images (assuming that the RAM can be increased if required)?

It may be necessary to process the image in chunks. That is, open the image file, using a stream, and read part of the image file into memory prior to working with it.

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HTH,

Kevin Spencer  
Microsoft MVP  
Chicken Salad Surgery

It takes a tough man to make a tender chicken salad.

"LT.Ang" <LT.Ang@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message

Re: C# Image

news:823A2F25-3B2F-43E9-A221-8161FF8EF7CE@xxxxxxxxxxxxxxxxxxxx

I am developing an application that possibly opens very large images – bmp, jpeg, tiff. I have 2 questions:

Language: C#, VS .NET 2003.

1. When the program opens a BMP image, the amount of memory used seems to be larger for BMP files than JPEGs with the same pixel dimensions. For example, 5200 x 5000 pixels image -- increase in Mem Usage is about 80MB for JPEG, but 200MB for BMP (with Task Manager). The Mem Usage is noted before and after the following command:  
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