Fluid to Particle

in

Autodesk MAYA

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PRAYING LICENSE

Always read this part, some of my tutorials may have a different licenses

Do not sell this Tutorial

Do not make another tutorial from this tutorial (translation and ….)

Tell me if you make something base on this tutorial, I would love to see how you used it

Important:

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1. If You Learn Something From This Tutorial:

Thank God for What You Have Learned (You Can Simply Say "Thank You God")

Also Pray For Me [Both Life And After Life] (Pray Something Good :D)

Pray For Your Success And Your Afterlife.

2. If This Is The Tutorial That You Were Looking For, For A Long Time:

Thank God For What You Have Learned (You Can Simply Say "Thanks A Lot God") And Also Pray Something Nice For Me And My Family (Both Life And After Life) Pray For Your Success And Your Afterlife.

(I Don't Mean That You Spend 5 Min Praying, Simple Prays Are Enough, But Say It Like You Mean It. But it's Also Nice If You Spend Some More Time Praying!

This One Is Not Necessary:

But If You Make Money By Using These Techniques, Consider Donate A Little Too.

HELLO EVERYONE I AM MORTEZA AHMADI AND HERE WE ARE WITH THIS VERY FUN TUTORIAL.

In this tutorial we are going to learn how we can turn a fluid simulation into particle and who doesn't need to do.

License for this tutorial is of course like many of my other tutorials "Praying".

Yep. If you learn something from this tutorial you should "thank god" and pray for me, both life and after life. Pray some good stuff.

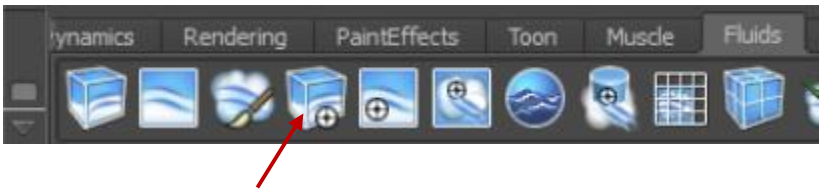
Check out the license page to understand what I am talking about.

Anyway. Let's get it started.

Part1: Making a Simple Fluid Simulation

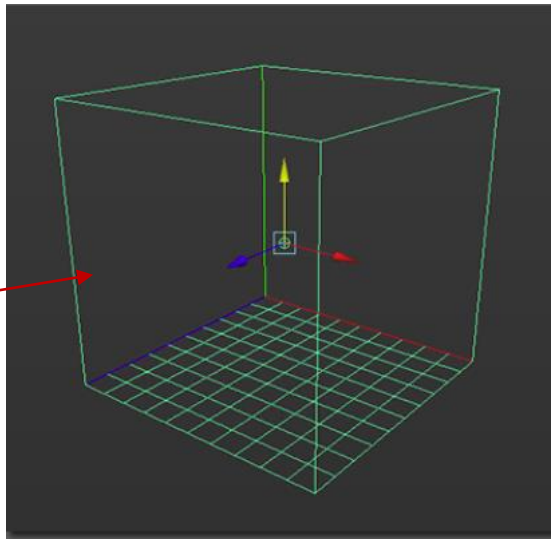
This part is for those of you who never touched Fluid and like to make something to test Tutorial with, you don't have to follow these steps.

