

The University of Nebraska at Omaha



IT Innovation Cup

Global Connectivity and the Internet of Things

2015-2016

UNO IT Innovation Cup Guidelines

University of Nebraska at Omaha

2015-2016: “Global Connectivity and the Internet of Things”

Introduction

The UNO IT Innovation Cup is an annual competition between Nebraska and Iowa High Schools. Schools compete each year to determine who can create the most innovative, creative and best IT-based solution given the current year’s problem requirements. For 2014-2015, the challenge area is “*Global Connectivity and the Internet of Things*”. The winning team is awarded the IT Innovation Cup (a traveling trophy) for their school and cash prize of \$2,500 (\$1,000 for second place, \$500 for third place). Each high school team can have at least one but no more than three faculty coaches, and each team coach will receive an honorarium of \$200 and free tuition to one College of Information & Technology (CIST) IT Professional Development Workshop. All participating students will receive free tuition to one CIST summer workshop and a CIST t-shirt.

2015-2016 Problem Requirements

Internet enabled objects are becoming the norm and published/public web-enabled services and application programming interfaces (APIs) are ubiquitous. Teams will discern a need or problem that can be solved by either:

- Making an object Internet-enabled
- Utilizing/combining multiple web services
- Both “Internetifying” something and combining this device with other web services

Teams should create a compelling solution that meets the identified need. The prototype must result in a useful, IT-based solution and must be communicated in a variety of media including written papers, oral presentations, and YouTube videos. The solution needs to include new or novel software development, hardware configuration, and/or system setup.

Available Resources

All teams will be assigned a mentor from current UNO IT Innovation Collaborative students. These mentors will offer guidance, encouragement, and assistance for each team. The mentors may not provide direct development work, but can assist with idea generation, debugging and problem solving, and clarifications of guidelines. They can also provide feedback on videos, papers and presentations prior to submission.

We will also provide a sample list of known web services and APIs. This will not be comprehensive, but should give teams a place to start. Teams are encouraged to look for other web services or ways to utilize these in novel ways.

Materials (hardware, etc.) for projects will be reimbursed up to \$200 per team and itemized receipts are required for these reimbursements. Reimbursements should be requested from Amy Kelley (amykelley@unomaha.edu).

A free one-day workshop will be offered on October 10, 2015 at the Peter Kiewit Institute to help students start their development. Web services and API development will be demonstrated. Faculty and staff from UNO will provide instruction on how to get started, help teams configure individual computers for development, and provide information about marketing a product. Additionally, upon request we will provide scheduled access to PKI computer labs, and will coordinate with the UNO Speech Center for any help required for presentation development.

Finally, all teams may have at least one but no more than three faculty members from their high school to serve as coaches, but all software, artwork, multimedia presentations, music, etc. must be performed by the high school students. Faculty coaches can provide basic debugging help and advising, but not code or development. Any team that is determined to have active development work from a faculty coach will be disqualified.

Judging Criteria

The competition is three-phased and points will be accumulated at three milestones. There are 1000 total points (broken out in detail below) and the team with the most points at the end of the competition will be the winner. The description of point allocation and judging criteria for each of the phases are shown in Appendix A.

Proposal Phase (225 Points)

Written Proposal	50 Points
YouTube Video	175 Points

Market Research (175 Points)

Presentation	175 Points
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Development Phase (150 Points)

Presentation	150 Points
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Demonstration Phase (450 Points)

Final Presentation	150 Points
Demonstration	300 Points

Key Dates

October 2, 2015 – Email of Intention to Compete Due
October 10, 2015 – Kickoff Event and workshop at PKI
October 25, 2015 – PKI Open House
October 30, 2015 – Proposals Due (Paper, YouTube video, final team composition)
November 7, 2015 – IT Innovation Film Festival (12:00 PM)
November 16, 2015 – Proposal Reviews Complete and Points Awarded
January 26, 2016 – Market Research (Need Motivation) Presentations
February 5, 2016 – Points awarded for Market Research presentation
February 27, 2016 – PKI Open House with a VIP room for Contestants
March 8, 2016 – Technical Progress Presentations

March 18, 2016 – Points awarded for Technical Progress presentation
April 19, 2016 – Final Presentations and awards

Eligibility

- For 2015-2016, competing high schools must be in the Greater Omaha area
- Each high school is allotted one team
- Each team must consist of no more than ten students, not including faculty coaches
- Diverse teams are encouraged; a great team will usually involve artists, programmers, project managers, marketers, etc.

