HUGIN

Price:	Free, Open Source.		
Platform:	Windows & Mac		
Output:	TIFF, JPG, PNG		
Fisheye:	Yes		
Difficulty:	Medium		
Extras:	Choose resource		
	usage. Limited out		
	of the box. can in-		

stall plugins.



Probably the most intriguing part of this software is its' price point; however, the concept of you get what you pay for is ever-present. This software seems to have a hard time with cubic panoramas. When aligning my files, it threw out the top and bottom images and had me manually add control points between these images. When I added a few, it did complete the image. The preview of the panorama had holes in it, but when rendered it looks almost perfect (slight distortion and heavy blur at the bottom). These rendering difficulties seem minor, but when thrown in a tour, you could notice the problems right away. If you are doing simple panoramas, this software will work perfectly; however, if you want to do anything more than simple, you probably should go for something with a little more polish.

PTGUI

Price: \$205 Platform: Windows & Mac Output: JPG, TIFF, PSD, PSB, MOV Fisheye: Yes Difficulty: Medium Extras: Less features than Hugin



What is intriguing about this software is that it is very much like Hugin. From the interface to the features, the program is almost identical. Except for the price point, it's like you are paying \$200 for the same software that is free. There is a difference though, despite it costing more, it seemed to have more problems than Hugin. It threw out two of the side images, ones I couldn't match with control points very well since they were separated so much (0 Degree and 180 Degree). I did what I could and stitched it together. As you can see, there is heavy distortion in the image, and some of the grass goes up into the sky. This is unacceptable of such an expensive program. It should, without a doubt, perform better than a free program.

AP GIGA

Price:\$319Platform:Windows, Mac, &Platform:LinuxOutput:HDR, JPG, PNG,
PSD, TIFF, EXR,
KOLORFisheye:YesDifficulty:EasyExtras:Output control, auto
render, auto color
correction, etc. Can
optimize for fish eye.Specifically set pan-

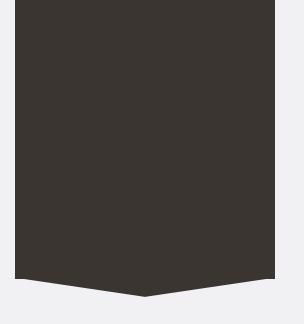
orama to spherical.



Autopano Giga is expensive; however, it is by far the best panorama stitching software I have used. The program automatically found all control points on my images. The preview had no holes and only minor distortion of objects and blur at the bottom. When the image was thrown into tour software, the tour looked beautiful and the blur/distortion were not noticeable. I believe it did so well due to the user's ability to select what type of panorama it will be creating. Ultimately, this program has so much user control, yet it is easy to use.

PMONKY

Price:Free -\$2.5 (Per)Platform:Web BasedOutput:JPGFisheye:YesDifficulty:Very EasyExtras:None





PanoMonkey is a great site for Panoramas. It's very easy to use. You just upload your images, select a few options, and then click upload. It does the rest of the work for you. The resulting panorama is close to what is produced by Hugin or Autopano Giga. The only downside is the free version only comes with a width of 3000px and is watermarked. There are also black holes at the very bottom where you will need to crop. I don't think the image will work in a tour, but for a panorama sticher it does work fairly well... The only downside is that the user control is very limited. You don't have any control on how long it takes (this test panorama took twenty minutes), output file, etc.

	Hugin	PTGUI	Autopano Giga	Pano Monkey
Price	Free	\$205	\$319	Free - \$2.5 (Per)
Platform	Windows & Mac	Windows & Mac	Windows, Linux, Mac	Web Based
Output	TIFF, PNG, JPG	JPG, TIFF, PSD, PSB, MOV	HDR, JPG, PNG, PSD, TIFF, EXR, KOLOR	JPG
Fish Eye	Yes	Yes	Yes	Yes
Difficulty	Medium	Medium	Easy	Very Easy
Extras	Resource Usage, Plugins	Little to no Extras	Output control, auto render, auto color correction, etc.	No Extras

Ultimately you get what you pay for. Autopano Giga may be the most expensive program there, but it is the only program that worked flawlessly with my test panorama. Moreover, you have a lot more output and user control settings. It is also the easiest program to use (besides PanoMonkey) and still retain the ability for more advanced users to control exactly what the program does and is optimized for. Without a doubt, the panoramas created by this program will work extremely well with virtual tours. It is easily the best value here.