FERRIS STATE UNIVERSITY

COLLEGE OF ENGINEERING TECHNOLOGY

School of Computer, Electrical, Energy, Mechanical, & Surveying Systems

Computer Networks & Systems

Electrical/Electronics Engineering Technology

Energy Systems Engineering

Mechanical Engineering Technology

Surveying Engineering

November 14, 2011

Patty Terryn
Diversity and Inclusion Office
1201 S. State St., CSS 312
Big Rapids, MI 49307

Re: Ferris State University Faculty and Staff Diversity Mini Grant

Dear Granting Committee:

Thank you for the opportunity to apply for the *Ferris State University Faculty and Staff Diversity Mini Grant.* The enclosed application outlines a plan and budgetary needs for "Diversity In Action (DIA) - A Mobile Social Network and Video Game Platform." Diversity in Action (DIA) is a mobile video game platform that targets both mainstream and under-represented students. Available on iPhone, iPad, Mac, PC or on the web, this free-to-play action packed 3D video game allows players to ride the "Big Rapids" while learning about diversity and inclusion through embedded video and game play content. DIA will reach out to diverse audiences on a much wider scale than currently possible. Students from all walks of life are encouraged to "Imagine More" as they explore the opportunities through a fun and engaging experience. The DIA program seeks to recruit under-represented ethnic, gender, and racial students into the College of Engineering Technology technical programs to enrich the current learning environment and increase the number of diverse graduates prepared for the workforce. DIA compliments FSU's long-term commitment to diversity and other strategic goals as documented in the application.

We have successfully engaged partners to develop and launch this initiative. Vantage Point Education will donate $2,500 in-kind development labor to enable the completion of this project. Kalamazoo Regional Educational Service Agency will be hosting a "Career Day for Girls" on May 11, 2011. They have invited us to present the DIA project to potentially 250 middle school girls. The School of CEEMS within the College of Engineering Technology has agreed to fund travel for this launch and purchase $500 worth of prizes for DIA. In order for us to complete this project, we are asking for $5,000 from the FSU Diversity Office. We have attached the "One Sheet" describing this project. Please do not hesitate to contact me should you have any questions regarding our program.

Sincerely,

Debbie Dawson

Debbie Dawson
Director

915 Campus Drive SWN 405
Big Rapids, MI 49307-2291

Phone: (231) 591-2755
Fax: (231) 591-2271

Ferris State University
Faculty and Staff Diversity Mini-Grant Application

I. **Identification**
Name of Primary Applicant:
    Debbie Dawson, Director, School of CEEMS
Members of Team:
    Ronald Mehringer, Associate Professor, Electrical and Computer Networks and Systems
    Carl Shangraw, Professor, Surveying Engineering; Advisor, Burt and Mullet and
        Lambda Sigma
    John Troxtel, Adjunct Faculty, Printing & Imaging Technology Management;
        Director, Vantage Point Education
Department or Unit: College of Engineering Technology
Campus Address: 915 Campus Drive SWN 312, Big Rapids, MI 49307
Telephone: (231) 591-3204 office, (231) 287 2627 cell
E-mail address: dawsond7@ferris.edu

II. **Event Title (25 words or less)**
    Diversity In Action (DIA)
    A Mobile Social Network and Video Game Platform

III. **Specific core value, strategic initiative, or goal related to diversity that the event will address. (See the University Strategic Plan and the Diversity Plan)**
    Core Values: Collaboration, diversity, excellence, and learning
    Strategic Goals: 1.5, 2.1, 2.4, 2.5, 2.6, 3.2
    Diversity Plan: Create a University that is welcoming to diverse populations
            Recruit, retain, and graduate a diverse student population
            Create environments for student learning that are inclusive of
                and sensitive to a diverse student population

IV. **Abstract (150-200 word, use additional paper if necessary). If the application is approved the abstract will be posted on the Diversity and Inclusion Office website.**