How to Enter

To apply, student teams must submit a brief email to unoinnovationcup@gmail.com by October 2, 2015. The email should state:

- The high school the team represents
- Contact information of the faculty coaches
 - Full name
 - Best contact phone number
 - Best email address
- For each student team member:
 - Full name
 - Email address
 - Expected graduation date
- The number of the student team members that plan to attend the workshop on 10 October 2015

Team Members

In the initial email to enter the competition, the members of the team must be identified. However, new team members can be added until the presentation on January 26, 2016. Teams cannot have more than 10 student members and no more than 3 faculty coaches. After January 26, 2016, teams cannot add new members, but team members can be removed. In order to remove, add, or replace a team member, a team must notify the IT Innovation Cup committee of the desire to remove, add, or replace a member and then receive an email confirmation from the IT Innovation Cup committee that the team structure has been updated.

Prizes

The first place team receives \$2,500, first runner-up receives \$1,000 and second runner-up receives \$500. There will also be a new prize this year called the “People’s choice” winner. This team will be determined by a public vote at the final event. This vote will not impact the score of the overall winner, but the team that wins this vote will receive a \$500 prize.

APPENDIX A – Detailed Judging Criteria

Written Proposal Guidelines (50 points)

DUE: 11:59 PM, 30 October 2015

Submitted via email to: to unoinnovationcup@gmail.com

While there is no size limit for this summary, entrants are encouraged not to exceed 3 pages in length.

1. Name of the Innovation (5 Points)

2. Describe the proposed solution (25 Points)

- (a) What is the issue or problem addressed by your idea? (9 points)
- (b) How is this problem addressed in the solution? (8 points)
- (c) Who is the target audience or customer base for your finished product? (8 points)

3. Stages of Development (10 Points)

- (a) What resources will you utilize to develop your idea? (5 points)
- (b) What is your team name, and who are the team members (with contact information)? (5 points)

4. Competitive landscape (10 Points)

- (a) Has anyone written about, presented, used or applied your idea before? Please provide details. What other products or services are similar to your idea? (5 points)
- (b) What about your proposed solution is different from existing products? (5 points)

YouTube Video Guidelines (175 points)

DUE: 11:59 PM, 30 October 2015

Submitted to YouTube: UNO IT Innovation Channel

Each student team creates a 1 to 3 minute YouTube video about their virtual reality idea. The content of the video is very flexible, but should be innovative and clearly communicate the purpose, relevance, and creativity of the solution. A few ideas that could be used are: create an extended infomercial about the idea, have video testimonials from potential users, etc. This is very open-ended as long as it is innovative, engaging, and clear. Points will be based on creativity, quality of the presentation, clarity of the message about the innovation, and how interesting the video is.

The videos must not be offensive or vulgar in any way. There will be zero tolerance for demeaning remarks or pejorative labeling in this competition. Videos that would not be allowed on network television will receive zero points.

Criteria	Description	Possible Points
Purpose	The idea is described in a clear and coherent manner The target user is described The idea is unique	40
Relevance	The need for the innovation is evident and important The innovation is relevant for the intended user The innovation addresses the need for the target user	60
Creativity	The video is unique, creative, and fun	25
Salience / Memorability	The video is engaging The video is memorable	25
Production Quality	The video is well-produced and well-edited	25

Technological-Need and Initial Development Presentation (175 Points)

DUE: 5:00 PM, 26 January 2016

Submitted via email to: to unoinnovationcup@gmail.com

Presented at PKI

This milestone evaluates the teams' ability to present their research into how their solution will solve the problem identified or add meaningful value to users. Each team's presentation must be at least 7 minutes and no more than 10 minutes. The presentation should:

1. Briefly and clearly describe the innovation
2. Clearly identify the need that the solution satisfies
3. Describe research techniques that demonstrates that the technology fills the need
4. Answer these questions:
 - a. Who is it for?
 - b. How will it benefit them?
 - c. How do you know it will benefit them (e.g., research performed)?
 - d. Are they willing to pay for it?
 - e. Who else is trying to solve this problem?
5. Explain results and effects of the project