1. **Make a Fluid Container**

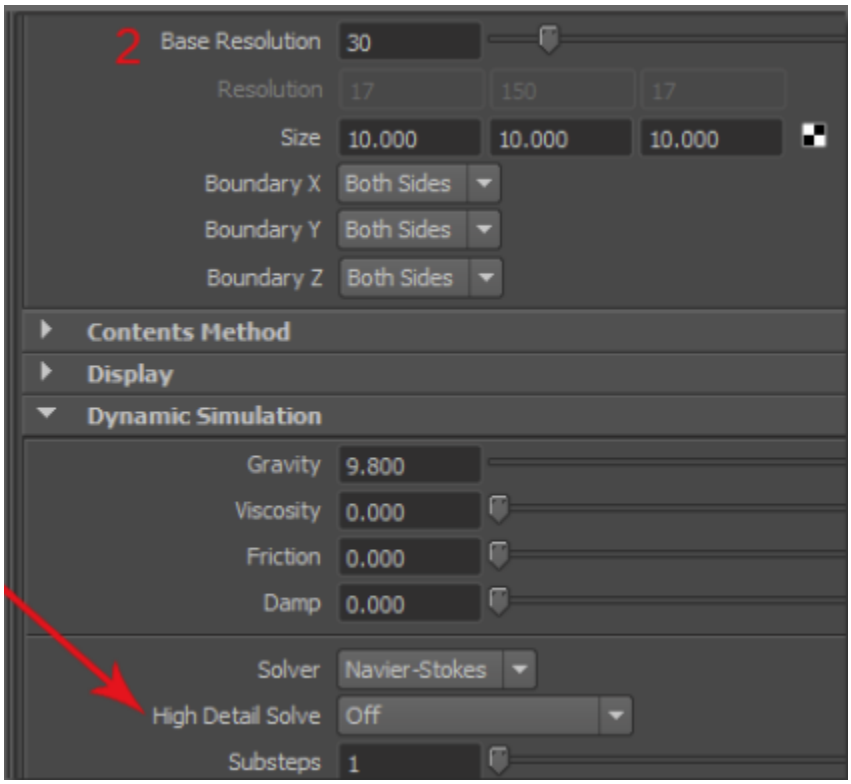


Press This Button

Make This Guy

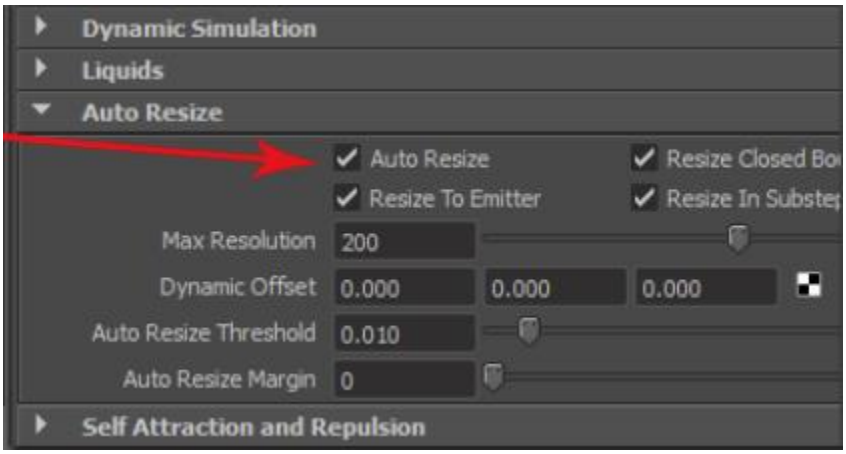


2. **Set Base Resolution to a Higher value**
   This will add more Detail to your Fluid



3. **Set High Detail Solver to "All Except Velocity"**
   Well as the name says, High quality solving which means high quality simulation.

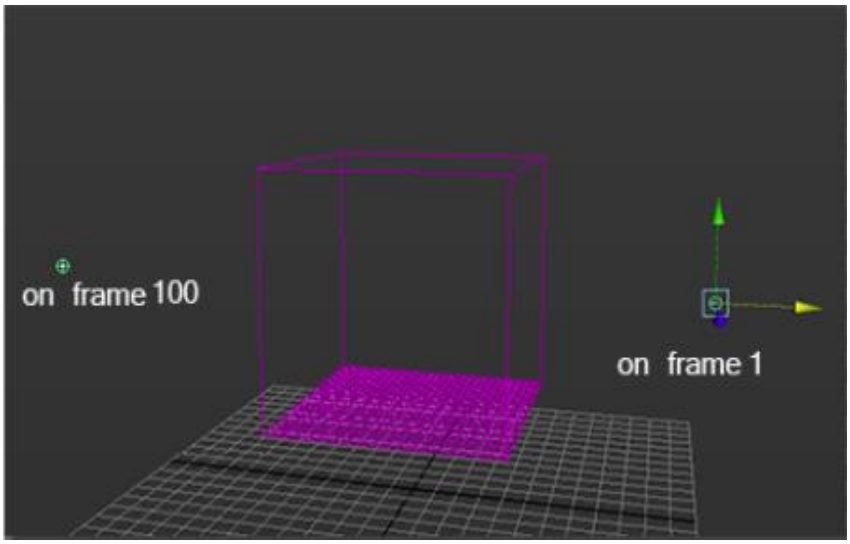
4. Enable Auto Resize
   This will make the Container grow automatically when The Fluid reach its border