Diversity in Action (DIA) is a mobile video game platform that targets both mainstream and under-represented students. Available on iPhone, iPad, Mac, PC or on the web, this free-to-play action packed 3D video game allows players to ride the "Big Rapids" while learning about diversity and inclusion through embedded video and game play content. The focus of the initial game will be in three program areas in the College of Engineering Technology. As a long-term plan, the DIA platform must have the flexibility to evolve. Provisions to expand game content to other areas of the university and the ability to link game play to social network features will be included in the initial DIA design. The game itself, *"Big Rapids River Run" - An Immersive Virtual World,* requires students to master river tubing through a maze of progressively more difficult 3D rapids courses on the virtual Ferris State University campus. Embedded within each path, YouTube® style "Diversity in Action" clips expose students to various programs while demonstrating diversity and inclusion. A prize code is also implanted in each diversity video allowing players to register on the FSU website to access new game levels and prizes.

V. Event Narrative (up to 4 pages single-spaced)

Background:

In recent times, our target audience has changed the way it absorbs communication, news, technology and new ideas. This change has come in the form of mobile smart phone technologies and the worldwide web.

Current research shows that today's teens use mobile devices more than any other communication or entertainment technology. Howard Handler at Virgin Media Mobile, noted that text messaging continues to be on fire, with 65% of Virgin Mobile users being "active text messagers," an increase of 33% over last year.

More importantly, the phone is the teen's most prized/required possession: they would give up all other items ahead of their phone. And "pimping the phone" is a big part of why they love them:

- ❑ 42% have downloaded ring-tones and ring-back tones
- ❑ 30% have downloaded games and graphics
- ❑ The number of users that downloaded a ring-tone in the last month is 28%, way up from 17% in 2010

Handler also said "15% of Virgin Mobile users admitted to breaking up with a boyfriend/girlfriend via text message...Welcome to the mobile lifestyle. Obviously, mobile devices are shaking things up a lot more outside of the dating world. Pretty much everyone talked about using mobile elements in their campaigns."

Mobile devices clearly represent the next preferred communication, entertainment and education technology. FSU should not leave this critical component out of its long-term marketing and recruitment planning.

Scope of Work:

To implement DIA, three main components will be developed: the game, the game portal, and sustainability features. The game will consist of one single-player 3D computer game themed as Big Rapids River and Ferris State University. It will be delivered as-built code-only to allow the unlimited download of the final version playable game in the iOS, Windows and Mac formats. The game content will include one virtual environment game play level (1000 x 1000 x 400 units) with six major structures themed to represent specific Ferris colleges. The design of the buildings, environment and landscape will be simplified and representational so as to not slow down or otherwise affect quality game play. The game includes music, sound and special effects designed to maximize the excitement of river tubing through a wild rapids environment as well as capability to include a maximum of six diversity videos at any time. There will be one player/main character to be used by all players when active within the game.

The game portal houses the input and output features that include: One main page with software download capabilities , one registration and log-in page , and twenty contact links to recruiting, college directors, and the main Ferris site.

The sustainability features include: one diversity video link page to showcase new and favorite uploaded content, one page highlighting the current prizes and diversity video voting. To enable growth, one additional page will be provided that may be used as a diversity discussion forum page. School of CEEMS faculty and staff will have the capability to change videos within the game. They will also maintain the database of student information for recruiting and retention purposes.

Project Team

The Project Manager, Debbie Dawson, is currently Director of the School of CEEMS within the College of Engineering Technology. Debbie is a Professional Engineer with an extensive background in electronics manufacturing. She has received grants to run Summer Institutes and has developed leading edge engineering programs. She serves on community boards and is a role model for females considering a technical career. Debbie will be responsible for overseeing the grant, providing feedback on DIA metrics, maintaining the database of student information, and uploading new material for DIA.

The Project Designer, John Troxtel, is Adjunct Faculty in Printing & Imaging Technology Management. He is also the Director of Vantage Point Education with 25 years' experience in video game design, online video and multimedia design. John will be responsible for the production of the video game, the design specifications, and the creative oversight of the web portal. He will also provide training for website maintenance and updates.

