



Connectors

Connecting Employers and Students

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Introduction

The goal of this project is to keep some of the fresh Computer Science graduates of OSU in the local area. Local software companies need to connect with good people, and we can provide that connection.



Project Description

We have provided a web-based solution to fill this need and to connect the local software companies with some employable graduates.

There will also be a short set of interest questions that the student can answer, this will allow an automated search for some similar interests between the student and the software companies.

When an interests match occurs, the students résumé will automatically be sent to the employer so that a meeting or interview can be arranged.

Results

We found that a combination of MySQL (an open source database program) and PHP (an internet scripting language) combined with a web-server would be the best way to handle the needed tasks.

Conclusions

We realized that keeping everything in "modular" format would help to keep everything easy for future updates and maintenance.



JOGL-based Interactive Structure Design



Surf's Up!

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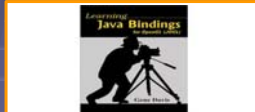
Introduction

We decided on this project based on a combination of things: new technology (JOGL), 3-D graphics, interest in tsunami research, and educational outreach.



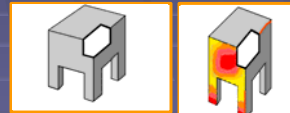
Project Description

Using JOGL, we created a 3-D model of a tsunami shelter. It has 7 adjustable parameters so that the general shape may be adjusted and tested against a computer model of a tsunami wave. The result of the model's performance is then displayed to the user. The initial model has been developed using regular OGL and C++ and was later extended for use over network via JOGL.



Results

Our results were perfect and we could have not asked for anything better. We were lifted up carried around for hours on the shoulders of our fellow classmates.



Conclusions

The models turned out to be quite the little bit of work to complete. If we were to have to do it again, we would have chosen a different type of software.

November 28, 2005


Forestry Data Management OSU


Helping Make Researchers More Efficient

Team photo
N/A

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H.J. Andrews
Experimental
Forest






Introduction

Sensors are installed in the Experimental Forest which record data continuously, resulting in large streams of raw data.

Currently, researchers must manually check this data for errors and convert to a standard format for statistical analysis.



Project Description

The Forestry Department needs an efficient, automated method to manage raw data recorded at the Experimental Forest and organize into a consistent format for archiving and easy retrieval.

Results



Through the use of Java and MySQL, we were able to design an automated system to parse incoming raw data, remove data deemed erroneous, and store in a database for future statistical analysis by these researchers.

Conclusions


More on this as our project nears completion...

Fuzzy Bunny Bulletin Board OSU School of EECS

A Democratically Operated Forum





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 Adam Taylor, taylorad@onid.orst.edu



Introduction

Today's forums are useful, but can be difficult to find specific information on. It is our aim to create an efficient, content-concise forum, run by its users.







Screenshots

Project Summary

Fuzzy Bunny Bulletin Board (or FBBB for short) will be a fully functional web-based forum built from the ground up, with the added feature of decentralized administration.

Rather than having the responsibility of moderation on a few individuals, it will be distributed accordingly to the forum's members based on their contributions to, and involvement in the forum.

Makes use of the following:

- * Apache 
- * MySQL 
- * PHP 
- * Linux cron 

Graphs, charts, imagery

Power Distribution

Happens automatically

- Power given to regular (frequent) users
- Power given to those who use it
- Power given to answer providers
- Power revoked from vandals / abusers

Conclusions

FBBB is a thing that does stuff better than some other people who have sites that do stuff.

November, 2005

Introduction

A recent advance in video games has been the ability to produce graphical objects on the fly allowing the creation of thousands of objects in a short amount of time.


Vehicles are logical objects to generate and few sophisticated procedural vehicle generators have been made.

We have created one such program that will be able to produce a world of unique cars.

Procedural Vehicle Generator is a project designed to undertake the task of spontaneously generating graphical representation of vehicles to be used in games for upcoming video game consoles.


Basically the idea is to take the load off of artists drawing hundreds of unique vehicles and place that load, or a much larger load, on the software we are creating.

