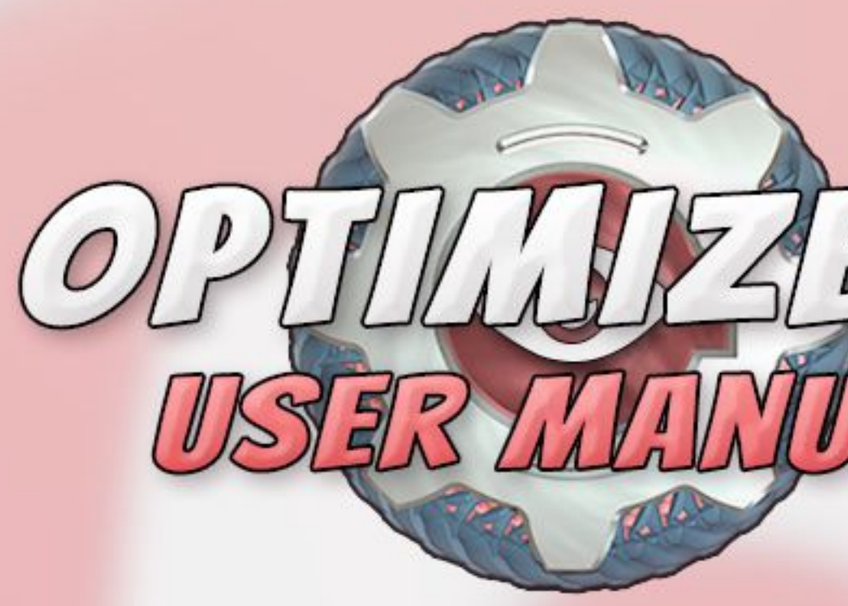
FIMPOSSIBLE CREATIONS



OPTIMIZERS
USER MANUAL

INTRODUCTION:

OPTIMIZERS IS PACKAGE WITH COMPONENTS WHICH WILL GIVE YOU POSSIBILITY TO CHANGE QUALITY SETTINGS OF DIFFERENT COMPONENTS WHEN THEY ARE FAR FROM CAMERA, WHEN CAMERA IS NOT LOOKING AT THEM, OR WHEN OBJECTS ARE BEHIND WALL.

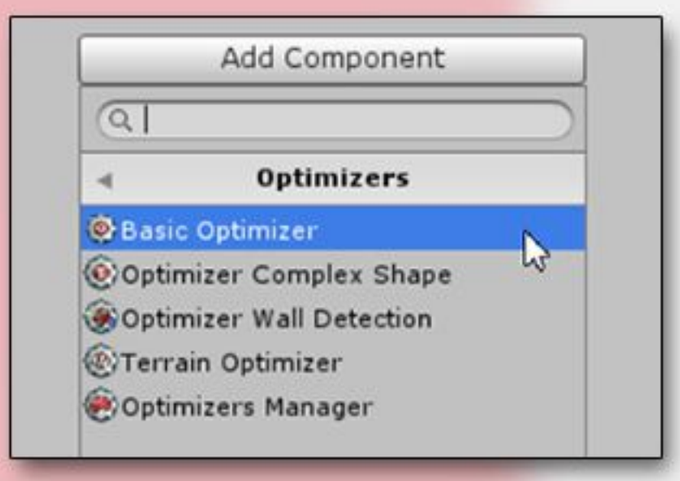
THIS SYSTEM IS USING CULLING GROUPS API AND OTHER SMART WAYS TO DETECT MOMENTS IN WHICH SETTINGS SHOULD BE CHANGED TO GIVE YOU MORE FPS!

IF YOU WILL LIKE THIS PACKAGE PLEASE VISIT PAGE ON ASSET STORE AND RATE OR WRITE REVIEW :)

OPTIMIZERS
USER MANUAL

1 / 5 - QUICK GUIDE:

TO USE OPTIMIZERS SIMPLY Add Component TO YOUR GAME OBJECT. AFTER THAT OPTIMIZER IS AUTOMATICALLY TRYING TO FIND COMPONENTS FOR OPTIMIZATION ATTACHED TO THIS OBJECT. IF THERE IS NO COMPONENT TO OPTIMIZE IT IS TRYING TO FIND THEM IN CHILDREN.



