



2015 AIS Student Chapter Leadership Conference

Track: Information Systems that serve society

Background

The mission statement of AIS is as follows:

“The Association for Information Systems (AIS) serves society through the advancement of knowledge and the promotion of excellence in the practice and study of information systems. AIS is the premier professional association for individuals and organizations who lead the research, teaching, practice, and study of information systems worldwide.”

As students and future practitioners of Information Systems (IS), you play a significant part the AIS mission. This contest will allow you to demonstrate the impact that IS can have in the service of society by challenging a team of 1-5 individuals to design and implement an information system that can serve as an innovative solution to a societal problem.

Preliminary Round

For the preliminary round, student teams must submit a report that contains:

1. The societal problem that the team has chosen to address and why it is important to solve this problem.
2. A detailed description of your proposed solution including diagrams, solution architecture, etc.
3. A statement on why you believe that your solution is innovative (ex. How is it different than what has been tried before? What makes your solution “special”?)
4. An introduction of each team member and a description of the role that they play on the project team.
5. A link to the demo of the “alpha” prototype of the solution (see below).
6. In addition to the report, the team must also submit a video that depicts a demo of the “alpha” prototype of their solution to YouTube. The guidelines for this deliverable are:
 - a. The video must not be more than 7 minutes in length.
 - b. The team should briefly introduce the problem and an overview of the solution in the video, but the focus of the video should be the demo of the alpha prototype.
 - c. Remember that this is only a demo of the alpha prototype, so it doesn’t need to completely ready for “prime time.” Hard coding some data elements or responses into the system for the purposes of the demo is completely acceptable. The judges are primarily concerned with whether or not your team has started to develop the technological aspects of your solution and does it reflect what your team described in the report.
 - d. All team members must be featured in the video.

Final Round

The top four submissions as scored by the judges will move on to the finals round to be held at the Student Chapters Leadership Conference April 9-11, 2015. In this round, the teams will be required to:

1. Make a presentation (10 minutes max.) of their report to a panel of judges.
2. Do a live demo of the “beta” version of your solution (15 minutes max.).



Judging Criteria for participants

The submissions in the preliminary round will be judged based on the following criteria. The questions in each area are the questions that the judges will address when assigning scores.

Problem Significance (30%)

- Does the team describe a societal problem that can be solved by IS?
- How well do they make the case for the need for a solution?

Solution Description (30%)

- Does the team fully and clearly describe the proposed solution?
- Does the solution that they describe have the potential to solve the problem that they have presented?

Innovativeness of Solution (20%)

- Is the solution innovative?
- How is it different than what has already been done?

Alpha Prototype Demo (20%)

- Does the team's solution reflect what was in the report?
- Is it something that can be developed into a beta prototype before the finals?
- How is the quality of the demo/video?

Deadlines

- All preliminary submissions must be received no later than noon CST on January 29th 2015. The submission should be sent to **ais.sclc.competition@gmail.com**.

Prizes

- Awards and cash prize TBD

Other Rules

- Each team's submissions must entirely be the work of the team. Faculty may review the submission, but may not contribute to the content of the policy solution.
- Late submissions will not be accepted.

Eligibility:

- Undergraduate and graduate students enrolled in an AIS student chapter are eligible and encouraged to participate. Start a new AIS chapter and participate in the competition!

Materials Availability and Submission:

- Materials for each of the tracks are accessible for open viewing. Multiple submissions for each school are allowed, however, a maximum of two teams from each school for each track will be selected to participate in the onsite competition.