Criteria	Description	Possible Points
Innovation Description	Good presentation introduction Clear, succinct description of the innovation	30
Need	The need is relevant, real, and well-thought out Segmentation is realistic (i.e., who is the product for?)	30
Research	Research questions are answered realistically	25
Technical Progress	Technical progress on the idea is sufficient to demonstrate concept development and expertise	15
Time Control	Over 7 minutes (show sufficient content) Under 15 minutes (shows control over presentation flow and time constraints)	15
Demonstration	Demonstration that the proposed solution fits the need	40
Presentation Quality	Slides are neat, orderly Good eye contact with audience around the room Clear voice, loud enough to hear in the back row Display of enthusiasm and appropriate gesturing	20

Technical Progress Presentation Guidelines (150 Points)

DUE: 5:00 PM, 8 March 2016

Submitted via email to: to unoinnovationcup@gmail.com

Presented at a networking event at PKI

This milestone evaluates the teams' ability to present their technological innovation in a professional manner. Each team's presentation must be at least 7 minutes and no more than 10 minutes. The presentation should:

1. Briefly and crisply describe the innovation
2. Clearly identify the need that virtual reality solution satisfies
3. Explain the basics of the innovation functionality
4. Demonstrate how the virtual reality solution meets the needs
5. Discuss development efforts including progress to date
6. Provide screenshots, story boards, or rudimentary examples that demonstrate technical progress is being made

Criteria	Description	Possible Points
Innovation Description	Good presentation introduction Clear, succinct description of the innovation	15
Need	The need is relevant, real, and well-thought out Segmentation is realistic (i.e., who is the product for?)	15
Solution Functionality	Functionality is clear Ties from the innovation to the needs are strong, and evident	35
Time Control	Over 7 minutes (show sufficient content) Under 10 minutes (shows control over presentation flow and time constraints)	15
Development Progress	Evidence of technical progress is presented Development efforts are solid and a clear path to completion is presented	50
Presentation Quality	Slides are neat, orderly Good eye contact with audience around the room Clear voice, loud enough to hear in the back row Display of enthusiasm and appropriate gesturing	20

Final Presentation Guidelines (150 Points)

DUE: 5:00 PM, 19 April 2016

Submitted via email to: to unoinnovationcup@gmail.com

Presented at a final event at Scott Conference Center

This milestone evaluates the teams' ability to present their innovation and idea in a professional manner. Each team's presentation must be at least 7 minutes and no more than 12 minutes. The presentation should:

1. Briefly and crisply describe the virtual reality solution
2. Clearly identify the need that the aid solves (e.g., social, educational needs)
3. Explain the functionality of the innovation
4. Demonstrate how the aid meets the need
5. Discuss development efforts including progress to date
6. Show completed virtual reality and what it does

Criteria	Description	Possible Points
Innovation Description	Good presentation introduction Clear, succinct description of the idea	15
Need	The need is relevant, real, and well-thought out Segmentation is realistic (i.e., who is the product for?)	15
Functionality	Functionality is clear Ties from the aid to the needs are strong, and evident	35
Time Control	Over 7 minutes (show sufficient content) Under 15 minutes (shows control over presentation flow and time constraints)	15
Completion	Innovation is complete, functional, and provides value to target market	50
Presentation Quality	Slides are neat, orderly Good eye contact with audience around the room Clear voice, loud enough to hear in the back row Display of enthusiasm and appropriate gesturing	20

Virtual Reality Demonstration (300 Points)

DUE: 5:00 PM, 19 April 2016
Demonstrated at a final event at PKI

Each team will demonstrate their virtual reality solution to a panel of judges and show how it works and how it solves a need. Each of the judges will subjectively evaluate the virtual reality solution and award a point total from 0 to 300 points. The average of the judges' scores will be calculated for each team and the resulting number will be the resulting score. Sample criteria include visual appeal of the innovation, error-free demonstration, quality of the implementation, functionality, etc.

People Choice Award Public Votes (NO Points)

DUE: 5:00 PM, 19 April 2016

Votes at final event at PKI

All of the attendees at the final presentation and demonstration conference will be given the opportunity vote on which innovation they like the best. UNO students, faculty, and community members will also be allowed to vote. Votes will be cast using a mobile application.

Credits will be awarded in the following fashion. Each first place vote receives 10 credits, each second place vote receives 7 credits, and each third place vote receives 5 credits.

The team with the most credits will be the “People’s Choice Winner” and receive the \$500 prize.