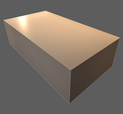
A TECHNICALLY CORRECT WORKFLOW TO BAKE FROM ZBRUSH TO YOUR GAME MASH

IN THIS TUTORIAL I'M GOING TO TRY TO EXPLAIN THE BASIC WORKFLOW TECHNICALLY CORRECT TO BAKE YOUR HIGHPOLY INTO YOUR GAME MESH, BY CREATING A CAGE, THE PROCESS IS VERY SIMILAR TO THE PREVIOUS TUTORIAL THAT I MADE (https://goo.gl/E7CKR2) THE DIFFERENCE BETWEEN THOSE ARE THAT THIS ONE IS TECHNICALLY CORRECT, BUT IT MIGHT REQUIRE MORE TIME, THE OTHER ONE ISN'T 100% CORRECT BUT IT'S FASTER IF **YOU HAVE TIME ALWAYS USE THIS ONE.**

BUILD YOUR LOWPOLY + UV



EASY AS IT LOOKS CREATE YOUR LOWPOLY MESH, AND UVS (YOU CAN MAKE UV ALSO LATER IF YOU WANT TO PREVISUALIZE QUICKY THE SCULPT IN ZBRUSH)

GET YOUR LOWPOLY READY FOR ZBRUSH

I DON'T USUALLY BRING MY MODEL IN ZBRUSH AND DYNAMESH IT, SO IF YOU WANT TO USE YOUR MODEL AS A BASE IN ZBRUSH, YOU NEED TO MAKE THE FACES OF YOUR LOW POLY WORK UNIFORMLY POSSIBLE, IN TERM OF SIZE. SO JUST ADD FEW LOOPS AFTER THAT JUST EXPORT IN OBJ AND IMPORT IT INTO ZBRUSH

ADD SUBDIVISION

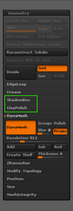
GOAL: YOUR MODEL, WITH SUBDIVISIONS, THE MORE

WHEN YOU REACH A GOOD LEVEL, YOU CAN DELETE LOW SUBDIVISIONS OPTION

UPS, YOU GOT A UGLY SMALL BUG IN

OR

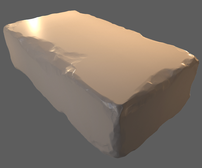
BRING YOUR IN-GAME MESH AND DYNAMEH IT



IF YOU ARE PLANNING TO DYNAMESH YOUR MESH, IN ZBRUSH, YOU CAN BRING YOUR IN-GAME MESH DIRECTLY WITHOUT ADDING EXTRA LOOPS

SCULPT YOUR MODEL

HERE JUST SCULPT THE MODEL AS YOU WISH, OF COURSE, THIS PROCESS WILL NOT WORK CORRECTLY IF YOU SCULPT DETAILS ON A SPHERE AND THEN TRY TO BAKE THEM ON A CUBE:)



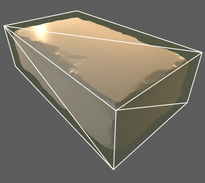
I USUALLY KEEP FINE DETAILS FOR THE TEXTURING PROCESS I FOUND IT FASTER AND A MORE NON-DESTRUCTIBLE WORKFLOW

EXPORT HIGHPOLY FROM ZB

EXPORT YOUR HIGHEST RESOLUTION LEVEL OF THE SCULPT

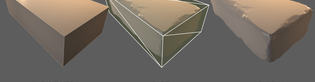
CREATE THE CAGE

WHAT IS A CAGE? TO MAKE IT SHORT THE CAGE IT'S A MESH WITH THE SAME NUMBER OF VERTEX THE SAME INDEX AS WELL OF YOUR LOWPOLY. THE ONLY DIFFERENCE IS THAT THE CAGE HAS TO CONTAIN EVERY DETAIL IN YOUR HIGHPOLY HOMOGENEOUSLY



WHEN YOU ARE DEALING WITH SIMPLE SHAPE AN EASY WAY TO CREATE A CAGE IS: DUPLICATE YOUR LOW POLY, SELECT ALL THE VERTEX AND MOVE THEM ALONG THIR NORMAL DIRECTION UNTIL YOUR MESH COVER ENTIRELY YOUR HIGHPOLY. FOR PARTICULAR SHAPE IT MIGHT REQUIRE SOME MANUAL ADJUSTMENTS

