Team 29

Indira River Adventure

The first teams of explorers have just arrived on the recently colonized planet Indira, tasked with gathering information on the local creatures. They set sail down a nearby river in a boat equipped with handheld sensing devices, a communication system, and a variety of lights and sounds for attracting creatures. They are guided by Commander Larson, who watches the vehicle's video feed to advise the explorers on appropriate strategy. Near the end of the mission, he comments on the increasing splashing sounds and wonders where it is coming from. It turns out they have attracted something a bit larger than expected! When the river monster reveals itself, Commander Larson will have to divert the vehicle to safety by going over a waterfall.

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Riders first notice the unusual plants surrounding the river. As they take in the sights, they will start to hear footsteps and flapping wings. Commander Larson tells them to look for the source and point their sensing device at the creatures they find. Each time a rider senses a new type of creature, it appears on the control panel.

Riders will be encouraged to experiment with lights and sounds to attract different kinds of creatures. The ride speed varies due to several small drops. In the final encounter, riders will be faced with a giant river creature right in their path. To get away, their vehicle will switch direction, taking them down the final drop.

Creatures Discovered

Luring Options

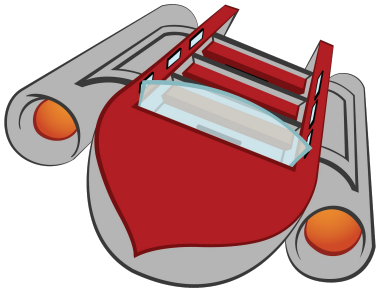
Bell | Whistle | Flash | Lights Off

Technical Systems

- The handheld sensing devices are Pixel XL Android phones which are tethered to the vehicle to provide power and prevent loss. They use ARCore to recognize creatures.
- The central control panel is powered by a NUC mini computer. Each row of seats has a display. Tactile buttons are used to control lights and sounds for attracting creatures.
- Most of the creatures are projection mapped into the scenes. This allows the ride to change the creatures that appear depending on lure selection.
- The river monster is an animatronic.
- Vehicle electronics are powered by an on-board battery power supply which lasts an entire day. Vehicles are recharged overnight.