The Program Experts, Ronald Mehringer and Carl Shangraw, will be responsible for the content of the diversity videos and help John with video production ideas. Ronald Mehringer is an Associate Professor and Program Coordinator in the Electrical and Computer Networks and Systems Program. He is very active with his students and serves the university on a number of committees, such as the University Curriculum Committee and the Academic Program Review Council. He is also a member of IEEE. Carl Shangraw is a Professor in the Surveying Engineering. He is a licensed surveyor in both Michigan and Wisconsin. Carl is advisor for both Burt & Mullet, the student chapter of ASCE; and Lambda Sigma, the honor society for Surveying Engineers. He also has numerous industry connections.

Requirements

a. DIA has a strong conceptual framework that is valuable to FSU over the long term. The mobile area is an innovative and effective space to widely promote diversity and inclusion at FSU. DIA will augment Ferris' long-term commitment to diversity and inclusion:

Strategic Goal 1.3 Cultivating a stimulating, student centered environment that integrates theory and practice. DIA supports and creates a virtual environment supporting the goals of the university. A major advantage of the DIA mobile network is that it is designed specifically to engage and teach diversity concepts through entertaining and rewarding multimedia experiences. These experiences also evolve and change on a constant basis through player interaction. These design elements: the mobile space, the web portal, and video game represent a "critical mass" successfully reaching the widest range of students worldwide.

Strategic Goal 1.5 Increasing the emphasis on preparing students for a global society and leadership roles. By providing examples of diversity in action, the effort gives examples to students highlighting the value in diverse and inclusive workplace environments and projects. Using the DIA mobile network and worldwide popularity of social networks and video games, Ferris State will reach a more diverse and larger population than ever before. The nature of the game and social network design will provide incentives for long-term engagement with the site and video game.

Strategic Goal 2.1 Implementing and Sustaining the Ferris Diversity Plan. The DIA focuses student attention on the diversity and inclusion effort by providing a fun and entertaining virtual environment that highlights and focuses attention on the diverse and inclusive efforts throughout the University.

Strategic Goal 2.4 Creating a place for students to share and gather information in a safe and comfortable environment at Ferris State. The online environment both in the video game and web portal is designed to highlight the positive effects of inclusion and diversity at Ferris State. The Diversity In Action videos show the positive results of highly diverse groups in a wide range of projects and student efforts at the university campus.

Strategic Goal 2.5 Enhancing the sense of community for everyone at FSU including those working online and at all FSU sites. The DIA plan creates an effective and assessable virtual environment that meets all of these requirements and more. The game environment and web portal focus attention on diversity and inclusion in a way that has never before been seen at FSU. The popularity of mobile devices and social networks on our target population will impact the students in both a dramatic and effective way.

Strategic Goal 2.6 Enhancing the sharing of information among the university community. One of the most important aspects of the DIA plan is to provide a forum for students to create diversity in action videos that will be incorporated into both the web portal and the video game. These student created videos will, by their very nature, involve more people in the diversity and inclusion discussions. As students show these videos to their siblings, parents, friends and classmates, the subject of diversity will be discussed by a much wider audience.

Strategic Goal 3.2 Expanding the marketing campaign to promote Ferris State University. The mobile space is an untapped marketing opportunity for FSU. The Diversity topic is an excellent vehicle to support expansion into this area. Students' participation in the diversity effort will expose both the game and web portal to a broad range of potential students to all that FSU has to offer.

b. The goals and intended outcome(s) of the event. DIA will have a significant impact focusing attention on diversity efforts at FSU and beyond. The entertaining, positive experience will cause a high percentage of return to the site and game. As the game and site evolve through the creativity and engagement of the players, the impact will continue to increase over time. DIA data will be used to develop future activities and plans by reviewing game play and mining site data.

