INTRODUCTION:

IPRO 370: Crisis Management & Security Assessment Program (CMS) is the second stage of a four stage project. Our goal is to develop the second phase of the project which involves the necessary assessments for organizations to use while determining how well their crisis management plans stand up to different methodologies, assessments, and scenarios during the testing process.

Our grant was funded by Homeland Security Innovation & Entrepreneurship Center. R&A Crisis Consulting will be our sponsor to ensure we are meeting the needs of the crisis management community.

Objectives

There are multiple objectives and goals the team has set forth this semester:

- Enhance the current database so scenarios are more efficient and effective.
- Amend current and new scenarios to include "starter" scenarios. Meaning it will allow the user along with the use of "injects" (information that is injected throughout the exercise). The goal is to obtain custom scenarios.
- Customization allowance so user has "choices" within their created scenario. For example: number of employees; number of sites; number of floors per site; types of services and/or products produced at each site; keep the question about the date - and then ask what "events" or "special work" will be taking place on that day; etc.
- Provide additional ability to add these "injects" (information) at any stage during the "live" table-top exercises.
- Develop instructions on how to use a scenario while setting up an exercise so as to create the most successful real live test.
- Provide access to pilot group of businesses and gather feedback.
- Enhance the test tracking functionality, meaning comparative data from each table-top exercise that is performed.
- Construct/continue a working prototype incorporating objectives.
- Submission of required reports/documentation.

The continued development of our web-based Crisis Management Scenario Builder tool will be our main objective for the summer 2007 semester. Our team will achieve results through these objectives by continuing to learn about crisis management plans, crisis management team's needs, adding more extensive scenarios, and testing of crisis management plans with the available selection of scenarios in our database.

Background

It is important first to understand three key terms that will be used throughout our IPRO. *Crisis* is anything that has the potential to significantly impact or cause instability within an organization. *Management* is the controlling and directing of a situation in a positive proactive manner. A *Plan* is a method of acting, proceeding, developing in advance.

The potential for a crisis is all around us and happens every day. It is detrimental that organizations are prepared in all areas of risk management where potential vulnerabilities can occur. Crisis management involves identifying the crisis, planning a response then confronting and resolving it. Crisis management can be applied in almost any situation and could include product tampering, something as shocking as a shooting, to a natural catastrophe such as a tornado or hurricane.

Every year, organizations invest millions of dollars creating plans to ensure that their business only experiences minimal interruption during a crisis. One of the most important and often overlooked aspects of this preparation is to fully test the crisis management plan to ensure that it is sufficient. A proven method for testing is constructing scenarios and executing what are called "table-top" exercises. During these exercises, crisis management planners use these scenarios to walk through their crisis management plan and more importantly, assist them with a process to acknowledge their vulnerabilities.

There is a need in the Crisis Management Community for a tool that assists business continuity professionals in the assessment of their crisis management plans. Our web-based tool will assist a growing community with the ability to easily create realistic scenarios and track the results of their table top exercises for future comparison.

A company's ethical point of view regarding crisis management should be a moral and conscience one. Upfront, tough, and direct approaches will show their commitment to their employees. Unfortunately, organizations view crisis management to different extremes. Some simply do not have a crisis plan, while others have a department / team allocated to ensure that their plans are written, tested, and maintained properly.

Our scenario builder tool is vital to the industry because an organization's written plan is one milestone, but what is more important is to determine if it will work in the manner intended. It is proven that prepared organizations tend to respond and recover from a crisis / disaster faster and cheaper. Those who fail to plan, plan to fail. The goal after a crisis occurs is to ensure that your business remains in business and fully functional. Upfront planning is a way to ensure that this happens. A well written, tested plan will aid an organization in minimal recovery time, money, and effort.

Purpose:

"In the US nearly one in five enterprises and nearly one in three medium size businesses lack a business continuity plan."

"It takes years to build a successful business. It takes seconds to destroy it."

"80 percent of businesses that suffer a major disaster go out of business in three years."

The question is "ARE YOU READY" for a crisis?

Proper crisis management reduces the tension during the crisis at hand, demonstrates a company's commitment and expertise, controls the flow and accuracy of information

and execution of their plan, and allows the company to manage resources effectively and efficiently. Our project objective is to provide a tool that would facilitate business continuity planners (BCP) to test and validate their disaster recovery plans (DRP).