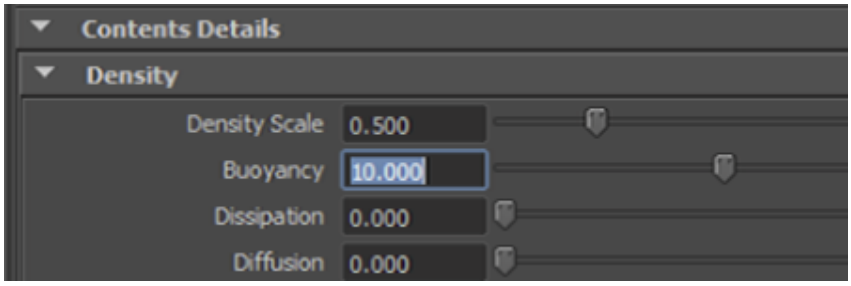
5. Grow the Range Slider
6. Select the Emitter
   It's in the center of Container

7. On Frame 1 move the Emitter to the Right Side of the Screen and Press "Shift+W"
   This will add a key Frame to emitter's location

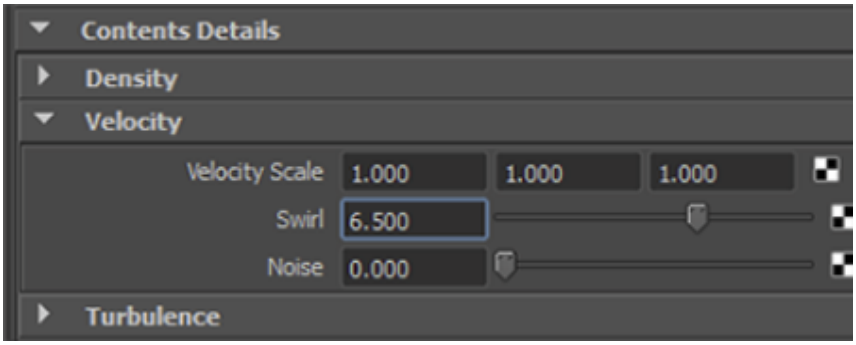
8. Move the emitter to left and Add another key on Frame 100
   Use middle mouse to click on frame 100



9. Select Density Buoyancy to 10
   This will make the Fluid Flow Faster

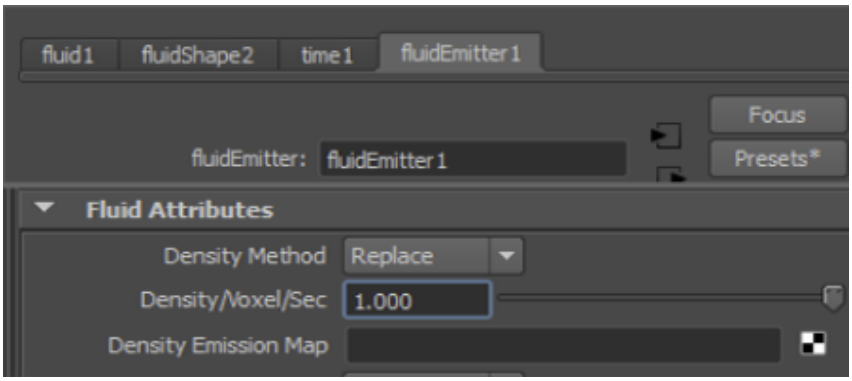


10. Select Swirl to 7
    Add more swirl make your fluid look better



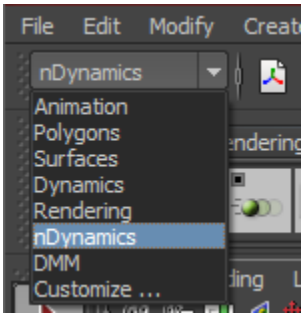
11. Go to emitter tab
    You will go to emitter tab

12. Set Density Method to Replace
    Just Emitting more fluid



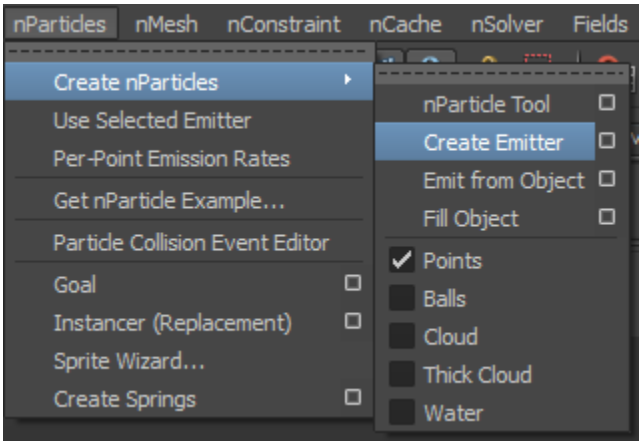
Part2: Adding Particles

13. **Set Menu Type to nDynamic (or FX in case of Maya 2016)**
    This will change menus base on category you select.
    Yeah like you already don't know that! ☺