BASIC OPTIMIZER IS THE MOST UNIVERSAL COMPONENT TO USE ON THE OBJECTS.

IF YOU WANT OPTIMIZE OBJECT WHEN BEHIND OBSTACLES THEN USE ONE WITH DETECTION.

WITH OPTIMIZERS MANAGER YOU CAN DEFINE SOME WORLD RULES HELPING CORRECT OPTIMIZING.

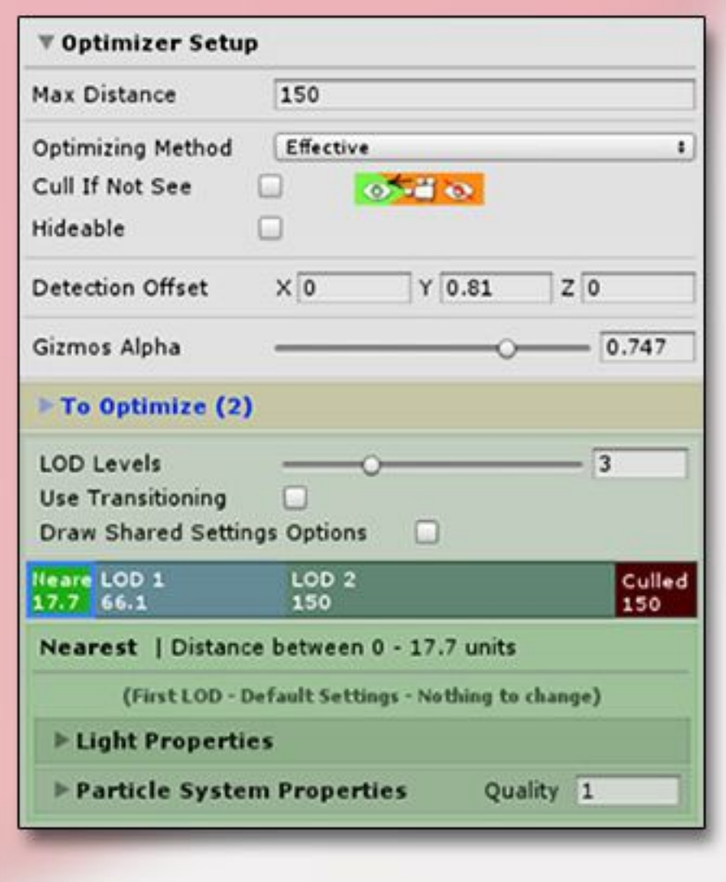
INSPECTOR WINDOW FOR OPTIMIZER COMPONENT IS CAREFULLY DESIGNED TO MAKE YOU FOCUS ON RIGHT MODULES STEP BY STEP.

AT FIRST THERE ARE PARAMETERS FOR DETECTION
THEN SELECTING COMPONENTS TO OPTIMIZE
AND FINALLY LOD*/QUALITY SETTINGS.

CHOOSE YOUR OPTIMIZATION METHOD, DETECTION BEHAVIOUR AND CONFIGURE TO FIT WITH YOUR OBJECT.

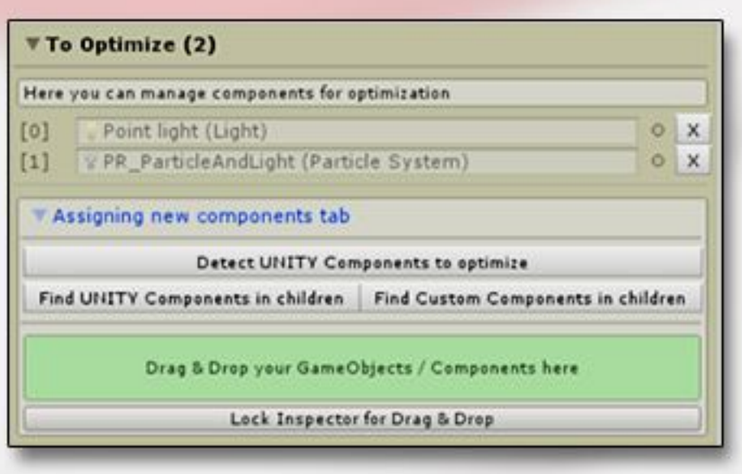
DEFINE HOW MANY LOD (QUALITY) LEVELS YOU WANT TO USE. YOU CAN CHANGE LOD LEVELS SMOOTHLY WITH TRANSITIONS.