The purpose of this web-based management tool is to test a company's current crisis management plan through various levels of impact and penetration throughout their company.   This will allow Crisis Management Teams to not only gain an understanding of their plans, but more importantly allow them to create the necessary scenarios to test their plans. Our tool will also give them measurable data. This measurable data will show the potential impact on an organization's sustainability if ever faced with a crisis while evaluating a risk analysis combined with their preparedness. Thus, answer the biggest question most organizations have: Will their company's crisis management plan hold up to but more importantly, survive a crisis.

Methodology

This project will consist mainly of research, development, and expert consultation from qualified professionals. There are a number of approaches we could use to continue development of our web-based tool, each having its own positive and negative challenges. We have chosen the path modeling the Pipeline Process in combination with an Iterative Prototyping Process.

The Pipeline Model will consist of three phases and specific tasks to attain our goals. These phases provide a solid foundation for problem solving because the phases make time for continued research, development, testing, and marketing so our successors can continue building. As a result, using the Prototyping model, we will build a more robust version of the scenario builder and present it to potential users for consideration as part of the development process. This goal will be attained by using a pilot group to test an actual crisis management plan matched up against a table top exercise. The pilot team will create a scenario from our database, add injects, and act out their plan "live" to see the results. They will then provide feedback to ensure we are meeting the crisis management community's needs.

The *Pipeline Model* consists of the following phases:
- Phase I - Create, analyze, research, and select key target areas based on the most common need when testing a company's crisis management plan.
- Phase II - Using aforementioned iterative methods, the web-based tool is brought from preliminary design to the second development stage, including the actual testing of a crisis management plan.
- Phase III - Through various outlets, the web based tool is introduced to our sponsor and her company uses it to determine its tangible value through analysis of strengths, weaknesses, and additional needs to stand up within the crisis management community.

The *Pipeline Model* allows for even development and proper implementation of the Prototyping Model.

The *Prototyping Model* consists of the following looping steps:

- *Research/Definition/Collection*: Target most critical areas according to risk management and link objectives / categories by importance. While developing specific attributes based on those key objectives of a crisis management plan.
- *Design*: Once new information is gathered it will be integrated into a new or existing design so that it may be folded into an improved prototype.
- *Prototype Development*: The information from the design will be quickly executed into the prototype. This will involve new coding and modifications to existing programming.
- *Pilot Testing:* The prototype will be presented to a pilot group for their use and review. Comments and suggestions will be collected from the group and reported back to the team for evaluation.
- *Prototype Refinement*: Information collected from the customer will be assimilated and the prototype refined. The developer revises the prototype to make it more effective and efficient.
- *System Implementation*: The prototype will be rewritten once requirements are understood from the needs of the crisis management community. In the Iterative Prototyping process, the results of the tests will be used to guide the changes within the system. As some parts or phases of the software are implemented, testing will be completed.

Once the initial research phase is completed, we will take an iterative approach to achieving our objective for this project. Each of the iterations will consist of a design, implementation and enhancement phase. In the design phase, the team will continue with the design and prototype based upon the iteration's objectives. Once the design is complete the team will implement the changes. A Final review of the completed project, along with testing, and suggest enhancements will be carried on to the next semester.

Expected Results

The expected result of this project is a web based tool that will allow crisis management planners to construct a scenario by providing test objectives, and crisis information. This tool could be used by our sponsor, R&A Crisis Management Inc., to provide a scenario planning service to its clients.

Our Team:
Hassan Alnoon is a fifth year Computer Science major. He has a wide diversity in programming languages and is a strong programmer. He is also very goal oriented and has experience in setting tasks to ensure completion.

Danielle Benoit is a fourth year Information and Technology Management major. She brings not only the technological aspect but also real life project management.

James Fiorato is a second year Computer Science major. He not only brings a strong technological background but is a diverse programmer. Jim in the last IPRO demonstrated extremely positive leadership. His profession requires leadership, project management of software design, and teambuilding.

Rick Kaim is an Industrial Technology and Management major. He has a strong background in project management. He understands the importance of being thorough, setting goals, and attaining tasks to meet key objectives.

Annette Pioletti is a fourth year Computer Science/Information Technology and Management major. She not only brings a technological aspect to the team but also has experience as a leader of a Crisis Management Team, documentation writing, and leadership in project management.

Oliver Schmidt is a fourth year Mechanical Engineering major. He brings not only a strong background in project management but also experience in the writing and editing of technical documents.