14. **Set nParticle Type to Points**

    Well it's not my fault if you can't find it in Maya 2016
    Autodesk just loves changing location of each menu item and hide it somewhere new in each release.
    Just kidding Autodesk is a nice guy they try their best.
    (That makes it even worst!)
    In Maya 2016 it's in "nParticle>CreateOption" section



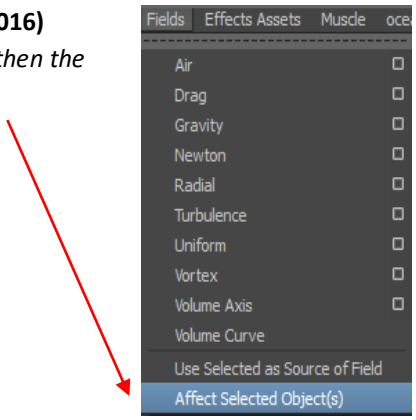
15. **Create Emitter**
16. **Go to first Frame then Play forward a little until you see some particles.**

17. **Select your fluid container then select your nParticle**

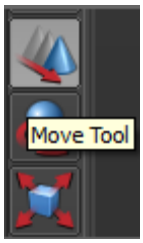
    Don't you dare selecting it the opposite way, This fluid is not a kind of fluid who likes to be controlled by a bunch of particles, oh he will get mad, he will get mad real good buddy, god help you if you make that fluid angry and believe in me you DON'T want to see him get angry.

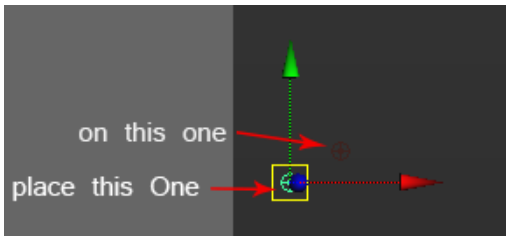
18. **Go to field menu and Click on Affect Selected Object ("Assign to selected" in maya 2016)**

    In case you are still wondering what would happen if you select the nParticle first and then the Fluid. Well Nothing! The result would be the same.

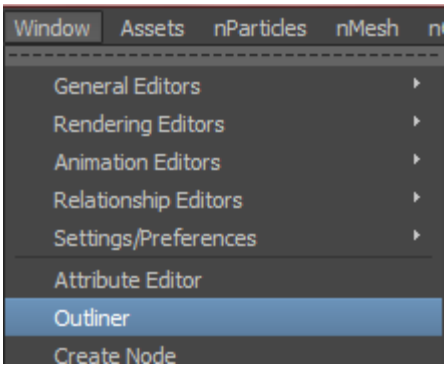


19. **Move the Particle Emitter inside Fluid's Emitter**

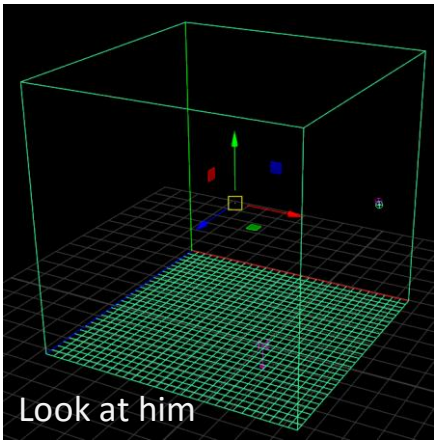




20. **go to Window>Outliner**
I know it's hard to guess what this button do :/ .
Well surprisingly it opens Outliner, I know right! Who would expect that?
Stupid confusing buttons 😐

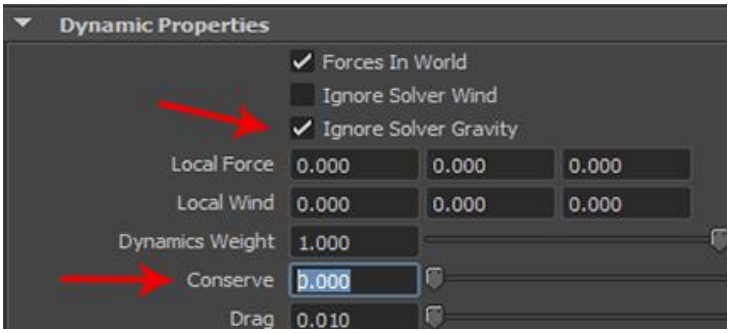


21. **Select particle Emitter first and then select the Fluid Emitter.**
Now very gently without making that fluid suspicious press the "P" button
Wooh!! I know very sensitive works, any mistake and that fluid will lose it look at his sick Cube face, dang it, and then they say being an fx artist is safe
Did they even know this guy "fluid"



Just in case this time it really is important to select the Fluid emitter last.
Unless you animated your particle emitter and you want fluid emitter to follow It.