Competition Author: James Parrish, Ph.D., Graduate School of Computer and Information Sciences, Nova Southeastern University





2015 AIS Student Chapter Leadership Conference

Track: Security Policy

Background

You are the new IT manager at InvestCo, a small securities firm, and three days after you started your new job the secretary to the CEO was tricked into giving the CEO's password over the phone to someone she thought was in the IT department. Luckily she quickly discovered that she had been tricked and had the CEO immediately change his password. When asked, the secretary said she knew the CEO's password because it was the same one that he used for his Facebook account. You've been told that as far as the IT staff can determine, the hacker probably did not use the stolen password before the CEO's password was changed. However, if the thief had gotten in, he would potentially have had access to the extensive data that the company keeps on its clients. The CEO is very concerned about the potential liability and loss of customers if the client data had been stolen. Now it is your task to reexamine the firm's policy on employee and customer account passwords, craft a new security and data retention policy, and to make a recommendation to the CEO.

InvestCo holds, trades and manages stock and bond portfolios for clients. There is an existing security and password policy that has been in place for 3 years. Some longer-term employees remember the security training that occurred back then, but there has been no training since the old policy was put in place. The password policy was strengthened two years ago so that passwords had to be longer, couldn't be reused and had to be changed monthly. Following that change, an intern was hired to help reset passwords when employees and clients couldn't remember their password. Due to the financial nature of the company's business, your recommendation must make the security of financial data paramount. But your recommendations must take usability and accessibility by employees and customers into account. A very secure but inaccessible system would be bad for business, but so would a very accessible but insecure system. So your task is to identify the problems with the existing security at InvestCo. Then craft a security policy and implementation and maintenance plan that address those problems while striking a balance between security and accessibility.

Preliminary Round

For the preliminary round, student teams must submit a report that contains:

1. A detailed description of the proposed security policy, including descriptions of processes, training, software, diagrams, data policies, etc. needed to implement the policy.
2. A statement on why you believe that this proposed policy will maintain the security of the firm, while also giving employees and clients access to the information they need.
3. A recorded video presentation (10 minutes max) of the policy that would be presented to the CEO and board of directors.
4. An introduction to the members of your team, and a description of the role each one played.

Final Round

The top four submissions as scored by the judges will move on to the final round to be held at the Student Chapters Leadership Conference April 9-11, 2015. In this round, the team will make a live presentation of the policy recommendation.



Scoring

Submissions in the preliminary round will be judged based on the following criteria:

Security policy (70%)

- The extent to which the team's proposed security policy identifies and addresses the security issues that are evident in the InvesCo story.
- The extent to which the proposed policy holistically blends the elements into a consistent and workable policy that balances security with employee and client accessibility and usability

Supporting statement (15%)

- The extent to which the team fully and clearly describes the proposed security policy, shows an understanding of the

Recorded video (15%)

- Displays technical accuracy, understanding of the various proposed security issues, professionalism, creativity, and production quality

Deadlines

- All preliminary submissions must be received no later than noon CST on January 29th 2014. The submission should be sent to **ais.sclc.competition@gmail.com**.

Prizes

- Awards and cash prizes TBD

Other Rules

- Each team's submissions must entirely be the work of the team. Faculty may review the submission, but may not contribute to the content of the policy solution.
- Late submissions will not be accepted.

Eligibility:

- Undergraduate and graduate students enrolled in an active AIS student chapter are eligible and encouraged to participate. Start a new AIS chapter and participate in the competition!

Materials Availability and Submission:

- Materials for each of the tracks are accessible for open viewing. Multiple submissions for each school are allowed, however, a maximum of one team from each school for each track will be selected to participate in the onsite competition.

Competition Author: Ken Gunnells Ph.D. UAB Collat School of Business





2015 AIS Student Chapter Leadership Conference

Track: Video Competition

Background

Why Should Women Study IS?

If we look at recent advancements in the fields of communication, medicine, education, and entertainment, it is apparent that computing is changing just about every aspect of our lives today. Therefore it is important that the people that design and implement these technologies are as diverse as the population that they impact. Women are traditionally an underrepresented population not only in information systems, but across all computing disciplines. That's why we, along with the great people at the AIS IS Women's Network and National Center for Women in IT (NCWIT), are challenging you to change that by creating a short (no more than 5 minute) video explaining why women should study IS!