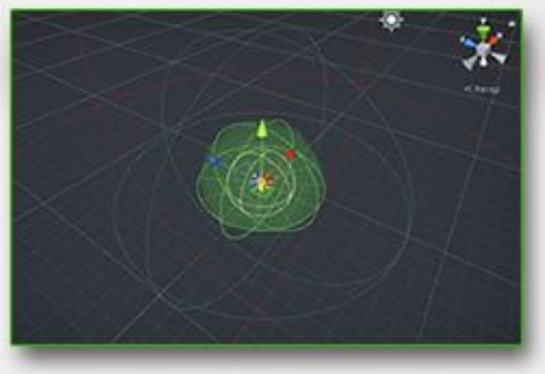
EVERY TIME YOU CHANGE COUNT OF LOD LEVELS THERE ARE AUTOMATICALLY GENERATED QUALITY SETTINGS FOR THIS COUNT WHICH YOU CAN FREELY MODIFY



*L.O.D. IS SHORTCUT FOR LEVEL OF DETAIL!

BY DEFAULT OPTIMIZER IS SEARCHING ONLY FOR UNITY COMPONENTS BUT YOU CAN PUT HERE CUSTOM MONOBEHAVIOURS BY DRAG&DROP TO FIELD INSIDE 'TO OPTIMIZE' TAB.





OPTIMIZERS
USER MANUAL

2 / 5 - COMPONENTS DESCRIPTION:

OPTIMIZERS MANAGER: THIS COMPONENT DON'T NEED TO EXIST WHEN YOU USE ONLY STATIC OPTIMIZERS AND NOT USING LOD TRANSITIONS.

IT'S HANDLING UPDATE OF DYNAMIC OPTIMIZATION, ADAPTING TO GAME PERFORMANCE AND SMOOTH TRANSITIONING BETWEEN LOD LEVELS.

IT'S RECOMMENDED TO USE 'PERSIST THROUGH SCENES' SO IT WILL STILL EXIST WHEN YOU WILL CHANGE SCENES DURING GAMEPLAY BUT IT WILL BE GENERATED AUTOMATICALLY ANYWAY WHEN NEEDED AND NOT EXISTING YET.

THERE ARE SOME PARAMETERS INSIDE IT YOU NEED CONFIGURE TO MAKE IT FIT TO YOUR GAME WORLD.

OPTIMIZER: BASIC OPTIMIZER COMPONENT WITH POSSIBILITIES TO CULL* OBJECT OR CHANGE LOD QUALITY SETTINGS IN DEFINED DISTANCE LEVELS OR HIDE WHEN CAMERA WILL LOOK IN DIFFERENT DIRECTION.

THIS COMPONENT HAVE ALL OPTIMIZING METHODS AVILABLE TO USE.
YOU CAN CULL STATIC AND DYNAMIC OBJECTS AND DEFINE VISIBILTIY DETECTION (WHEN CAMERA LOOKING AWAY) WITH ONE SIMPLE SHAPE.

*CULL MEANS TURNING OFF COMPONENTS/GAME OBJECT
*HIDE MEANS APPLYING ADDITIONAL LOD LEVEL WHERE YOU CAN SET IF YOU WANT TO DEACTIVATE FULL OBJECT OR JUST SINGLE COMPONENTS

OPTIMIZER COMPLEX SHAPE: SAME LIKE DEFAULT OPTIMIZER BUT OPTIMIZATION METHODS LIKE 'DYNAMIC' OR 'TRIGGER BASED' ARE NOT AVAIABLE (METHOD 'EFFECTIVE' IS ANYWAY THE BEST FOR DYNAMIC OBJECTS)

THIS COMPONENT GIVES POSSIBILITY TO BUILD DETECTION SHAPE FROM MULTIPLE SPHERES FOR MORE DETAILED WORK. IT FEATURES TOOLS TO EASILY CREATE SPHERE STRUCTURE ON MESHES SHAPE.

