

VERMONT TECH

Afternoon Session: 1:00pm – 3:30pm, rooms 401A/B
CPE, IT & SE Programs (Prof. Jean Hakim, Project Advisor)

Presenters: Nicole Hurley (BS.CSE) & Seth Lunn (BS.CSE)

Project Title: Roleplaying Coder (RPC)

Project Description: Roleplaying Coder (RPC) will be a roleplaying game designed to teach children at the middle school level programming concepts while simultaneously giving a storyline and unique and entertaining gaming experience. The game will focus on a male or female character (player's choice) who goes on a quest. During the combat stages and the gear creation phases of the game the player will have to use creative, logical, and problem solving skills in order to advance in the game.

Presenters: Kelsey Bull (BS.CSE) & John Candido (BS.CPE)

Project Title: Terra Neo Board Game

Project Description: Terra Neo is an indie-developed board game wherein players take the role of gods as they build a new world. The core gameplay revolves around tile placement and strategic maneuvering for the locations of temples as the players take turns building to increase their divine power. The winner is the player with the most valuable temples when the world is completed. This project will take the existing board game mechanics, as well as art assets from the existing game and implement them as an app for Android.

Presenters: Team Members: Randy Belval (BS.CIT), Armin Coric (BS.CIT), Rajen Dahal (BS.CPE), Hem Dulal (BS.CIT), Deo Pokhrel (BS.CIT)

Project Title: Pali

Project Description: Pali is an ecommerce website for Nepali Kitchen located in Essex Junction, Vermont. The website will allow the user to look at the menu options, order online and have them pick it up in store. There will be a mandatory pre-paid policy. The app will have a confirmation page showing them the order details before processing their payment. Customers can also make reservations for any parties that might include, weddings, birthdays, and special occasions.

Presenters: Team Members: Hossain Al-Mordef (BS.CIT), Wayne S. Watker (BS.CIT), Tom Weening (BS.CIT)

Project Title: The Remote Lab Experience (RLE)

Project Description: With the introduction of networking certificates, academic facilities are getting students in industry that cannot travel to campuses, yet still need access to the equipment in our Labs. This proposal describes how students shall have access to preconfigured networking equipment, potential resources required as well as the benefits academic facilities will reap via implementation. The RLE Project shall create a reliable product to facilitate students participating in networking certificate program(s) in accessing the necessary lab equipment.

The RLE project shall enable remote access via a server, database and an adaptive security appliance (ASA) for additional security, to three routers and three switches located on both the Vermont Technical College (VTC) Williston and Randolph campuses. This equipment shall be reserved for remote users only. Students shall be able to configure (and reset) each device separately via console access, and will be able to perform lab exercises assigned by instructors, the hardware previously configured and documented for the user, while accessing from a network other than the campuses. This will open up possibilities to reach more students and potentially increase student enrollment at VTC.

< Discussions & Program Conclusion >

VERMONT TECH

5th Annual Student Project Presentations
Williston Campus
CPE, EET, ELM, IT and SE Programs

“Designing a Better World with Technology”

May 05, 2017



VERMONT TECH

Morning Session I: 8:30am – 10:45am, rooms 401A/B
BS.EET, BS.ELM (Prof. Michael Marceau, Project Advisor)

Presenters: Puru Nepal (BS.EET) and Andrew Faure (BS.ELM)

Project Title: Self-Watering System for Indoor Plant

Project Description: A self-watering system for indoor plants by using a freedom board used in previous course and building a shield board that communicates with this freedom board. The board connects to an LCD that displays the soil moisture content for each plant.

Presenter: Daniel Rapoza (BS.ELM)

Project Title: Heat Retention Bacterial Barrier

Project Description: This project focuses on the automation of several curtains at a local Vermont dairy farm. These curtains simultaneously function as a heat retainer and bacteria barrier. This barrier resides between a free-stall cow barn with temperatures ranging from 30°F to 100°F and a double-6 milking parlor that has a target temperature of around 70°F. The PLC (Programmable Logic Controller) will have inputs from sensors indicating where cows are, what position the curtains are in and weather the curtains need to change position.