Guidelines

- The video can be no more than 5 minutes in length.
- You must submit your completed video and email to YouTube.com by the contest deadline.
- Once your video is submitted to the competition, you may not go back and make any changes to the video after the competition deadline.

Submission Instructions

- Upload your video to YouTube.com (make sure that you don't make your video private so we can access it!)
- Send an email to **ais.sclc.competition@gmail.com** with the link to your video, the names of the team members, the university that you represent, and a brief summary of your video (no more than 150 words).

Helpful Hints

- Grab the viewer from the first 3-5 seconds of the video. When you're at a computer, the next option is just a quarter second away. Don't let the viewer get away by having long introductions or black screens. Think of the best movies that you have seen...the action starts right away!
- Production values are important, but less important than the "interesting" factor of the video. A good idea done in a mediocre manner is better than a boring idea done well.
- Title of the video is really important, but often depends on the content and where you expect to find your audience. Strictly informational videos have lengthier titles that seem more authoritative. Infotainment titles have a lot more humor inflected in them.
- Lists are good for infotainment; viewers know what to expect. Most interesting fact should be presented first in order to keep the audience hooked!
- Find the most intriguing/awe-inspiring facts and information; make it memorable and shareable. The best facts might be surprising to the viewer and/or trigger an emotional response.
- Don't try too hard to be hip or cool. People generally see through that. This is especially true when you are focusing on a younger audience.
- Don't engage in male bashing or resort to using stereotypes to sell your point. There are enough good reasons for women to be in IS so don't resort to these tactics. They usually wind up backfiring anyway.
- Look for similar videos on the Internet. This will help you as you create your video!



Resources

- The National Center for Women in IT has a page full of resources located at: <http://www.ncwit.org/resources>. You can even search the resources for specific goals (recruitment, outreach, etc.) and specific target audience.
- YouTube has a huge number of videos for girls in computing. Use them for inspiration!

Possible Target Audiences

Your video doesn't have to focus on women in general (although that would be great!). You might want to focus your video on a particular target market. Lecia Barker, a Research Scientist for the National Center for Women in IT offers the following suggestions:

- High school Juniors/Seniors
- Undergraduate Juniors/Seniors
- Women who are re-entering the workforce after being out for a while to raise a family.
- Women who have undergraduate majors in non-computing disciplines such as psychology, sociology, or the humanities.
- Women and girls of color.
- Military spouses that need a degree that will allow them to have a good job that is "portable".
- Those that influence women and girls (ex. Parents, teachers, guidance counselors, etc.).

Scoring

All video submissions will be scored based on the rubric below. The questions after each subject will be the questions that we want the judges to consider as they assign their scores.

Entertainment Value (20%)

- Does the video grab your attention?
- Does it hold your attention throughout?
- How interesting did you find the video to be overall?

Information Value (20%)

- Does the video convey valuable information to the viewer?
- Is the information accurate to your knowledge?
- Does the information conveyed support the message of the video?
- Was the information presented effectively?

Message (50%)

- Does the video deliver a convincing message as to why women should study IS?
- Does it engage in any male bashing?
- Does it employ the use of stereotypes or use a mythbusting approach (presenting stereotypes and then denying them)?

Production Value (10%)

- How well done is the video from a production sense?
- Do they add any production elements outside of just straight video?

Deadlines

- All videos must be uploaded and emails must be received no later than noon CST on **January 29, 2015**.
- The winner will be revealed at the Student Chapters Leadership Conference on April 11, 2015 (need not be present to win).



Prizes

- Awards and cash prizes TBD

Other Rules

- Each team's submissions must entirely be the work of the team. Faculty may review the submission, but may not contribute to the content of the video.
- Late submissions will not be accepted.

Eligibility:

- Undergraduate and graduate students enrolled in an active AIS student chapter are eligible and encouraged to participate. Start a new AIS chapter and participate in the competition!