Nicole Trevor is a fifth year Computer Science major. She has a wide diversity in programming languages and project management.

Brett Watkins is a fifth year ARCH major. He not only brings a creative aspect to our team but also project management.

Sebastian Zielinski is a fourth year Electrical and Computing Engineering major. He not only brings the technical background to our team but also real life business decision processes.

To achieve our goals for the semester we have broken into subteams using each team member's strengths or area's of interest.

Team 1: Research/Writing/Analyzing

This team is responsible for continued researching all aspects of crisis management specifically how to breakdown different areas of a crisis management plan, risk management, and effects directly correlated within them. Specifically, how to analyze what is missing within a plan and the writing of crisis management scenarios.

Subteam Members:
Rick Kaim (sub team leader)
Oliver Schmidt
Sebastian Zielinski
Annette Pioletti

Expected Results:
- Complete analysis of what a crisis management plan should consist of, while analyzing commonalities within a plan.
- Gain an understanding of the most critical areas according to risk management and link objectives/categories by importance.

- Develop specific attributes based on key objective of a crisis management plan that need to be included while building successful and realistic scenarios.
- Discover key elements so crisis management teams can efficiently and effectively develop company specific scenarios, as well as, save scenarios that other organizations can potentially use.
- Create stronger and more usable scenarios based on attributes of a good scenario, specifically linking key objectives to actual crisis management plans.
- Determine a way of enhancing the current database so scenarios are more efficient and effective.
- Amend current and new scenarios to include "starter" scenarios. Meaning it will allow the user along with the use of "injects" (information that is injected throughout the exercise).
- Determine the best way to customize allowances so user has "choices" within their created scenario.

Team 2: Creative/Marketing/Design

This team is responsible for the visualization of our product. This includes the general structure and decorative scheme providing edifice, expressions, and marketing aids.

Subteam Members:
Brett Watkins (sub team leader)
Annette Pioletti

Expected Results:
- Obtain new ideas on how to convey the perception of emergency moving into a state of calmness.
- Work on a poster to incorporate the continued vision of this IPRO.
- The designs of several "handouts" during IPRO day.
- Create an abstract/brochure to substantiate several key factors that would help visualize a crisis.

Team 3: Documentation

This team is responsible for writing, communicating, and documenting all aspects of team meetings/classes.

Subteam Members:
- Nicole Trevor-minutes/summary (sub team leader)
- Annette Pioletti-compilation of documentation (hard copy)

Expected Results:

- Create a place on igroups to store weekly minutes for the purpose of communication for the team.
- Create a real life copy of all team documents so that we would maintain our work outside of a computing environment.

Team 4: Design/Development

This team is responsible for the writing and development of all aspects of technology specifically the web-design.

Subteam Members:
Jim Fiorato (sub team leader)
Danielle Benoit
Hassan Alnoon
Nicole Trevor

Expected Results:
- Continuation of the website design.
- Enhance our website to include storage for registration, about us, my saved scenarios, and builds scenario elements.
- Enhance tool to test tracking functionality by means of comparative data from each table-top exercise that is performed.
- Construct/continue a working prototype incorporating objectives.
- Fix broken links

Team 5: User Experience

This team is responsible for the integration between our web-based tool and actual crisis management plans. They will conduct research, interviews, and observations to gather effective information required for the crisis management community.

Subteam Members:
Jim Fiorato (sub team leader)
Danielle Benoit

Expected Results:
- Gain understanding of needs for testing crisis management plans.
- Pilot test an outside company's crisis management plan to our scenario builder.
- Create/understand the needs during an actual crisis management table top exercise.
- Develop ways to incorporate suggestions to improve our web-based tool.

Team 6: Leadership/Deliverables

This team is responsible for the management of the IPRO. Goals include ensuring that all deadlines are met, tasks are being executed and focused in a timely and efficient

manner, and assisting where needed. As a result, creating a positive working team environment.

Subteam Members:
- Jim Fiorato(facilitator)
- Annette Pioletti (co-facilitator)

Expected Results:
- Create a timeline associated with each sub team to ensure project completion.
- Maintain along with the team igroups site, the appropriate email correspondence to ensure proper communication.
- Update individual assignments and team organization as deemed necessary.
- Ensuring that the writing and submission of required reports/documents are met according to specified guidelines.