- Choose the parts of the car they want.
- Tweak deforms
- Add detail through subdivision
- Adjust paths to follow contours
- Choose textures and material properties
- Automated process



Procedural Vehicle Generator


DRIVING THE FUTURE OF VIDEO GAMES



Results

Data is shown is based off the generation of 60 unique vehicles:

- 15.45 seconds
- rendered at 124 fps
- memory buffer size of 305 kb



Conclusion

With our software, gamers will be stunned by the fantastic variety vehicles we generate.

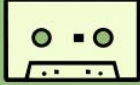
Imagine gamers saying "Wow, how did they create so many nice looking cars!"

Limitless number of cars, each uniquely generated according to a variety of parameters.

This software is truly a time savings

MIXTAPE COLLECTIVE


www.mixtapecollective.org



root@mixtapecollective.org

A NEW WAY TO SHARE

A PROJECT BY



corey sprague
eric feigner

MIXTAPE?

A mixtape is a homemade compilation of songs recorded in a specific order.

Mixtapes reflect the musical tastes of the compiler and can range from a casually selected list of favorite songs, to a conceptual mix of songs linked by a theme or to a highly personal statement tailored to the tape's intended recipient.

Mixtapes represent an artistic statement greater than the sum of its individual songs.

MIXTAPE COLLECTIVE?

The Mixtape Collective was born out of the simple lack of outlets for sharing mixtapes online.

Extending the simple concept of mixtape sharing, the Mixtape Collective aims to be a full-fledged community based around mixtapes and more specifically, sharing musical knowledge.

HOW?

The Mixtape Collective is a web-based application built using the following technologies:

PHP	MySQL
CSS	AJAX
HTML	Apache

Layering these web technologies provides an extremely modular design, allowing for the utmost control over every aspect of the Mixtape Collective

FUNCTIONALITY?

The core functionality of the Mixtape Collective focuses on the users, making it easy for them to:

- Create and edit mixes
- Add description tags
- Upload custom cover-art
- Share their mixtapes
- Interact with others

COMMUNITY?

There is much additional functionality that works to bring the community an unprecedented level of user interaction for a web-based application.

- Create a profile
- Write private messages
- Compete in showdowns
- Maintain a "friends" list
- Rate mixtapes and friends
- Join a mixtaping "gang"



To encourage community interaction, users have a certain point-based score attached to them. Based on the ratings of their mixtapes, their activities on the site, and a variety of other factors, users will gain (or lose) points. We hope that this point system acts as a motivator for community activity.


RESULTS / CONCLUSIONS

We have successfully designed and implemented a fully interactive web-based community. Our vision was brought to life in a stable, secure, and aesthetically pleasing application which will hopefully draw the attention of the internet music-loving population.

We were able to garner new insights on the scope of creating a web-based application and were able to fully explore the design process.

LAST MODIFIED
11.29.05







OSU School of EECS

SmartForms : Interactive Application

Business Processes automation at your fingertips



Fair Isaac


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 Mentor: Hollis Fishelson-Holstine <HFHolstine@fairisaac.com>

Introduction

Smart Forms provides business users to create and manage web-based interactive applications with minimal support from IT.

Results

Successfully gathered user requirements and prepared the Customer Requirement Specification



Project Description

The purpose of this project is to develop and document a model demonstrating the use of rule technology for automating mortgage application and processing.

Process

The process involves the following steps

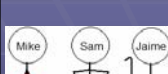
- Importing the object model from XML schema into Smart Forms
- Designing the pages using SmartForms Designer
- Generating business rules using wizard driven mechanism in Smart Forms
- Deploying to a web server

Conclusions

We had a great experience working with Fair Isaac and had this excellent opportunity to learn a powerful technology like SmartForms

Picture of results (Screenshots)


Picture of results (Screenshots)



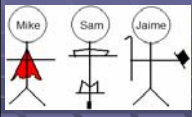
OSU School of EECS

Wave Monitoring at Mouth of Columbia River

Monitoring the Mouth of the World's Most Dangerous River



Team Columbia: The Wave of the Future



Mike Sam Jaime

Introduction

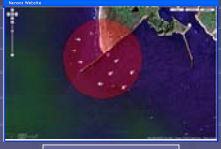
The mouth of the Columbia River is one of the most dangerous navigational entrances in the world. However, there is a lack of real time wave information available to vessels that traverse the Columbia River Bar.