Materials Availability and Submission:

- Materials for each of the tracks are accessible for open viewing. Multiple submissions for each school are allowed, however, a maximum of two teams from each school for each track will be selected to participate in the onsite competition.

Competition Author: James Parrish, Ph.D., Graduate School of Computer and Information Sciences, Nova Southeastern University





2015 AIS Student Chapter Leadership Conference

Track: QVC Analytics Challenge

Prizes

- 1st \$2000
- 2nd \$1250
- 3rd \$750
- *Honorable Mentions (2) \$500*

Background

Big Data Analytics is a critical skill, touching fields as diverse as medicine, chemistry, linguistics, and business. New fields such as “data journalism” and “big humanities” reflect the transformative potential of large, widely available, and trans-disciplinary data sets. Good visualizations are a cornerstone of this new field, as they communicate complex ideas and reveal patterns difficult to see. Proficiency in the visual communication of data will give students a competitive edge; by 2015, analysts predict 4.4 million new jobs will support this emerging area.

Goals

- To provide students an accessible entry point into data analytics.
- To create the opportunity for students to work on real-world problems.
- To emphasize critical thinking, visual communication, and oral presentation skills.

Task

Student teams choose one of four problems and data sets donated by the participating companies. Create a graphic that addresses one or more of the questions in the problem description, using the data given by the company. Students create a visualization that provides insight into the data, addressing the key issues of the problem. Teams submit their graphic and a one page description highlighting its key features. Students can use any tool to create their entries.

Participating Companies

This year’s participating companies are QVC, NBCUniversal, Lockheed Martin, and Merck.

Preliminary Round

For the preliminary round judges from the industry will score each entry. The ten top-scoring teams will present their work at the AIS Student Chapter Competition in Tuscaloosa, Alabama. Travel support is available for finalist teams based on need.

Final Round

At the Student Chapter Leadership Conference in Alabama, each team will make a 10 minute presentation before a panel of industry judges. Winning entries receive cash prizes divided among team members and will be featured in a gallery on the AIS Student Chapter Conference site.

Scoring

- Clarity (how well the graphic stands on its own without additional explanation)
- Novelty/creativity (originality of thought; surprising way of approaching the data)
- Provides meaningful insight into the data
- Integration of multiple data sets to yield new insights
- Utility of the visualization in aiding decision making

(based on criteria by dataviz.challenge.gov)



What you should submit

- The graphic. It can be a static image or interactive (such as Flash).
- A description, less than one single-spaced page, describing what's great about your graphic. Make sure it's clear which one of the four challenges you're addressing.

How you should submit

- Email your entry to **analyticschallenge@temple.edu** by 11:59 P.M. on February 15, 2015.
- Attach the graphic and the description as separate files to a single email message with the subject "Entry for QVC Analytics Challenge".
- Convert static graphics to PDF format. The one-page description must also be in PDF format. There are free tools that do this, such as PDF Creator.
- Interactive visualizations must run without special software on any PC running Windows 7.
- The name of the challenge, the team members' names and email addresses, and the name of their school must be clearly displayed on the graphic and the one-page description.

What happens after you submit

- You will receive a confirmation email acknowledging your entry.
- Finalists will be notified by email by February 24, 2015.
- Finalists will present their work at the AIS Student Chapter Conference April 9-11, 2015.

Deadlines

- November 15, 2014 Challenge starts. Students given data set and rules.
- February 15, 2015 Challenge ends. Submissions due.
- February 24, 2015 Finalists announced.
- April 9-11, 2015 Final Judging and Awards Event

Prizes

- 1st \$2000
- 2nd \$1250
- 3rd \$750
- Honorable Mentions (2) \$500

Other Rules

- Each team's submissions must entirely be the work of the team. Faculty may review the submission, but may not contribute to the content of the policy solution.
- Late submissions will not be accepted.
- Your entry will be disqualified if...
 - It is submitted after the deadline.
 - The attachments won't open or are in the wrong file format.
 - Your interactive visualization won't run.
 - You don't specify the challenge you are addressing.
 - Team member information (see above) is not included on both the graphic and the description.



