Motion Tracking Tech Paper

Here's how to motion track in Nuke and then apply the transform data towards other effect like god rays. So first you want to start with your basic Nuke Tree with your read node having your animation. Then, create a Tracking node and attach it to the read node. Note: this will be a separate thread outside the main tree line.

۲	C		🗯 🐓 🛛 Trac	ker1							2 2 5	? @ ×
Tracker Settings Transform Node												
-												-
		е	name	track_x	track_y	offset_x	offset_y	Т	R	s	error	
	1		track 1	1625.5	183	0	0				0	
		×	track 2	1530.2	909.74	0	0	×			0.00	
		×	track 3	707.5	927.5	0	0	×				
												2
			add track	delete tr	acks se	lect all a	verage tra	cks				
E	KD	ort										
			T									
			Transform (match-mo	vej			crea	te			

Click "Add Track" and a small square will pop up. Drag the square and place the center point at a point of high contrast, then manipulate the outer square to increase the area where the calculations will be done (this will either help or hurt the calculations depending on the area.



Once in the desired position, press the button that looks like a play button for "Track to End" to run the tracking information to the end of the scene. If your tracking is successful, your information will show all a path with dots representing the frames at with it tracked your desired point. Repeat this process 3-4 more times to have a better sense of depth if your camera does more then just move in 2D (think Maya's X and Y-axis). Once the trackers are created, go to the Transform tab of your tracker and set the Transform drop-down to "match-move". Then back on

▼ (○ ₩ 🖌 (Tracker1						? & ×			
Tracker Settin	ngs Transf	orm Node								
transform	match-move 🔻									
reference frame		set to current frame								
jitter period							90 100			
smooth t		r O	s 0							
15 ST 16	live-link transform									
translate	× -177.58544	49 6.44720459	9 2							
rotate							150180			
scale .							10 2 1			
skew X	0						0.8 1 1			
skew Y	0						0.8 1			
skew order	XY Y									
center	Cubic x dama X black outside									
motionblur										
shutter	0.5						+ 10			
shutter offset	start •						1.8 2.0			
							0.8 1			
ado	l track d	elete tracks	s selec	tall a	average	tracks				
Europet										
Export										
Tran	isform (ma	tch-move)				creat	e			
							ansion			

the Tracker tab, select the bottom drop-down and select "Transform (match-move)" then click "Create" to the right. This will create a node with the match-move transformation information to apply in your main node tree. Now you can play through your timeline and the transform data should apply to your desired element.

