

Re: correlation of rotated image with perspective

Source: <http://sci.tech-archive.net/Archive/sci.image.processing/2007-07/msg00143.html>

- *From:* Adam Chapman <adam.chapman@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 30 Jul 2007 07:56:16 -0700
-

On Jul 30, 2:44 pm, Adam Chapman
<adam.chapman@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

Hi,

I'm trying to make a vision-guided robot aircraft at uni and I want it to land on an 'H' shaped marker on the ground. The aircraft will only use the information from its mounted video camera to navigate.

I have been looking into ways of identifying the helipad seen in the video, which will be rotated, scaled and have perspective. These properties will be used to determine the orientation and 3d position of the aircraft w.r.t. the landing marker.

The processing will need to be very fast, close to real-time.

I understand that the fourier-mellin transformation can be used for identifying rotated objects, but I am not sure how robust it is for perspective and scaling (zooming).

During my university career I have specialised mainly in aircraft control systems and simulation programming. Image recognition and processing is very new to me and I expect there are better ways to do things than those methods I know of.

If anyone out there could throw some suggestions my way, I would really appreciate it.

Regards,
Adam

I forgot to mention that I have made a program to segment and label objects seen by the camera, now i want to test each object to identify my 'H'.

.