Eligibility:

- Undergraduate and graduate students enrolled in an AIS student chapter are eligible and encouraged to participate. Start a new AIS chapter and participate in the competition!

Materials Availability and Submission:

- Materials for each of the tracks are accessible for open viewing. Multiple submissions for each school are allowed, however, a maximum of two teams from each school for each track will be selected to participate in the onsite competition.

Competition Author: David Schuff, Associate Professor of Management Information Systems, Fox School of Business
David.Schuff@temple.edu | 215-204-3078 | community.mis.temple.edu/dschuff

The AIS Analytics Challenge is Powered by the Institute for Business and Information Technology at Temple University and the Association for Information Systems





“Programming” Better Product Sales

QVC Challenge

Problem

QVC is the **world’s leading video and e-commerce retailer**, reaching nearly 300 million homes worldwide with a live broadcast 24 hours a day, 364 days a year. Our vision is to **change the way the world shops** by re-imagining shopping, entertainment, and social as one. To do so, QVC analyzes our customers’ experience to make sure we are providing them the products and services they want.

For this challenge, QVC would like to use this data to better understand and anticipate our customer’s buying behavior. However, airtime is a finite resource, and therefore QVC needs to choose the best airtimes for their products and product categories.

Specifically, QVC would like to better understand:

- What is the next product a customer will buy in the next month given their previous buying behavior and product airtime?
- In what product category is a customer likely to buy their next product, given their previous buying behavior and product airtime?
- What are the products and product categories that sell better in a particular geographic, time zone, and customer segment?
- Is there a best time of day to sell a particular product or product category?
- What is the brand affinity (personal connection with the brands QVC sells) for QVC’s different customer segments?

Develop a visualization (static or interactive) that reflects your customer analysis based upon the consideration of product airtime and customer buying behavior. In addition to customer orders, your analysis should include customer geography, customer segment, and product air time.

Data

- [Customer master](#) (customer number, customer state, customer zip, customer segmentation code)
- [Product master](#) (product number, product description, product category, product brand)
- [6 month history of customer orders](#) (order date, order time, customer number, product number)
- [Product airtime](#) (date, total time on air, product number, time on, time off)

Finding “Hot Spots” for Election Spending

NBCUniversal Challenge

Problem

The 2014 Federal midterm elections may deliver a new record for midterm spending. Messaging and engagement of voters in crucial races will take priority. NBCUniversal (NBCU) would like to better understand the distribution of spending across Congressional Districts and Nielsen® DMAs (Designated Market Areas), as well as how they relate to markets with NBC owned-and-operated (O&O) and affiliate stations.

NBCU would like to use this data to better understand:

- Which key markets (DMA) present the greatest opportunities for engagement through advertising spending (e.g. – “tight-races”, “highest ratios of funds raised vs. funds spent in key races”, etc.)?
- What demographics are represented in those key markets (DMA) and how they relate to NBCU’s audience segments?
- Based on understanding the fundraising and spending patterns of the mid-term elections and the subsequent results, how best should NBCU posture for the upcoming mid-term and Presidential elections (2016)?

Develop a visualization (static or interactive) that reflects campaign spending, as provided the Federal Election Commission (FEC), by Committee, Candidate, and total Contributions by Individual for each Congressional District of the 113th Congress. This information should be triangulated with Nielsen® DMA and local station information.

