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## A Place Through Time

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# **A Place Through Time**

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RCEU20-ART-VMA-02

The goal of this project is to enhance and create the necessary content for a proof of concept Virtual Reality (VR) experience that allows the user to control time and see the evolution of one location through time, from the earliest stages of planet formation to modern day. Users will be in a fixed location in VR space but will be able look around an immersive environment and fast-forward or rewind time as well as skip eons, periods, epochs, or ages. A representative loop of time will be created for as many divisions of time the project team deems appropriate. During these loops if the location is underwater, then the user will see what it would have been like underwater at that time, if it was on land and in the Mesozoic era, then the dinosaurs from the area will be part of the loop, etc., right up to modern day. The final product will have several well researched locations the user can choose from and will likely incorporate procedural generation. Subject matter experts from a variety of fields such as biology, geology, history, and paleontology along with production staff of coders and artists will be needed to produce the fully featured project. The RCEU project will seek only to prove out the concept for the larger project by prototyping the major features needed to create the experience and by creating three initial content loops. Last year an RCEU grant supported creation of content for a modern loop of time featuring UAH. The needed research is done and the majority of models needed for this loop are in place, but are largely untextured. This RCEU proposal is to complete work on the modern loop as well as create the content needed for two additional loops (Hadean & Mesozoic).



The student member of the team will model, texture, shade, light, rig and animate 3D assets for use in the real-time VR simulation. As a prototype, the emphasis will be on creating the necessary assets quickly at the appropriate resolution over the fidelity of any one particular asset. As a collaborative project, an emphasis will be placed on scene upkeep, file naming, and proper use of version control - all industry best practices the student will benefit from better understanding. The selected student should be prepared to create a lot of models with very tight time, geometry, and texture restrictions imposed on them. In addition to the asset work, the selected student will collaborate with faculty mentor to assemble, set dress and animate prototype environments in the game engine for three time loops.

This project will have an intense schedule, but is an outstanding opportunity to learn and develop artistic and technical skills, gain a better understanding of industry best practices, as well as produce portfolio work. A positive attitude, good organizational skills, strong communication, and self-motivation are important traits the successful student will need for this role.

Students interested in this position need to have a solid understanding of the 3D CGI pipeline and are required to have completed ARS 220 Animation: Introduction, at least one 300 level animation course, and at least one 300 level modeling course before the RCEU project begins. Students with at least one 400 level animation production course (ARS 41X or 42X) are preferred.

The student will work on site with faculty member in Wilson Hall. Working hours will be flexible. Faculty member will not just be supervising & mentoring, but will also be working on the project, so regular contact will be vital to the success of the collaboration. Direct interaction will occur daily to assess progress, talk about issues or potential roadblocks, and to evaluate technical and artistic work completed. Thoughtful, detailed feedback will be provided, and is expected in return. Help will always be available, but a good deal of independent troubleshooting and problem solving is expected.