TIME TO BAKE

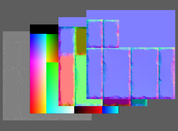


IN-GAME MESH WITH UVS

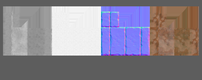
CAGE

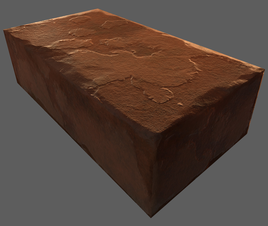
HIGHPOLY

NOW YOU ARE GOOD TO GO WITH THE BAKING PROCESS, AND YOU HAVE TO PLACE YOU IN-GAME MESH AS A LOWPOLY, YOU CAGE AS A CAGE :) AND GUESS WHAT YOUR HIGHPOLY AS HIGHPOLY ;)



NOW YOU CAN START TO TEXTURE YOUR ASSETS, AND AFTER THAT YOU ARE GOOD TO GO IN YOUR ENGINE.





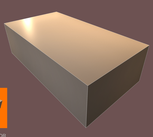
MADE BY: LEONARDO IEZZI IF YOU HAVE ANY QUESTIONS/FEEDBACK CONTACT ME: - WWW.LEONANO.COM

ANOTHER FAST BUT NOT TECHNICALLY CORRECT WORKFLOW

THIS TECHNIQUE IS ONE OF MANY WORKFLOWS THAT YOU CAN FOLLOW TO BAKE DETAILS FROM ZBRUSH TO YOUR LOWPOLY. I'M GOING TO MAKE A SINGLE BRICK FOR THE PURPOSE OF SHOWING THE TECHNIQUE ON THIS TUTORIAL. KEEP IT MIND THAT THIS IS ONE OF MANY WAYS TO DO ONE THING, AND THIS ONE IS FAST ESPECIALLY IF YOU DON'T HAVE MUCH TIME DURING PRODUCTION, IN MY OPINION. I HOPE THIS TUTORIAL CAN HELP TO SPEED UP YOUR WORKFLOW. IF YOU HAVE ANY SUGGESTION OF SOMETHING THAT YOU WOULD LIKE TO SEE IN THIS TUTORIAL LET, ME KNOW AT ACCOUNTS@LEONANO.COM

1

BUILD YOUR LOWPOLY + UV

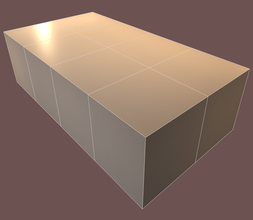


REMEMBER FOR THE NEXT IMAGE

EASY AS IT LOOKS CREATE YOUR LOWPOLY MESH, IN MY CASE IT'S JUST A VERY PRIMITIVE MESH. BUT REMEMBER THAT IT'S EASIER TO WORK WITH SIMPLE SHAPES AND YOU HAVE ALWAYS TIME TO ADD LOOPS AND SILHOUETTE VARIATION AT THE END. ABOUT THE UVS DO NOT FORGET TO KEEP IN MIND THE GENERAL RULES BEHIND THE PRINCIPLE OF BAKING NORMAL EDGE. I'VE TALKED ABOUT THAT IN THIS TUTORIAL: https://goo.gl/xhrxQ8

2

GET YOUR LOWPOLY READY FOR ZBRUSH

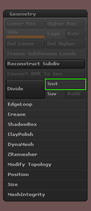


REMEMBER FOR THE NEXT IMAGE

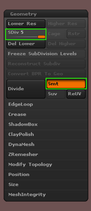
I DON'T USUALLY BRING MY MODEL IN ZBRUSH AND DYNAMESH IT. SO IF YOU WANT TO USE YOUR MODEL (WITH UV AS WELL) AS A BASE IN ZBRUSH YOU NEED TO MAKE THE FACES OF YOUR LOW POLY MORE UNIFORM AS POSSIBLE IN TERM OF SIZE. SO JUST ADD FEW LOOPS. AFTER THAT JUST EXPORT IN OBJ AND BRING IT INTO ZBRUSH

3.1

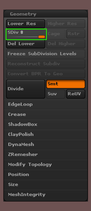
ADD SUBDIVISION



DIVIDE YOUR MODEL WITHOUT SMOOTHING THE MESH



WHEN YOU REACH A DENSE MESH RE-ACTIVATE THE SMOOTHING OPTION

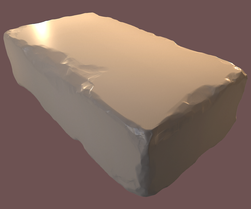


UNTIL YOU GET A VERY SMALL BEVEL

3.2

SCULPT YOUR MODEL

HERE JUST SCULPT THE MODEL AS YOU WISH, OF COURSE, THIS PROCESS WILL NOT WORK CORRECTLY IF YOU SCULPT DETAILS ON A SPHERE AND THEN TRY TO BAKE THEM ON A CUBE:)