Objectives:	Measures:
1. Preparing potential students for a positive multi-cultural experience in college	1. Amount of time spent playing the game
2. Outreach to students from diverse populations	2. Number and player contact information along with growth and demographics of players registered
3. Create a virtual alpha-state environment for student diversity training inclusive of and sensitive to a diverse student population	3. Number of total players per day, week, month and year; number of video uploads
4. Evolving participants to engage in acceptance and tolerance	4. Results from ongoing diversity surveys imbedded in the game experience

c. The College of Engineering Technology (CET) recognizes the need for a more diverse and multicultural environment. DIA will reach out to diverse audiences on a much wider scale than currently possible. Students from all walks of life are encouraged to "Imagine More" as they explore the opportunities through a fun and engaging experience. The DIA program seeks to recruit under-represented ethnic, gender, and racial students into technical programs.

d. Timeline:
Phase 1 - December 2011 - Jan 15, 2012
Planning and resource development. <u>Deliverables</u>: the final game design document and a website mock-up.
Phase 2 - January 15 - March 15, 2012

Content production - beta game and web presence. <u>Deliverables</u>: the first working version of the game and preliminary website.

Phase 3 - March 15 - May 11, 2012

Project implementation and preliminary beta testing. <u>Activities</u>: Troubleshoot, test, analyze and develop game elements and the web portal for optimum entertainment and education value.

Milestone – May 11, 2012

KRESA Career Day for Girls. A total of 250 middle school girls will be invited to this event. KRESA would like to partner with FSU to "launch" DIA during their event.

Final Phase - May 31, 2012

Deliver final project - Open site and mobile applications to the public along with three backup copies of the game build in all formats on DVD.

e. The target audience for the DIA experience is potential college students worldwide: male, female, ethnically and racially diverse – ages 12 - 25.

> The Heaviest Mobile Video Viewers: On average, mobile subscribers ages 12-25 watched 7 hours 13 minutes of mobile video a month in Q4 2010, compared to 4 hours 20 minutes for the general population. More Receptive to Mobile Advertising than their Elders: More than half (58%) surveyed in September 2010 said they "always" or "sometimes" look at mobile ads.

> Out-Texting All Other Age Groups: In Q1 2011, teens 13-17 sent an average of 3,364 mobile texts per month, more than doubling the rate of the next most active texting demo, 18-24 year olds (1,640 texts per month).

> Grew Up in the Age of Social Media—and It Shows: While they make up just 7.4 percent of those using social networks, 78.7 percent of 12-25 year olds visited social networks or blogs. *Source: <u>http://blog.nielsen.com/nielsenwire/consumer/kids-today-how-the-class-of-2011-engages-with-media/?utm_source=feedburner</u>*

This target audience clearly benefits from this unique and effective approach as evidenced by the sheer number of products and advertisers who are now entering the mobile space.

f. The expected impact that the event will have on Ferris. DIA will have a significant impact focusing attention on diversity efforts at FSU and beyond. The entertaining positive experience will cause a high percentage of return to the site and game experience. As the game and site evolves through the creativity and engagement of the players, the impact will continue to increase over time.

g. The plan to assess the impact of the event on the University is continuous. The web site and game play registration process will create constant feedback generated by users of the DIA network. Items that will be incorporated into the site include usage demographics, attendance statistics and hit evaluations. DIA will email reports on a wide range of data with summary recommendations to interested parties on a monthly basis. This data can be applied to Google Analytics to increase traffic even more via search engines. "Diversity in Action" Videos are created by students, staff, and faculty and may be updated in the actual game. These videos highlight inclusion and diversity on campus and in our local community. Prize codes are embedded in every video providing the closed loop feedback between players, Ferris recruiters and the dedicated web portal.

University Marketing and Recruiting
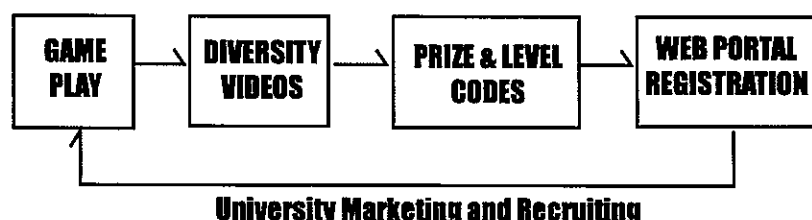
VI. **Budget**
   a. Anticipated expenses (itemize and briefly explain).
      $4,000 - Development work includes listing game assets, capabilities and limits of the environment, the decision tree (allowing the player to interact in a variety of different ways), difficulty balance, sub textural concepts related to game play, development of timing and process for optimal experience
      $3,000 - Purchase and develop resource materials including 3D assets, java script components, programming prefabs, audio clips, and state engine. Also included is object oriented programming interface.
      $1,000 - Purchase promotion items for game prizes and contests such as FSU T-shirts, bulldogs, pens, USB drives, ipod, ipad, etc.
      $1,000 – Estimated cost of KRESA Careers for Girls event
      $100 – Travel to KRESA Careers for Girls event
      Total Anticipated Expenses: $9,100

