OpenCV - Bug # 253: cvShowImage() with Cocoa causes serious memory leak on Mac 10.6 x86_64

Status:	Done	**Priority:**	High
Author:	Ryan Lei	**Category:**	highgui-gui
Created:	2010-04-02	**Assignee:**	Vadim Pisarevsky
Updated:	2012-08-16	**Due date:**	
Affected version:			
Difficulty:			
Pull request:			
Operating System:			
HW Platform:			

Description:

Today I built r2968 by CMake with commands

<pre>
sudo cmake -G "Unix Makefiles" -D BUILD_NEW_PYTHON_SUPPORT=OFF -D BUILD_TESTS=OFF -D WITH_CARBON=OFF -D WITH_QUICKTIME=OFF .
sudo make -j8
sudo make install
</pre>

which gave QTKit and Cocoa support.

Then with the following simple webcam capturing code:

<pre>
int main() {
    [[IplImage]] *frame;
    [[IplImage]] *resized;
    /* Example 2-9: Input from a camera */
    cvNamedWindow("USB Camera");
    [[CvCapture]] *camera = cvCaptureFromCAM(0);
    assert(camera != NULL);

    while (true) {
        frame = cvQueryFrame(camera);
        resized = cvCreateImage(cvSize(800, 600), IPL_DEPTH_8U, 3);
        cvResize(frame, resized);
        cvShowImage("USB Camera", resized);
 if (cvWaitKey(10) == 32) break;

 cvReleaseImage(&resized);
    }
    cvReleaseCapture(&camera);
    return 0;
}
</pre>

caused serious memory leak as in this [[youtube video]].
The variable resize does not matter with the memory leak, and cvReleaseImage(&frame) gives [[OpenCV]] exceptions as indicated in the [[doc]].

The same source code runs WITHOUT memory leak with the library previously built with make_framework.sh and r2492, giving [[QuickTime]] and Carbon support.
I think the problem lies in the file src/highgui/*cvcap_qt.mm*.

Associated revisions

2010-06-24 02:28 pm - Vadim Pisarevsky

fixed memory leaks in cocoa bindings (trac ticket #253). Thanks to N. Butko

2013-01-10 05:35 pm - Vadim Pisarevsky

Merge pull request #253 from Nerei:smart_operators_for_smart_ptr

History

2010-04-02 01:54 pm - Ryan Lei

btw, I think the key line is

<pre>

frame = cvQueryFrame(camera);

</pre>

, which returns a pointer to an entire Iplimage.

2010-05-02 11:35 pm - anonymous -

Replying to [comment:1 ryanleitaiwan]:

> btw, I think the key line is

<pre>

> frame = cvQueryFrame(camera);

</pre>

> , which returns a pointer to an entire Iplimage.

I have made similar tests, it seems that the memory leak is in the cvShowImage()

2010-06-07 01:14 pm - Giorgio B.

I've made a test too. The memory leak is very likely to be caused by cvShowImage()

I'm working on Mac OS X 10.6.3 + [[OpenCV]] r3146 with Cocoa and QTKit.

Is anybody working on that? This problem is very frustrating! :(

Regards,
Giorgio

Replying to [comment:3 anonymous]:

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>

2010-06-10 09:46 pm - Nicholas Butko

I am changing the summary to reflect the content of the thread (the problem is in cvShowImage())

2010-06-13 10:42 am - anonymous -

FYI, same problem in new Python bindings; /samples/python/camera.py hogs over a GB in a matter of seconds. Commenting out the call to cv.ShowImage makes the problem go away.

This is on on x86_64 OSX10.6 of course. Note that I used a regular build line of just:
cmake -G "Unix Makefiles"
...that is, no specific build options. Seems to be core.

2010-06-14 01:01 am - Nicholas Butko
I attached a patch that should fix the memory leak. There are also other miscellaneous fixes.

There is still some cleaning up that could be done on window_cocoa, but it should be lower priority. Please continue to report bugs if you see them.

2010-06-14 08:54 am - anonymous -
I just applied the patch to latest SVN, seems to run nicely. The memory leak has disappeared with the fix. Thank you!

2010-06-14 10:22 am - Ryan Lei
Cheers! It's finally fixed. Is this the status going to be changed to _closed_?

2010-06-14 10:23 am - Ryan Lei
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2010-06-14 06:53 pm - Nicholas Butko
- (deleted custom field) set to fixed

2010-06-14 07:13 pm - Brian Gerkey
- Status changed from Done to Cancelled

- (deleted custom field) deleted (fixed)

2010-06-14 07:13 pm - Brian Gerkey
- Status deleted (Cancelled)

2010-06-24 02:29 pm - Vadim Pisarevsky
- Status set to Done

- (deleted custom field) set to fixed

Thanks! The patch was applied in r3253

2010-11-13 04:44 pm - Ricardo Zilleruelo
- Status changed from Done to Cancelled

- (deleted custom field) deleted (fixed)

I still observe the memory leak.
The code below just display an image over and over again. This has a memory leak, around +1MB per second.
I compile the code linking to opencv svn trunk code. Rev: 3914.
g++ opencv_camera2.cpp -o opencv_camera -L/Users/zeta/opencv/opencv/lib/ -I/Users/zeta/opencv/opencv/include/opencv/ -lhighgui

```
#include "highgui.h"
int main(){
    [[IplImage]] *frame;
    [[CvCapture]]* capture = cvCaptureFromCAM(CV_CAP_ANY);
    cvNamedWindow("x",CV_WINDOW_AUTOSIZE);
    frame = cvQueryFrame(capture);
    while(1) cvShowImage("x",frame);
    return 0;
}
```

2010-11-13 07:17 pm - Nicholas Butko

- Status changed from Cancelled to Done

- (deleted custom field) set to worksforme

I tested the code, and there is no memory leak.

You are probably linking to the wrong library. The correct library is "opencv_highgui" and not "highgui".

I am using r3825, but I checked out r3914, and there are no differences that should cause a leak to reappear. The differences are almost negligible and only affect windows platforms.

Here was my compile script:
g++ opencv_camera2.cpp -o opencv_camera -L/usr/local/lib -lopencv_highgui -I/usr/local/include/opencv

2012-08-16 03:34 pm - Andrey Kamaev

- Category changed from highgui-images to highgui-gui

Files

window_cocoa.patch	17.8 kB	2010-06-14	Nicholas Butko