

Senior Design Project Description for FALL 2016

Project Title: Discovery Place Interactive Topographic Map (DP_TOPMAP)

Supporter: Discovery Place

Supporter Technical Representative: ASSIGNED

Faculty Mentor: ASSIGNED TBD (check one)

Single Team Dual Team (check one)

Personnel (EN/ET): 2 E, 1 Cp, Cv, 2 M, SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

Discovery Place is one of the leading hands-on science centers in the country. Visitors gain a greater understanding of science, technology and engineering in a fun, interactive and informal setting. This project is to design and fabricate a new interactive exhibit in which the visitors can interact with the topography and see changes effect the topography – e.g. creating an island.

Initial Project Requirements (e.g. weight, size, etc.):

The exhibit will use sand within a wood enclosure. Sand will be the medium in the box. A projector is to be mounted above the display and project the topography on the sand in the display.

An example can be seen in the YouTube video at: <https://www.youtube.com/watch?v=2AWJvlyc-10>

The display should incorporate the following features:

- If an area is left alone for 10+ seconds the following happen: animals and plant begin to populate the screen based on these details
- Lowlands get certain forests/bushes/grasses and associated animals
- Highlands/mountains get certain flora and fauna
- Waters get boats/dolphins/whales/turtles

Expected Deliverables/Results:

The deliverable will be a functioning display ready for installation at Discovery Place.

List here any specific skills or knowledge needed or suggested (If none please state none):

None