   b. Funds anticipated from other sources (please list).
      $2,500 – In-kind donation from Vantage Point Education to support labor for development work as listed above.
      $1,000 – Estimated cost of KRESA Careers for Girls event
      $500 – School of CEEMS, College of Engineering Technology will provide funding to purchase promotional items.
      $100 – School of CEEMS to provide travel expenses to get to KRESA
      Total Funds Anticipated from Other Sources: $4,100

   c. Total amount requested from Faculty and Staff Diversity Mini-Grant: $5,000

VII. **Final Report**

   A final report is required and it will appear on the Diversity Office's website. That report is due no later than three months after the funded activity. The final report should address:
   a: A self-evaluation
   b: Results of the event assessment
   c: Attendance figures
   d: Final budget

Applicants' Signatures:

Submission Date: *11-15-11*

Submit applications to Patty Terryn, Diversity and Inclusion Office, CSS 312. Review of applications will begin upon receipt and continue contingent on available funds.

Budget Overview

	Requested Grant Funds	Funding from other sources	TOTAL BUDGET
STIPEND	1,500	2,500	4,000
HONORARIA			
TRAVEL		100	100
FOOD			
RENTALS			
PRINTING & DUPLICATING			
PROMOTION	500	500	1,000
SUPPLIES & POSTAGE			
RESOURCE MATERIALS	3,000		3,000
ASSESSMENT TOOLS			
OTHER		1,000	1,000
TOTAL	$5000	$4,100	$9,100

Criteria	Points Possible	Points Received
Need For Project ❏ The activity/program/event has a strong conceptual framework that can be identified as strengthening Ferris' long-term commitment to diversity. (5pts) ❏ The activity/program/event reflects the mission and core values of Ferris as expressed in the University's Strategic Plan. (5pts) ❏ The activity/program/event has a direct impact upon a significant portion of the University community or targets an under-represented or under-served group at the University and has broad visibility. (5pts) ❏ The activity/program/event brings clear and valuable benefits to the FSU community (5 points) ❏ The activity/program/event is new and/or innovative to the Ferris community (10pts) <u>Comments:</u>	30 points	
Quality of Project Design (The activity/program/event is clearly defined with easily identified starting and ending points, specific activities, specific goals, and measurable outcomes, and a plan for assessing learning.) ❏ Goals, Objectives, and Outcomes Specified (4 pt) ❏ Goals, Objectives, and Outcomes Measurable (4 pt) ❏ Clear description of activities (3 pt) ❏ Clearly defined project leader and project team with roles specified and information about qualifications. (5 pt) ❏ Clearly specifies the audience and, if different, the beneficiaries of the project (5 pt) ❏ Has a clear project timeline, specifying what events will occur, when, and in what order (3 pt) ❏ The project design makes use of specific and relevant data (1pt) <u>Comments:</u>	25 points	

Budget ❑ Itemized budget indicates all funding required for the project with a clear delineation of what funding is being requested in this application (10 pt) Comments:	10 points	

Quality of Evaluation Plan
(The activity/program/event is clearly defined with easily identified starting and ending points, specific activities, specific goals, and measurable outcomes, and a plan for assessing learning.)
 	