OPTIMIZER OBSTACLE DETECTION: SAME LIKE DEFAULT OPTIMIZER BUT OPTIMIZATION METHOD LIKE 'STATIC' IS NOT AVAIABLE.

THIS COMPONENT GIVES POSSIBILITY OF HIDING OBJECT WHEN IT IS BEHIND WALL (YOU CAN DEFINE IF HIDDEN OBJECT SHOULD BE DEACTIVATED OR STILL MOVE ETC.)

IT CAN BRING BIG PERFORMANCE BOOST BUT USE IT VISELY.
DON'T USE IT ON OBJECTS WHICH PUTS ONLY TINY PRESSURE OVER GAME PERFORMANCE BECAUSE DETECTION COULD TAKE MORE CPU THAN OBJECT ITSELF.
DEFINE COUNT AND SHAPE OF DETECTION RAYS TO BE MOST EFFECTIVE FOR YOUR OBJECT.

TERRAIN OPTIMIZER: COMPONENT DESIGNED TO SUPPORT OPTIMIZATION OF UNITY TERRAINS. IT HAVE UNIQUE GIZMOS VISIBLE ON SCENE VIEW TO HELP YOU SET IT UP TO YOUR PROJECT NEEDS.

IT SHOULD BE USED ONLY WHEN YOUR GAME IS USING MULTIPLE TERRAINS.
YOU CAN EFFECTIVELY SWITCH QUALITY SETTINGS OF TERRAINS WHEN IT'S OUT OF CAMERA VIEW OR IN CERTAIN DISTANCE FROM NEAREST POINT OF IT.

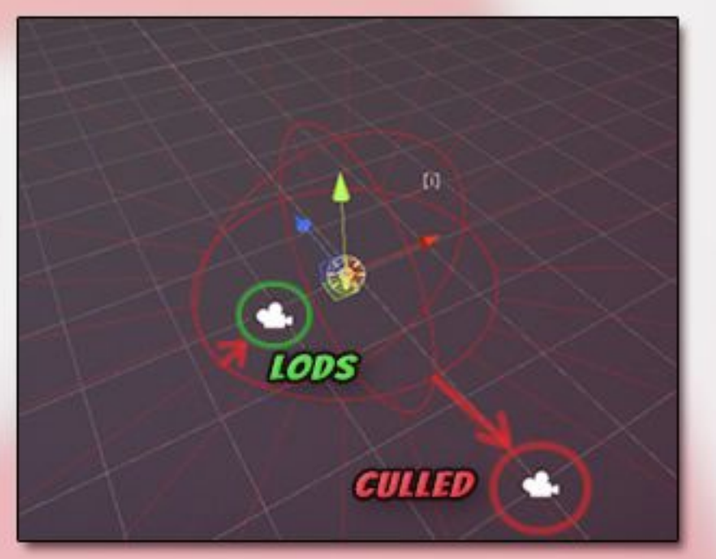
QUALITY SETTINGS FOR DIFFERENT LEVELS ARE GENERATED AUTOMATICALLY BUT YOU CAN FREELY MODIFY THEM.

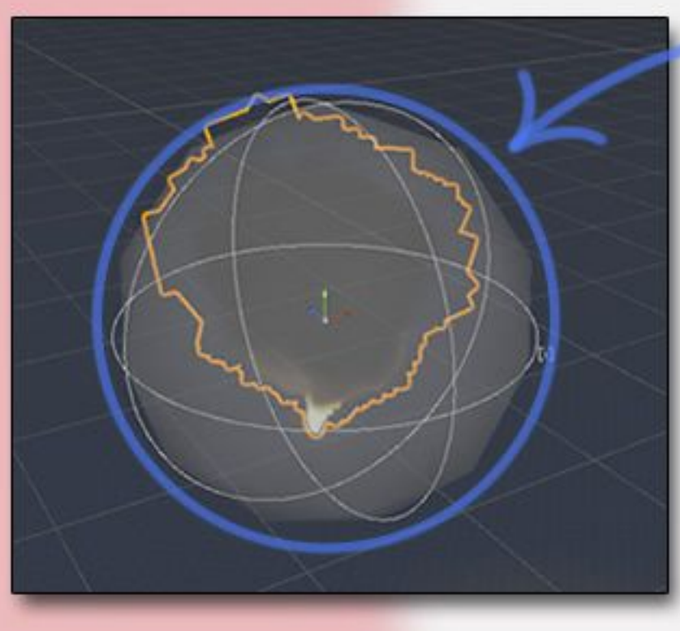
OPTIMIZERS
USER MANUAL

3 / 5 - USING OPTIMIZERS:

AFTER ADDING OPTIMIZER TO YOUR OBJECT, YOU MUST CONFIGURE IT'S BEHAVIOUR.