Overall IPRO

Our overall scope includes:

- More scenario ideas developed for the database to include a broader range of crisis'. The scenarios need to be "starter" scenarios that can be added on to and relished by the user with the use of "injects."[information/situation additions]
- More customization that allows user information to be inserted in the scenario [number of employees; number of sites; number of floors per site; types of services and/or products produced at each site; keep the question about the date] along with what "events" or "special work" will be taking place during the table top exercise.
- The scenarios will allow "injects" (information) that can be added to the exercise as it moves along, and thus picked by the user prior to the exercise.
- Incorporation of instructions about how to use a scenario, and how to set up an exercise so it is successful.
- Piloted testing of a crisis management plan utilizing our product.

IPRO Day:
- Entire IPRO team will have a more complete interactive demo complete for judges and others to use.
- Documented process of our piloted exercise.
- Handouts, CDs, business cards, and pamphlets.
- Each sub team will be able to state the problem at hand and steps we used to attain our goals.
- Gain more attention from related companies through IPRO day and our special presentation.

Budget

Included below is the itemized budget for the project:

Design Team	Expenses
Website essentials (domain name registration)	$50.00
Subtotal	$50.00

Marketing Team	Expenses
Business Cards	$30.00
50 brochures	$35.00
Miscellaneous handouts for IPRO Day	$100.00
Subtotal	$165.00

Leadership Team	Expenses
Teambuilding	$50.00
Deliverables	$35.00
Subtotal	$75.00

GRAND TOTAL	**$290.00**

**This is an estimated amount

Estimated Hours:

10 hours a week x 7 weeks = 70

70 hours x 9 team members = 630 total projected hours

**more will be allotted based on project needs.

Project Deliverables and Milestones

Project Deliverable		Due Date	Teams
Scenario/Injects/Research	Draft	6/26	Research/Writing/Analyzing
	Final	7/3	(200 hours)
Programming Completion	Draft	7/10	Design (**see below)
	Final	7/21	
Pilot Test	Test	7/17	User Experience (10 hours)
	Report	7/19	
Site Testing		7/10	All (5 hours)

| Role out to R&A sponsor | 7/12 | All (2 hours) |

| Development Documentation | Ongoing | All (12 hours) |

IPRO Deliverable	Due Date		Teams
Project Plan & Budget	Draft	6/19	Annette (15 hours)
	Final	6/22	
	Due	6/22	
Mid-term Report	Draft	6/26	Annette (30 hours)
	Final	7/6	
	Due	7/6	
Website	Draft	7/3	Design/Development (250 hours)
	Final	7/10	
Minutes	Final	7/19	Nicole (5 hours)
Presentation	Draft	7/18	Jim/Annette (10 hours)
	Final	7/20	
	Due	7/26	
Poster	Draft	7/3	Brett/Annette (40 hours)
	Draft	7/10	
	Final	7/17	
	Due	7/24	
Abstract	Draft	7/3	Brett/Annette/Jim (15 hours)
	Final	7/10	
	Due	7/26	
Final Report	Draft	7/17	Annette (40 hours)
	Final	7/23	
	Due	7/24	
CD		7/26	Annette (1 hour)

Weekly Assignments

Week	Tasks and Deliverables
June 5– Week 1	Meet with team and review last semester ⮞ Begin project plan

June 12 – Week 2   All
  - ➢ Discussed goals for entire IPRO as well as each individual group
  - ➢ Make everyone aware of last year's progress

                          Design/Development
  - ➢ Get acquainted with software
  - ➢ Brainstorm to existing prototypes
  - ➢ Acquaint new members with previous work

                          Leadership/Deliverables
  - ➢ Discuss Project Plan Work Load
  - ➢ Show New People How to Use igroups

June 19 – Week 3   All
  - ➢ Overview of project management

                          Research/Writing/Analyzing
  - ➢ How to link/add injects
  - ➢ Key areas to continue scenario writing

                          Creative/Marketing
  - ➢ Poster ideas
  - ➢ Abstract/brochure ideas

                          Documentation
  - ➢ Meeting notes on igroups

                          Design/Development
  - ➢ Divide tasks into teams
  - ➢ Outline injects to current builder
  - ➢ Develop updated design

                          User Experience
  - ➢ Pilot plan(who with/date set)

                          Leadership/Deliverables
  - ➢ Project plan completion
  - ➢ Confirm project timeline
  - ➢ Questions/Answers
  - ➢ Igroups update