REMEMBER FOR THE NEXT IMAGE

I USUALLY KEEP FINE DETAILS FOR THE TEXTURING PROCESS I FOUND IT FASTER AND A MORE NON-DESTRUCTIBLE WORKFLOW

3.3

EXPORTING STUFF FROM ZB

EXPORT YOUR HIGHEST RESOLUTION LEVEL OF THE SCULPT

THEN SELECT THE LOWEST SUBDIVISION LEVEL

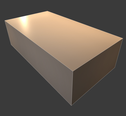
AND EXPORT IT TOO. THIS WILL BE YOUR "TOBAKE" MESH, SEE NEXT STEPS

FOLLOW THE STEPS N

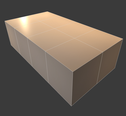
4 5 6

ANOTHER FAST BUT NOT TECHNICALLY CORRECT WORKFLOW

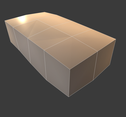
SO MANY LOWPOLYS



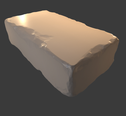
THIS WILL BE THE IN-GAME MESH. SO LET'S CALL IT IN-GAME MESH :) AND WE WILL USE THE RED COLOUR TO IDENTIFY IT.



THIS IS THE MESH THAT WE BROUGHT FROM MAYA/MAX TO ZBRUSH. LET'S CALL IT BRIDGE MESH, AND WE WILL USE THE BLUE COLOUR TO IDENTIFY IT, EVEN IF WE ARE NOT GOING TO USE THIS ANYWHERE :)



THIS IS THE BRIDGE MESH BUT WITH SOME VERTEX MOVED BASED ON THE SCULPT THAT WE MADE. LET'S CALL IT TOBAKE MESH, AND WE WILL USE THE GREEN COLOUR TO IDENTIFY IT.



HOPEFULLY, WE HAVE JUST ONE HIGHT POLY, AND GUESS WHAT, WE ARE GOING TO CALL IT HIGH POLY :)

ALL THE PROCESS

1

CREATE YOUR LOWPOLY MESH AND ITS UVS

2

IF IT'S NOT, MAKE YOUR LOWPOLY SUITABLE FOR ZBRUSH BY ADDING LOOPS AND EDGES TO HAVE ALL THE FACES WITH A UNIFORM SIZE

3

SCULPT YOUR HIGHPOLY AND EXPORT IT, AS WELL AS THE LOWEST SUBDIVISION (TOBAKE MESH) OF YOUR SCULPT.

4

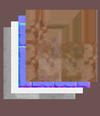
WE ARE GOING TO USE AS LOWPOLY OUR "TOBAKE" MESH

WHY: AS YOU CAN SEE THE TOBAKE MESH IS SLIGHTLY DIFFERENT FROM THE BRIDGE ONE, THIS IS BECAUSE WHEN WE SCULPTED THE HIGH POLY WE MOVED VERTEX, SO ALL THE SUBDIVISION LEVELS ARE AFFECTED. IN THIS WAY WE HAVE A MORE PRECISE LOWPOLY TO BAKE OUT DETAILS. IF YOU TRY TO BAKE INFORMATION FROM THE HIGHPOLY DIRECTLY TO THE IN-GAME MESH, YOU WILL GET SEAMS VERY NOTICEABLE.

5

SO YOU GET ALL THE BAKED MAPS BY USING YOUR TOBAKE MESH AS LOWPOLY AND THE HIGHPOLY AS IT IS.

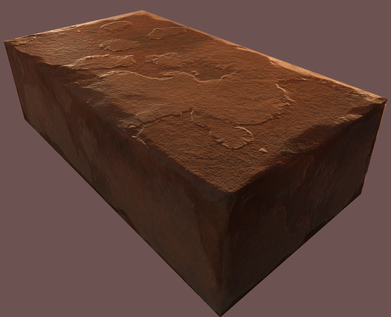
NORMAL BAKING TUTORIAL: https://goo.gl/xhrxQ8



YOU CREATE TEXTURE WITH YOUR FAVORITE SOFTWARE; YOU CAN USE BOTH TOBAKE OR IN-GAME MESH FOR THE VIEW-PORT. (THEY HAVE THE SAME UVS)

6

THEN YOU APPLY ALL THE TEXTURES TO YOUR IN-GAME MESH, AND YOU ARE GOOD TO GO TO YOUR FAVORITE ENGINE.



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