22. **select nParticle and from Dynamic Properties Check "ignore Solver Gravity"**
By default particles have gravity we should ignore that and any other force that affecting it so fluid takes full control.



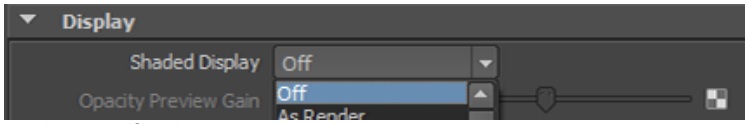
23. **Now set conserve to "0"**
Now particles can't have any motions of their own. So if something push them a bit forward they are not going to continue going to that direction.

Part3: Rendering with mental Ray

Ok so far so good. We managed to keep that fluid calm, we have particles following fluid and all we need to do is to render it and Done.

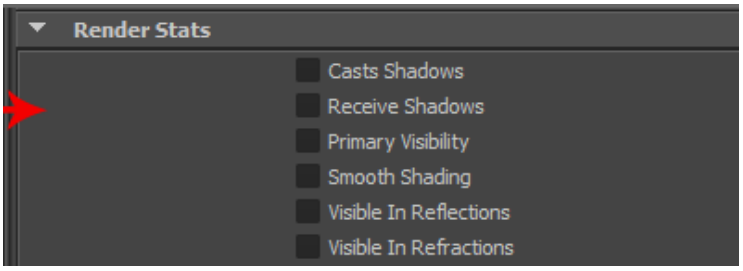
We are going to use mental Ray but don't forget that I have another tutorial about rendering particles in Viewport, you probably want to check that out too.

24. **select fluid container and set the Shaded Display to "off"**

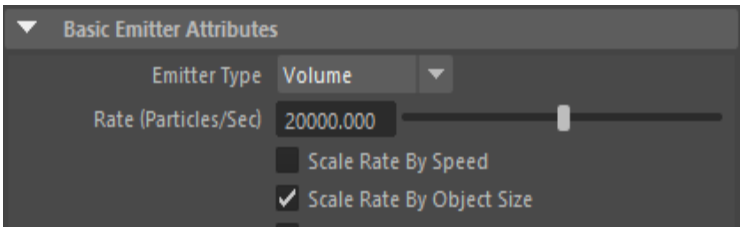


By setting this off the fluid won't be rendered anymore, but not completely do forget that this fluid is one bad ass fluid
He is not giving up that easy, he is just disappeared from viewport and he is waiting for you to hit render and BAM he will show up. NOOO don't hit render, I did it once and boy! That fluid was angry he keeps staring at me in the eye and flame coming out of his mouth (or his butt I don't know it's a cube! You can't say which part is his head or his tail) the point is he was scary and you don't want to see him.

25. **Now go and disable everything from Render Stats**
Now it is safe to render



26. **Select the particle emitter and set Emitter Type to Volume**
If you don't set it to volume particles will emitter from a point while fluids are emitting from a volume so if you want to have exactly the shape of the fluid as particle you need to emit particles from a volume too.