June 26- Week 4   All
        ➢ Subteam progress reports
Research/Writing/Analyzing
        ➢ Summary of analyzes/target plans key areas
        ➢ Inject plan into scenarios
        ➢ Sample scenario with inject allowance
        ➢ Instructions use of scenario creation
Creative/Marketing
        ➢ Poster draft
        ➢ Abstract/brochure outline
Documentation
        ➢ Meeting notes on igroups
Design/Development
        ➢ Idea's for changes to website(plan)
        ➢ About us page
User Experience
        ➢ Pilot idea to class
Leadership/Deliverables
        ➢ Questions/Answers
        ➢ Reassign work as necessary
        ➢ Igroups update
        ➢ Midterm draft

July 3 – Week 5   All
- ➢ Subteam progress report
- ➢ GROUP PICTURE BE HERE

Research/Writing/Analyzing
- ➢ 10 solid scenarios including injects
- ➢ Table top instructions

Creative/Marketing
- ➢ Post final draft
- ➢ Abstract/brochure draft
- ➢ Role out IPRO marketing ideas

Documentation
- ➢ Meeting notes on igroups

Design/Development
- ➢ Website draft with test scenario
- ➢ Any changes to original plan communicated
- ➢ About us page completed

User Experience
- ➢ Confirmation a go with pilot test

Leadership/Deliverables
- ➢ Questions/Answers
- ➢ Reassign work as necessary
- ➢ Igroups update
- ➢ Midterm report submission
- ➢ Meeting to determine progress/changes to timeline

July 10– Week 6   All
  ➢ Subteam progress reports
  ➢ Subteam leaders "completed objectives" submitted to igroups for final report
  ➢ IPRO day discussion

Research/Writing/Analyzing
  ➢ Any changes needed from design team
  ➢ Submission of resources
  ➢ Completion of resources page(for final report/website)

Creative/Marketing
  ➢ Poster final
  ➢ Abstract/brochure final
  ➢ Printing of business cards for IPRO day

Documentation
  ➢ Meeting notes on igroups
  ➢ Meeting notes layout for submission

Design/Development
  ➢ Website due for testing
  ➢ Resources page done
  ➢ About us page done

User Experience
  ➢ Pilot testing plan

Leadership/Deliverables
  ➢ Questions/Answers
  ➢ Reassign work as necessary
  ➢ Igroups update
  ➢ Midterm report submission
  ➢ Meeting to determine progress/changes to timeline
  ➢ Presentation discussion
  ➢ IRPO day discussion

July 17 – Week 7   All
  ➢ Subteam progress reports
  ➢ Discussion on suggestions for next semester
Research/Writing/Analyzing
  ➢ Finalization of resource page
  ➢ Any additional modification to scenarios
Creative/Marketing
  ➢ Printing of poster set up
  ➢ Printing of abstract brochure
  ➢ IPRO day marketables complete
Documentation
  ➢ Meeting notes are due
Design/Development
  ➢ Testing of website in class
User Experience
  ➢ Pilot testing completed
  ➢ Documents from testing completed(submitted for final report)
  ➢ Report to class
Leadership/Deliverables
  ➢ Questions/Answers
  ➢ Reassign work as necessary
  ➢ Igroups update
  ➢ Midterm report submission
  ➢ Meeting to determine progress/changes to timeline
  ➢ Presentation final draft
  ➢ IRPO day discussion
  ➢ Final report discussion

July 24– Week 8   All
  ➢ Presentation "live run through"
  ➢ IPRPO day expectations
  ➢ Pizza served!
Research/Writing/Analyzing
  ➢ Last review of website portion
Creative/Marketing
  ➢ Last minute confirmation of all
Documentation
  ➢ Hard copy binder for next semester complete
Design/Development
  ➢ Complete Constellation Game
User Experience
  ➢ IPRO day exhibit
  ➢ Submission report for final report(7/22)
Leadership/Deliverables
  ➢ Questions/answers
  ➢ IRPO day discussion
  ➢ Final report discussion
  ➢ Igroups closing
  ➢ Discussion with team re project
  ➢ Final Binder
  ➢ CD
  ➢ Submission of all reports

July 26 – Week 8   IPRO Debriefing ***mandatory to pass IPRO***

*Our team will not be using weekly timesheets.

*All tasks and milestone dates are being managed in igroups calendar. It is updated as necessary.

**SEE Project Management file for gnat chart.