FIRST SET MAX DISTANCE, IF CAMERA WILL BE OUT OF RED SPHERE WHICH IS VISIBLE IN GIZMOS, OBJECT CAN BE DEACTIVATED AND NOT USED ANYMORE UNTIL CAMERA STEPS AGAIN INTO DISTANCE RANGE SPHERE.





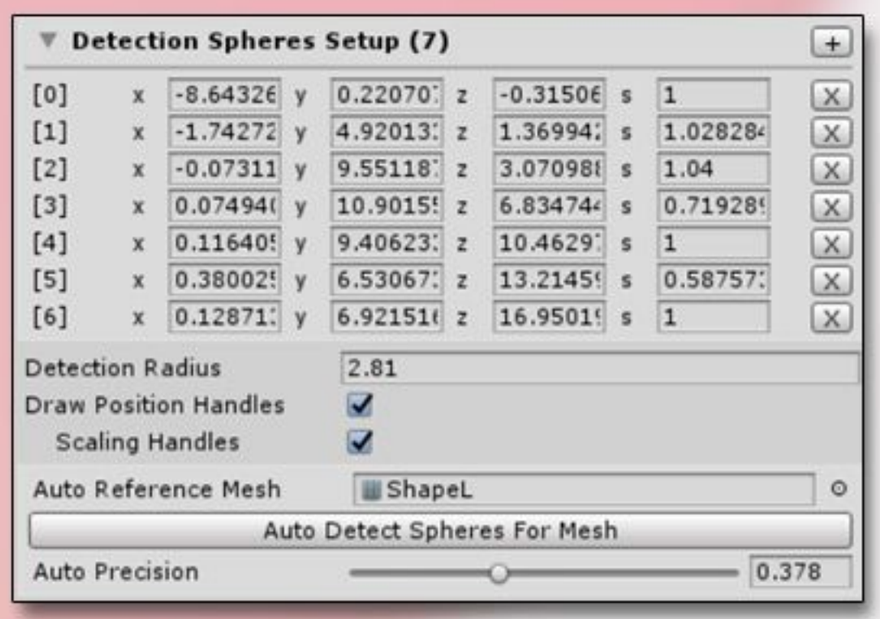
IF YOU WANT TO CHANGE QUALITY SETTINGS WHEN OBJECT IS NOT VISIBLE IN CAMERA VIEW, (VERY USEFUL FOR PARTICLE SYSTEM OPTIMIZATION) THEN USE 'CULL IF NOT SEE' TOGGLE.

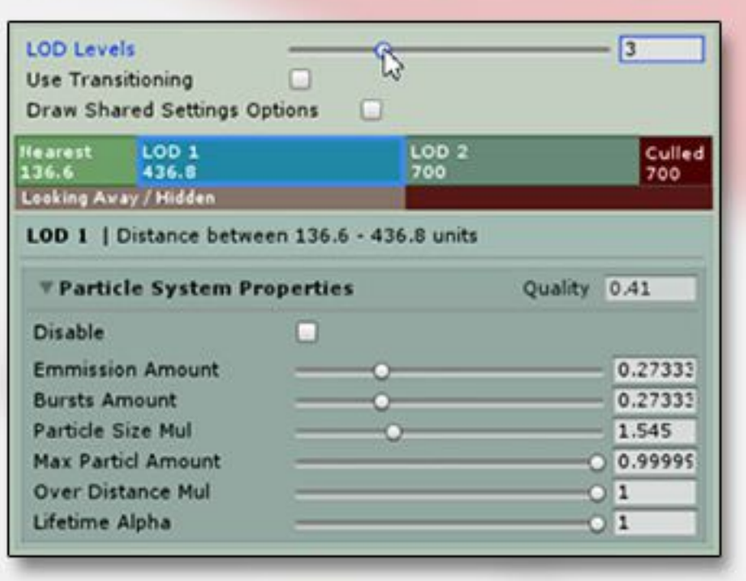
NOW YOU HAVE TO DEFINE DETECTION SHAPE. IF THIS SHAPE WILL BE VISIBLE IN CAMERA VIEW, THEN OBJECT WILL USE LODS, IF NOT - HIDDEN*