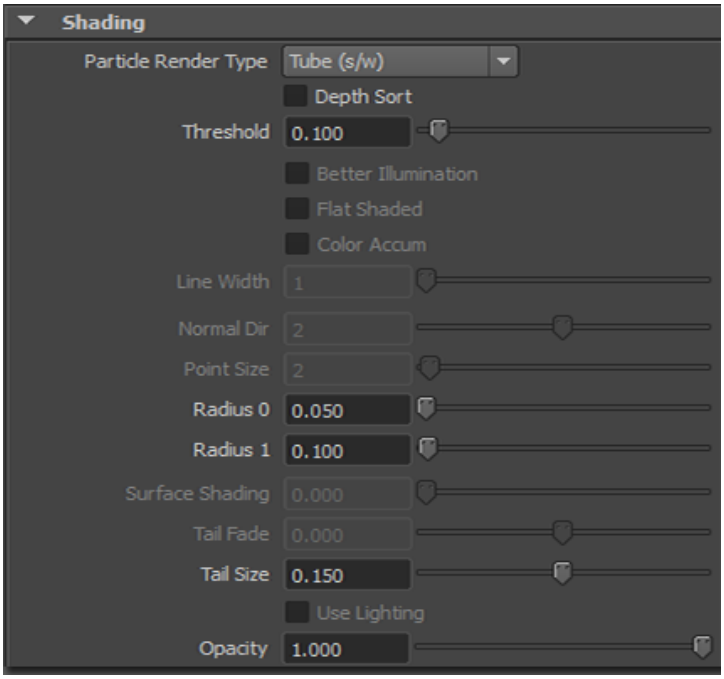
27. **Set Emitter rate to whatever you want, maybe 20,000.**
Just remember that this is rate not particle count.

You may or may not want to enable "scale Rate by Object Size"

28. **Go to first frame. Set particle render Type to "Tube"**
Usually the size of tubes are really big and if you be in the middle of simulation they can cause you a lot of trouble and slow down and stuff.

29. **Change the Radius 0 and Radius 1 as you need.**
Set a very low number and then playforwad a bit and emitter a little particle. Now you can change the size and it will update in viewport.
Just make sure particles are not going into Each Other That is what cause all the slowdowns in mental ray.
It is best to leave a very tiny bit of space between them

30. **Change tail size**
It can help your render look more filled and a little motion blur look to it.



31. **Add a light in your scene**

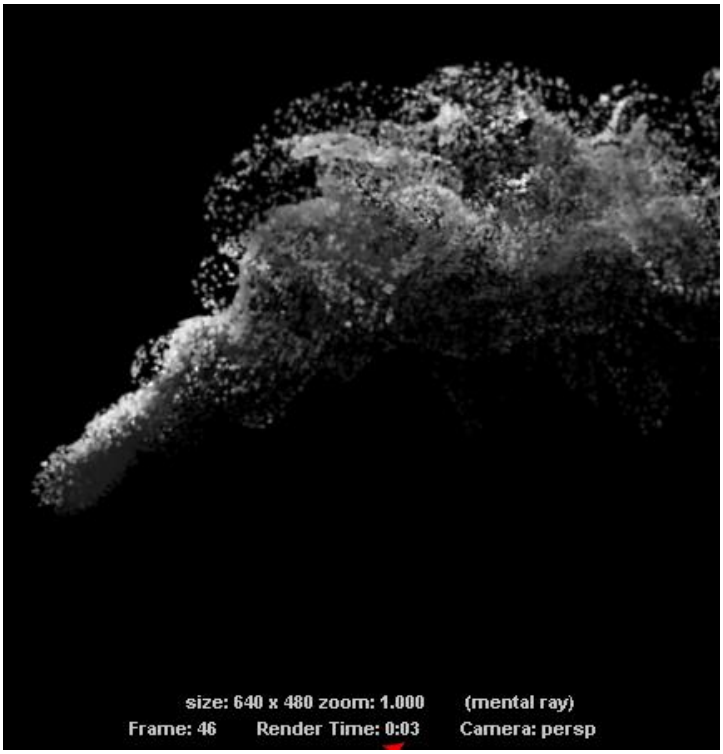
32. **Enable Ray Trace Shadow**
    From your light attributes of course