Presenter: Muteb Alzamanan (BS.ELM)

Project Title: Home Security System

Project Description: The project is a simple home security system that uses DHT11 and PIR sensors to gather information from the environment. A keypad will be used to receive input from the user and a 16 by 2-character LCD display will be used to output information to the user. An Arduino Uno controls everything and a speaker sounds the alarm.

Presenter: Jason Rol (BS.ELM)

Project Title: High Performance Traction Control

Project Description: Traction Control is a system designed to limit the amount of power transmitted to the drive wheels of a vehicle. Automobile manufacturers have various designs for traction control that work perfectly on unmodified vehicles and are designed to maximize traction on slippery roads. Vehicles that have been modified quickly surpass the capabilities of the original system and are usually trying to maximize traction under all conditions. The purchase of an aftermarket engine management system is the only other option to obtaining a high performance traction control system; there are no other products available to manage high power.

Presenters: Kyle Desso (BS.ELM), Shaun Hooker (BS.ELM), Niels Huisman (BS.ELM)

Project Title: VTBB-1 Ball Bot

Project Description: The VTBB-1 is a three-wheeled bot placed inside a ball. The chassis sits in the bottom of the ball and uses three omni-wheels mounted on dc motors to drive. The bot receives direction from a PS4 controller. The bot will detect and avoid objects that may not be visible to the operator. A mechanically balanced head will be mounted on top housing the sensors.

< Session Break & Project Demonstrations >

VERMONT TECH

Morning Session II: 11:00am – 12:30pm, room 215
AE.CPE & AE.EET Programs (Prof's. Ralph Esposito & Matt Gallagher, Project Advisors) – Poster Presentations

Presenter: Todd Tatreault

Project Title/Description: "Walking the Dog" A flashlight remote-controlled robot

Presenter: Christopher Daigle

Project Title/Description: "Ballistic Chronograph using optical sensors"

Presenter: Samuel Teasdale

Project Title/Description: "Modified Walkie Talkie Morse Code Communicator"

Presenter: Devin Allen; Project Title/Description: "Racing Simulator Hydraulic Handbrake"

Presenter: Aldin Konjuhovac; Project Title/Description: "Range finder"

Presenter: Sam Pratt; Project Title/Description: "Stereo FM radio"

Presenter: Kayla King

Project Title/Description: "Microcontroller-based Simon Says Game"

Presenter: Michael Hartson

Project Title/Description: "Thermometer with Safe-Zone Indicator (TSZI, or 'tizzie')"

Presenter: Zubin Jeandell

Project Title/Description: "The Mona Lisa": A Subject-Tracking Camera

Presenter: Yousef Alqayidi; Project Title/Description: "A Smart Phone Audio Amplifier".

Presenter: Craig Coultas; Project Title/Description: "Staircase LED Guild Light"

Presenter: Joseph Poulima; Project Title/Description: "Android Connected Bluetooth Controller"

Presenter: Daman Adikari; Project Title/Description: "Motion Tracking Doorbell"

Presenter: Riley Kissenberth; Project Title/Description: "Audio Frequency Analyzer"

Presenter: Chandler Prue;

Project Title/Description: "Clock with LED Ambience" Using Individually Addressable LED Strips

Presenter: Clay Carbone;

Project Title/Description: "Programmable LED Cube Using an Arduino Microcontroller"

Presenter: Matt Coon; Project Title/Description: "Automatic Maple Sugar Hose Snipper"

Presenter: Teigan Newell

Project Title/Description: "Color For the Night" - Using Individually Addressable LED Strips

Presenter: Ryan Pennucci

Project Title/Description: "StepMania Controller" Using an NXP Micro controller