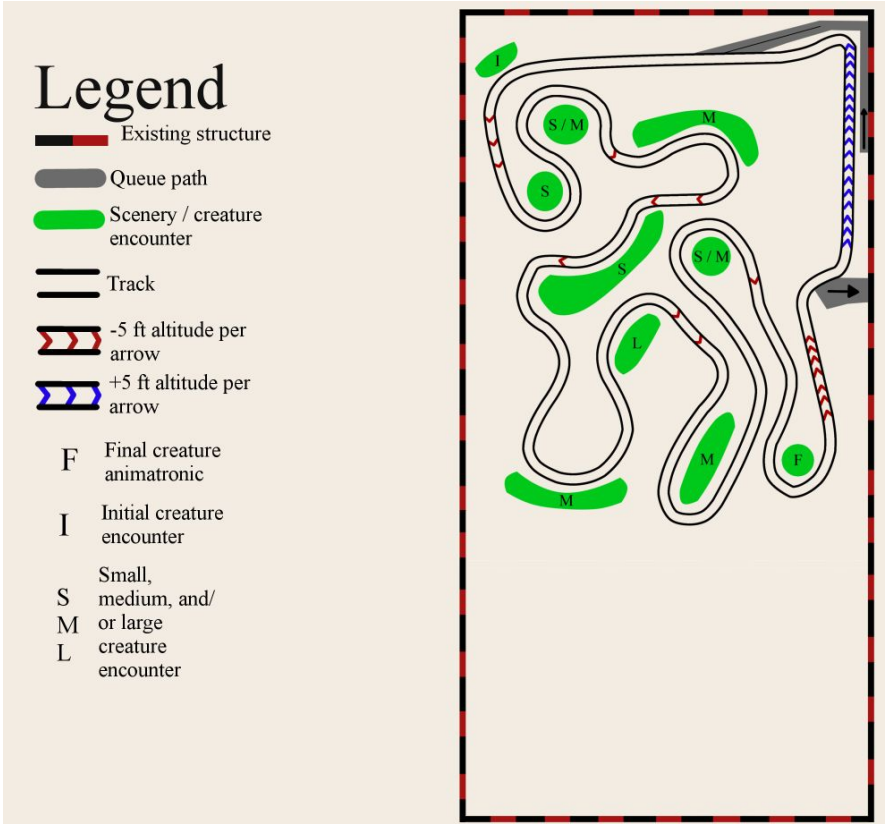
Ride Systems

- Each vehicle can hold up to six riders. Two vehicles will load at once and one vehicle will be released every 15 seconds. This gives a THRC of 1440.
- Vehicle propulsion will be handled by a large water pump capable of 150,000 gallons/min and small water jets throughout. This will keep a continuous current throughout the ride.
- The vehicle will maintain an average speed of 3 mph.



Site Layout

- Total track length: 1113.5 ft
- Guests on for 1007.8 ft
- Approximate ride length: 3.82 minutes
- The straight path at the beginning of the ride serves as a training period. Creatures are easy to see. Verbal and on-screen directions teach riders how to sense them.
- The ten creature encounters vary in difficulty due to size, scenery, and ride speed.
- Turns and drops prevent riders from seeing other vehicles.



Budget

Team 29

Item	Unit Price	Quantity	Total Price
Pixel XL	$850	6 / vehicle =126	$107,000
Customized Phone Casing	$100	6 / vehicle =126	$12,600
NUC Mini Computer	$471	1 / vehicle =21	$9,891
Control Panel Monitors	$480	3 / vehicle =63	$30,240
Control Panel Buttons/Wiring	$15	3 / vehicle =63	$945
Vehicle Headlights	$10	2 / vehicle =42	$420
Vehicle Speakers	$150	2 / vehicle =42	$6,300
Vehicle Batteries	$10,000	1 / vehicle =21	$210,000
Projectors	$8,000	72	$576,000
Media Servers	$89,995	12	$1,079,940
Natural Scenery	$300	8,000 sq ft	$2,400,000
Scenery Platforms	$200	8,000 sq ft	$1,600,000
Monster Animatronic	$2,500,000	1	$2,500,000
Queue and Exterior Painting	$20	10,000 sq ft	$200,000

Item	Unit Price	Quantity	Total Price
Steel Framing for Track	$1000 / circumference every 5 ft	223	$223,000
Conveyor Belt	Estimate from Titan Conveyors	1	$20,000
Water Pump	Estimate from Progressive Pumps	1	$1,000,000
Water Filter	$2,204.1	1	$2,204.1
Fiberglass for Track and Vehicles	$4.09 / lb	18,092.5 lbs	$73,998.5
Steel Framing for Vehicles	$2385.6	20	$47,711.9
Foam Seats	$35	6 / vehicle = 126	$4,410
Steel Piping	$40 / ft	1200 ft	$48,000
Track and Vehicle Manufacturing	⅔ Material Cost		$188,521
Track and Scenery Supports	$1600 / support (average)	150	$240,000
Labor	$22.5 / hr (average)	1 year, team of 20, 20% overhead	$1.08M

Interactive Technology: $2,033,436

Scenery: $6,700,000

Ride Mechanics and Building: $2,927,845.5

Grand Total: $11,661,281.5

Return Visits, Merchandising, and the “WOW” Factor

- This ride is unique in that it is competitive but goes beyond a numerical score.
- Visitors may want to compete with their family members or keep riding again until they have discovered everything.
- If the park implements a visitor identification system such as wristbands or an app, the ride can connect with this system by reporting what creatures were discovered each time through.
- There is an opportunity for additional revenue by selling certificates, badges, and shirts that list achievements or assign an explorer rank based on performance.
- By allocating a significant portion of the budget to the final animatronic it will be one of the world’s greatest for years to come.
- Because this proposal is under the maximum construction cost, there will be plenty of room for creating the interactive software and projected graphics that will make this ride shine.

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