*HIDDEN MEANS APPLYING ADDITIONAL LOD LEVEL WHERE YOU CAN SET IF YOU WANT TO DEACTIVATE FULL OBJECT OR JUST SINGLE COMPONENTS

IF SINGLE SPHERE CAN'T DESCRIBE SHAPE OF YOUR OBJECT ENOUGH, YOU CAN USE OPTIMIZER COMPLEX SHAPE COMPONENT TO CREATE SHAPE FROM MULTIPLE SPHERES OR DO IT AUTOMATICALLY BASING ON CERTAIN MESH.

(UPCOMING FEATURE)
YOU CAN CREATE DYNAMIC SHAPE USING TRANSFORM TOGGLE, THEN ONLY "EFFECTIVE" METHOD WILL BE AVAIABLE. YOU CAN USE IT FOR EXAMPLE ON BONES OF SKINNED MESHES.



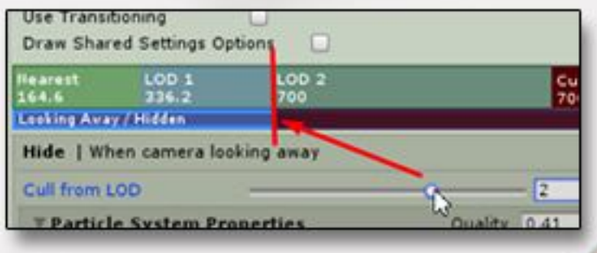


CHANGE LOD LEVELS COUNT FROM 1 TO 8, WITH COUNT=1 THERE WILL BE ONLY ACTIVE AND CULLED STATE.
(EVERY TIME YOU CHANGE LOD LEVELS AUTOMATIC SETTINGS WILL BE GENERATED)

DEFINE TRANSITION TIME FOR SMOOTH CHANGING LOD LEVELS.

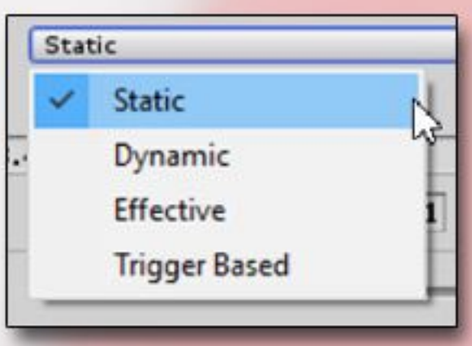
CLICK ON LOD SQUARES TO VIEW SETTINGS FOR CERTAIN DISTANCE LEVEL, IF YOU HAVE ENABLED "CULL IF NOT SEE" OR "HIDEABLE" YOU CAN ACCESS ADDITIONAL "HIDDEN" SLOT.

YOU CAN DEFINE IN WHICH DISTANCE HIDDEN SETTINGS SHOULD BE APPLIED WHEN CONDITIONS ARE MET.



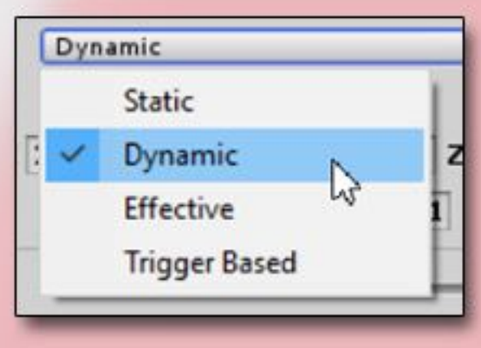
OPTIMIZERS
USER MANUAL

4 / 5 - OPTIMIZATION METHODS & PRESETS:



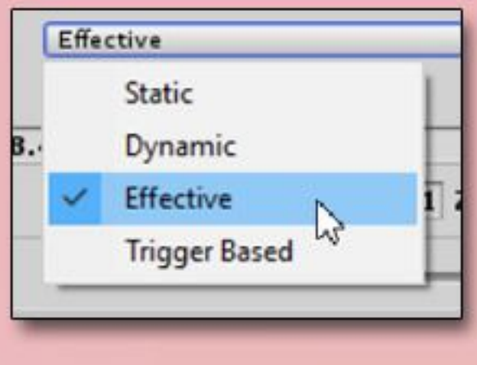
STATIC: THIS METHOD IS USING JUST CULLING GROUPS API. YOU CAN HIDE OBJECT IF IT IS NOT VISIBLE IN CAMERA VIEW AND SET UP DISTANCE LEVELS FOR LODS. (OPTIMIZERS MANAGER IS NOT NEEDED)

GAME OBJECT DON'T NEED TO BE MARKED AS STATIC, OBJECT CAN MOVE AROUND BUT SHOULDN'T LEAVE DETECTION SHAPE (SPHERE)



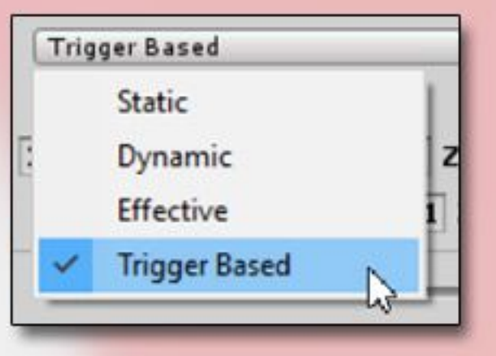
DYNAMIC: CAN BE USED ON OBJECTS WHICH ARE MOVING IN WORLDS SPACE. DETECTION SHAPE THIS TIME ISN'T SPHERE BUT BOX.

THIS OPTIMIZATION METHOD CAN GIVE THE BEST PERFORMANCE BUT ENABLING OBJECTS BACK WHEN CAMERA SEES IT AGAIN OR WHEN OBJECT ENTERS NEW LOD RANGE CAN BE DELAYED WHICH COULD BE UNWANTED!



EFFECTIVE: REGCOMENDED METHOD TO USE UNIVERSALLY WITH OPTIMIZERS. IT IS USING CULLING GROUPS API AND UPDATES IT WITH DYNAMIC'S METHODS.

IT'S QUICK, CAN BE USED WITH DYNAMIC OBJECTS AND SOLVES PROBLEM WITH DELAYED SWITCHING OF LOD LEVELS AND HIDING.



TRIGGER BASED (EXPERIMENTAL): DIFFERENT APPROACH FOR OPTIMIZATION USING JUST TRIGGER COLLIDERS. IF YOU DON'T NEED DETECT IF OBJECT IS VISIBLE IN CAMERA VIEW THEN OPTIMIZERS MANAGER WILL BE NOT NEEDED ("CULL IF NOT SEE" UNTOGGLED) WITH THIS METHOD, THEORETICALLY IT SHOULDN'T PUT ANY PRESSURE OVER CPU WHEN USED LIKE THAT.

BECAUSE SOME ENGINE LIMITATIONS CREATING PREFAB FROM SCENE OBJECTS WILL ERASE SETTINGS DONE BEFORE CREATING PREFAB.

BUT WHEN YOU ALREADY HAVE PREFAB, ALL CHANGES WILL BE STORED INSIDE PREFAB ASSET FILE.

YOU CAN SAVE LOD SETTINGS FOR CERTAIN COMPONENT INSIDE FILE AND ASSIGN IT TO OTHER OPTIMIZER, THEN YOU ARE ABLE TO SHARE SAME SETTINGS OVER WHOLE PROJECT AND MODIFY ALL SIMULTANEOUSLY.