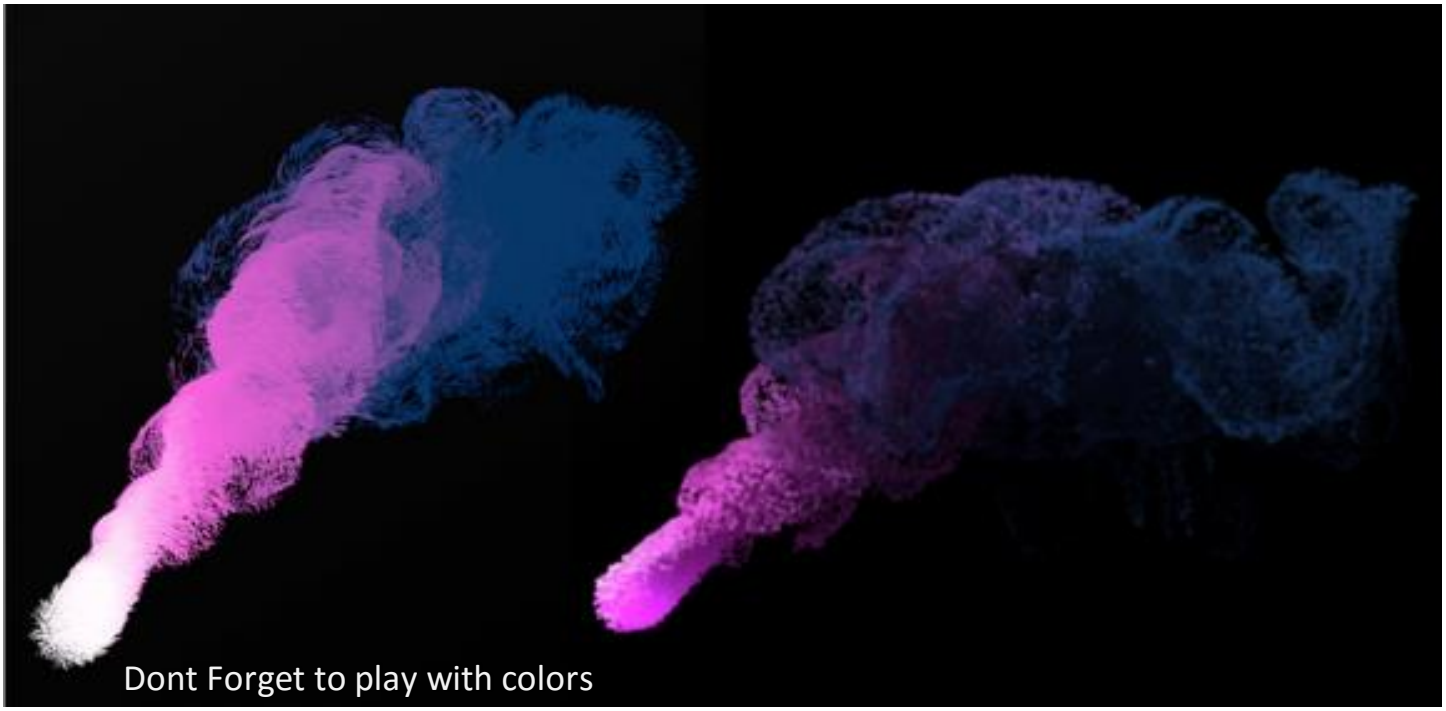
33. **Add an ambient light and set its intensity to 0.2 or 0.1**
    Just to make the dark parts a bit more visible.

34. **Make sure the Fluid is not mad at you**
    Just in case, how can you do that?! Well just look at him, if flame is coming out of his mouth without hitting playback or you see an angry look, if not you are good to go.

35. **Render your scene with mental ray.**
    Beside the shading settings inside nparticleShape you can also look at "npPointsVolume" attributes, you can find it in hypershade or by holding right click on particles and select "Material Attributes…"

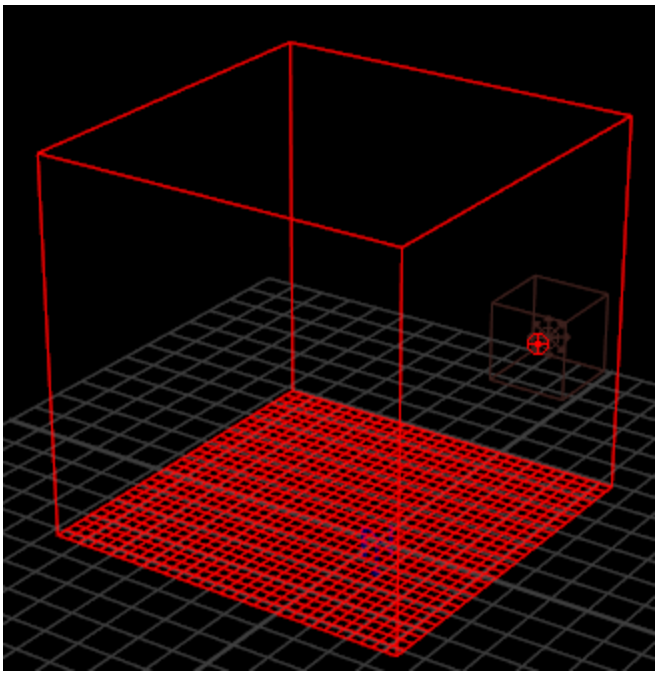
    Don't use mental ray motion blur, its usually pretty slow.
    In case of Maya 2016, it's a lot better to use Legacy Sample Mode.