   ❑ Goals, objectives, and outcomes produce quantitative or qualitative data (5 pt)
   ❑ Assessment has a clear time-frame, with a schedule for completion, and itemized activities that assess the impact of the activity/program/event. (22 pt)
   ❑ Assesses impact on Ferris and surrounding community (3 pt)
   ❑ Indicates how assessment results will be used to develop future activities and plans (3 pt)
   ❑ Indicates how information will be disseminated (2 pt)
 	
Comments:
	35 points	

Total	100 points	

OVERVIEW

Available on iphone, ipad, mac, pc or on the web, this FREE action packed 3D **VIDEO GAME** allows players to run the rapids while learning about diversity and inclusion through embedded video and game play content.

Each progressively difficult rapids course requires students to master river tubing through a maze of wild rapids on the virtual Ferris State Campus. Embedded within each course, YouTube® style clips inform and advise students on diversity and inclusion. A PRIZE CODE is also embedded in each diversity video allowing players to register on the FSU website for codes to open new game levels and prizes.

Level 1 - Rapids (top view)

1- Flite
2 - Engineering Technology
3 - Arts and Sciences
4 - College of Optometry
5 - Allied Health
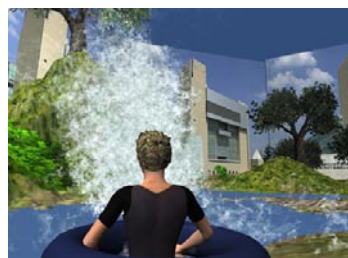6 - College of Business
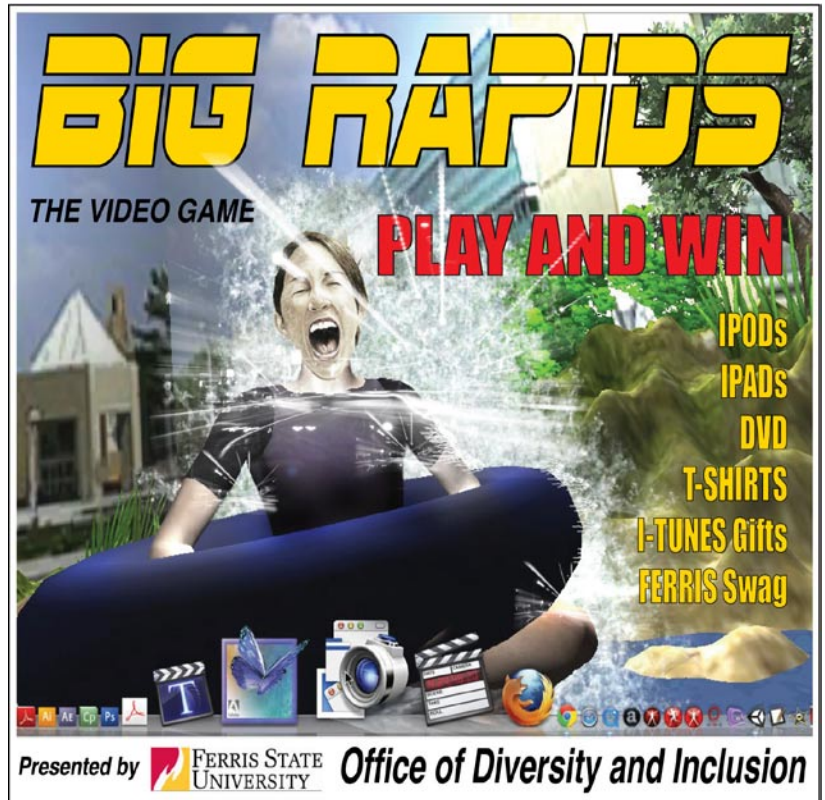
DIVERSITY VIDEOS

"Diversity in Action" Videos are created by students, staff and faculty constantly updated in the actual game.

These videos highlight inclusion and diversity on campus and in our local community. Prize codes are also embedded in every video providing the closed loop feedback between players, Ferris recruiters and the dedicated web portal.

GAME PLAY → DIVERSITY VIDEOS → PRIZE & LEVEL CODES → WEB PORTAL REGISTRATION

University Marketing and Recruiting

Game Screen Shot

IN GAME

Diversity in Action
YouTube style video clip