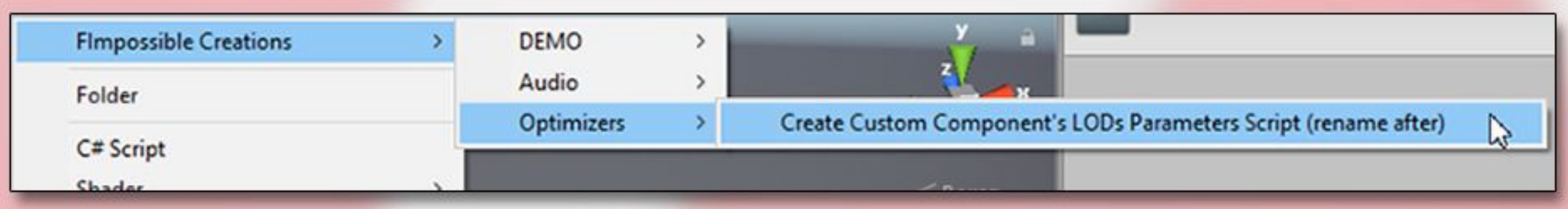
USE "DRAW SHARED SETTINGS" TOGGLE TO SEE SPECIAL PRESETS OPTIONS.

OPTIMIZERS
USER MANUAL

5 / 5 - ADVANCED FEATURES:

IF YOU ARE CODER YOU CAN EASILY IMPLEMENT CUSTOM COMPONENTS SUPPORT TO OPTIMIZERS SYSTEM!

SIMPLY HIT RIGHT MOUSE BUTTON SOMEWHERE IN YOU PROJECT AND:



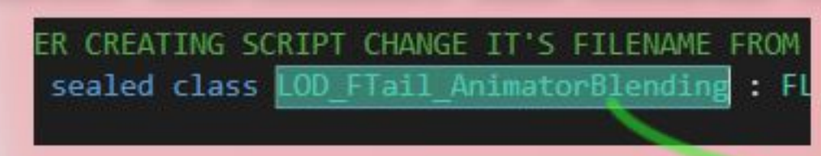
NAME NEW FILE WITH YOUR TARGET COMPONENT'S NAME

THERE WILL BE GENERATED CODE USING NAME OF YOUR COMPONENT AS PART OF IT SO YOU WILL HAVE ONLY FEW CODE-EDIT THINGS TO DO.

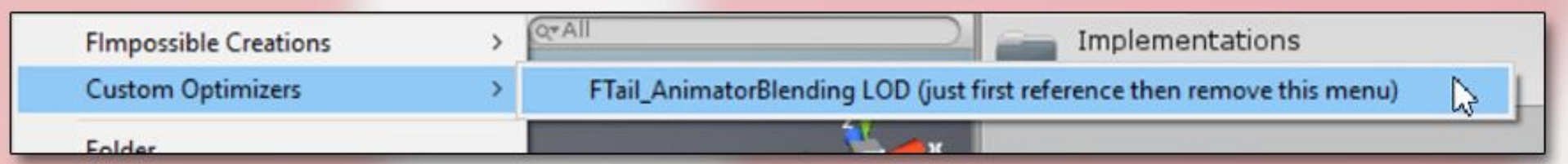
INSIDE SCRIPT FILE THERE WILL BE A LOT OF GUIDE TEXTS AND DESCRIPTIONS WHAT AND WHERE YOU HAVE TO DO.

DEFINE VARIABLES YOU WANT TO CHANGE INSIDE YOUR LOD SETTINGS, FILL CODE WITH THEM TO CORRECTLY IMPLEMENT ALL NEEDED FEATURES.

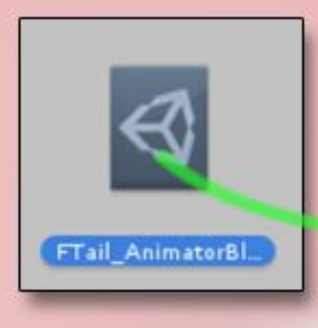
NOW RENAME CREATED FILE WITH CLASS NAME INSIDE FILE:



AFTER THAT HIT RIGHT MOUSE BUTTON AGAIN AND SELECT:



YOU WILL CREATE REFERENCE FILE WHICH NEEDS TO BE PLACED IN OPTIMIZERS MANAGER "CUSTOM COMPONENTS DEFINITION" LIST.



THEN AFTER DETECTING YOUR COMPONENT ADDED TO OBJECT OPTIMIZERS WILL USE YOUR CUSTOM CLASS TO SERVE IT!