Alright that is it another safe and cool tutorial, hope you … wait a minute I forgot to do Step 34

Oh my god! Why is my fluid container turning RED?



It is just like the last time but even worst…

Oh boy

This isn't happening

Not again
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No
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No
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No
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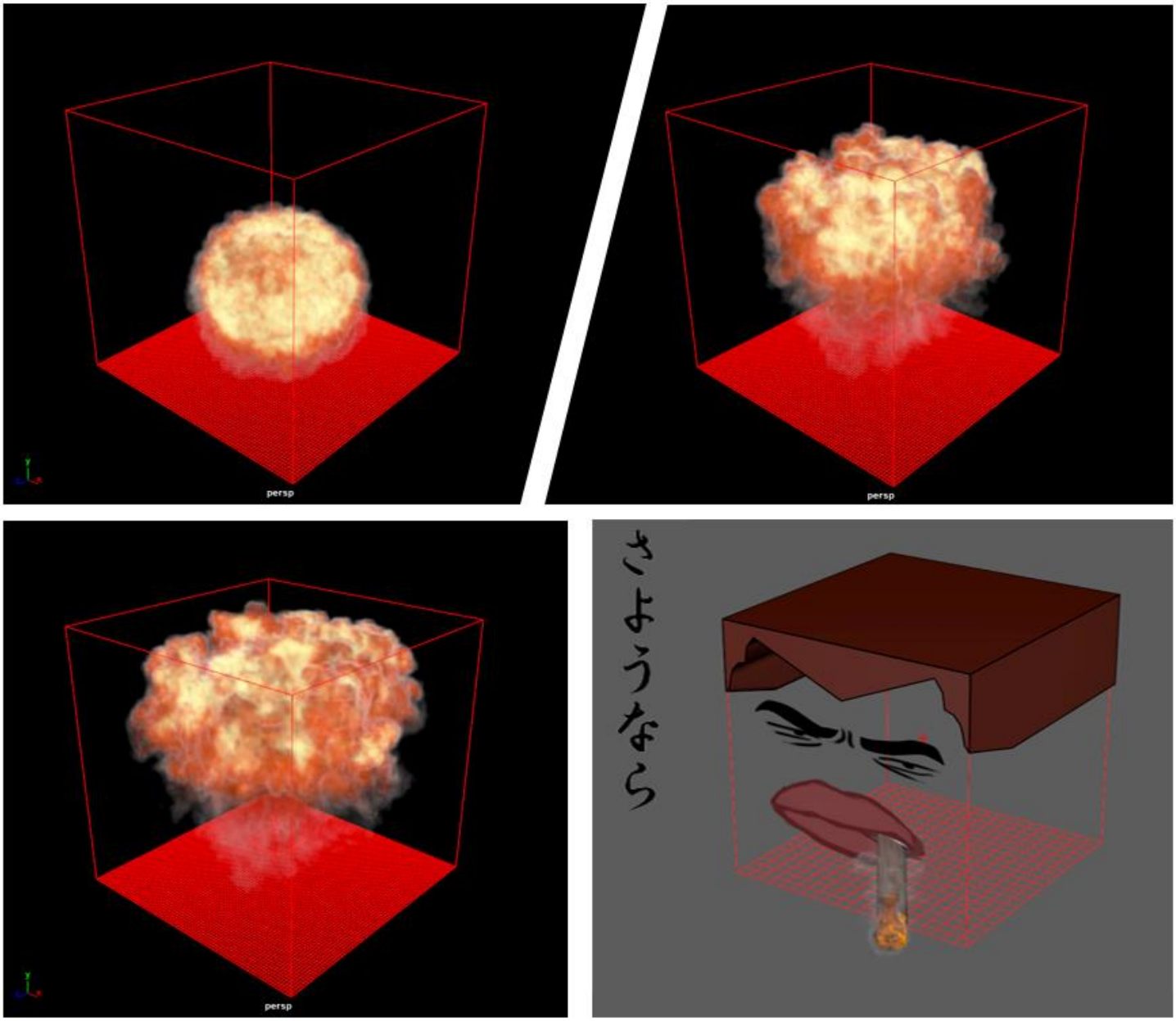
NOOOOOOOOooooooooooooooooo!!!!!!!!!!!!!!!



Alright Guys. ;)
Hope you enjoyed this tutorial and find it useful.
Don't forget to pray for me and remember Never Ever make a fluid angry ☺

I am Morteza Ahmadi, don't forget to leave a comment and I'll see you in next PDF.