Potentially relevant information for individual candidates may include:

- Spending by PAC (Political Action Committee)
- Party, PAC affiliation
- Individual contributions
- Ratio of funds raised and spent by PAC, Party
- Demographic data for candidates’ respective Congressional District

Data

- NBCU’s Owned & Operated (O&O) and Affiliates Stations by Designated Market Area: [[NBCU-Provided File](#)]
- Zip Codes by Market: [[NBCU-Provided File](#)]
 - Note 10/3/14: In the file, Philadelphia is misspelled as “Philadeplphia”
- The Federal Election Commission provides [detailed information about candidates, parties, and committees](#).
- The United States Census Bureau provides [Congressional Districts Relationship Files by ZIP Code](#) .
- The United States Census Bureau provides demographic information by Congressional District [based on the on-going American Community Survey \(ACS\)](#).

Reducing Employee Insider Threats

Lockheed Martin Challenge

Problem

Theft of intellectual property is an increasing threat to organizations, and can go unnoticed for months or even years. Additionally, there are increased incidents of employees taking proprietary information when they believe they will be, or are, searching for a new job.

Congress has continually expanded and strengthened criminal penalties for violations of intellectual property rights to protect innovation and ensure that egregious or persistent intellectual property violations do not merely become a standard cost of doing business.

A domestic or foreign business competitor or foreign government intent on illegally acquiring a company's proprietary information and trade secrets may wish to place a spy into a company in order to gain access to non-public information. Alternatively, they may try to recruit an existing employee.

Your challenge is to visualize the risk posture of the employee base and identify top potential insider threats based on predictive analysis of data sets and the use of publicly available risk indicators:

- Patterns and/or inconsistencies in travel & phone records
- Inconsistencies regarding actual versus planned physical location
- Personal stressors such as poor performance reviews or demotion
- Birth country and/or citizenship in high risk countries

Additionally, the presence of abnormalities or the absence of normality should weigh into your analysis.

Data

The data sets you have been provided have been generated for the purposes of this competition and do not represent actual Lockheed Martin data or employee personal records. They are as follows:

- Employee personal and contact information
- Employee travel records
- Employee phone records
- Employee performance records
- Employee citizenship records
- Server access logs

Data Set (single Excel workbook with multiple tabs) [[Lockheed Martin-provided file](#)]

The following resources can also inform your analysis

FBI Publication: [The Insider Threat: An introduction to detecting and deterring an insider spy](#)

Software Engineering Institute Publication: [Common Sense Guide to Mitigating Insider Threats 4th Edition](#)

Understanding A Corporate Move's Impact

Merck Challenge

Problem

When a corporation decides to move the location of a major site, the impact on employees is not always completely understood. Often the total impact on the quality of life and commute time for employees to travel to a new location is not always taken into consideration.

Merck recently decided to move its corporate headquarters from Whitehouse Station, New Jersey to Kenilworth, New Jersey. Leadership wanted to understand the impact on the commute experience for the over 2,400 employees who worked at that site and whether certain organizations were more affected than others. Beyond this, there are also larger environmental impacts of such a change, caused by shifts in driving patterns, increased traffic at the new location, and potential impacts on public transit.

Your challenge is to characterize, quantify, and visualize the impact of a change of location for those 2,400 Merck employees to a new location. Specifically, your analysis should address one or more of the following questions:

- What was the impact of relocating from Whitehouse Station, NJ to Kenilworth, NJ?
- How does this compare to the impact of relocating instead to West Point, PA?
- For either option, are certain organizations more negatively impacted than others?
- If the commute experience were the only factor in making a decision and Merck could move anywhere, is there a different location that would be ideal for most employees? For the surrounding communities?

Data

- An anonymized list of 2,453 employees that currently commute to the Whitehouse Station site. The data set includes their divisions, their home zip codes, and the organization code in which the employee works (Microsoft Excel). [[Merck-provided file](#)]
- A list of valid US zip codes, including a tool embedded in the sheet that allows you to compute the distance between two zip codes (Microsoft Excel). [[Supplemental File](#)]
- The zip code of Whitehouse Station, NJ is 08889.
- The zip code of Kenilworth, NJ is 07033.
- The zip code of West Point, PA is 19486.