Web Design/Data Views

Result

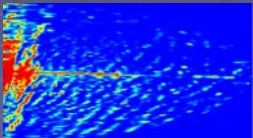
Project Description

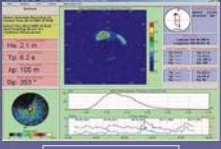
We are in support of a marine radar wave observation system at the mouth of the Columbia that will provide real time wave information accessible through an internet portal hosted by the Northwest Association of Networked Ocean Observing Systems (NANOOS). This capstone project would focus on the design of the web portal. The web portal will serve to display oceanographic wave conditions collected from the radar system in real-time and allow ship captains to review wave conditions at the mouth of the Columbia River.



Google Map Overlay

The picture below is proper interpretation of radar data showing wave magnitude at the mouth of the Columbia River. This image can be updated at the speed of the radar, or approximately 80 times a minute.





Web Interface

Conclusion

This makes travel safer for ships because they can now have an idea what is occurring at the Columbia River mouth.

Remote Olympic Commentator System



Bringing the Olympics to You

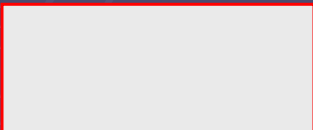
Cody Wise, wisec@onid.orst.edu

Joel Ranck, ranckj@onid.orst.edu

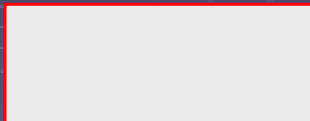
Mentor: Carlos Jensen,
cjensen@eecs.oregonstate.edu



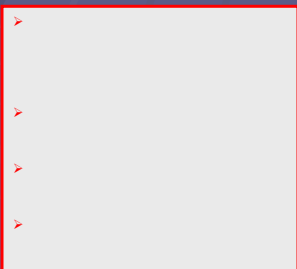
Introduction



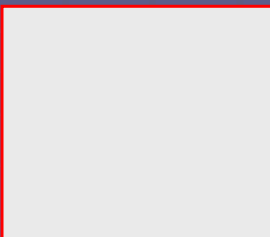
Visual Data



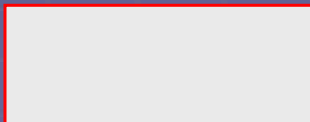
Project Description



Results



Conclusions



Emergency Response Simulator



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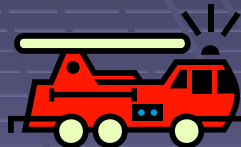
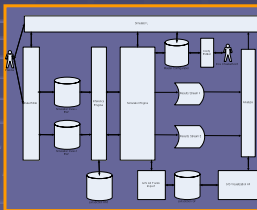
Dan Whiting, whitinda@enr.oregonstate.edu

Mentor: Carl Niedner, cdn@coelo.com



Introduction

A crude prototype of an Emergency Response Simulator has already been designed by Coelo Company of Design. Our goal is to take the simulator a step further by finishing the development and turning this into a powerful, easy to use product that will greatly assist the Corvallis Fire Department.



Project Description

Utilizing past 911 call data from the Corvallis Fire Department, our software will:

- Simulate the split-second decisions made by 911 dispatchers,
- Route necessary apparatus and personnel to the call location, and
- Analyze and compare the response times with existing call data.

With our software CFD chiefs can then perform "what-if" analyses on different response strategies (dispatch algorithms and apparatus / personnel distribution).


Results

We found that ...
•Our software works flawlessly.



Conclusions

We realized that...
*Software design is hard, but rewarding work!





PLACEHOLDER FOR PICTURE OF ACTUAL HARDWARE

Print Spot Memory

Using 2D Patterns for Data Association


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 Advisor: Ken Saul (ken.saul@hp.com)

Introduction

Have you ever taken a picture, and wished you could capture your thoughts along with it?

This is what our project is about: using visual patterns to associate images with data.



Here's how it works: A picture is taken, and a sound is recorded. The hardware associates that sound with the picture, creating a unique 2D pattern that can then be printed and saved with the picture - attached to the back, or some where close.

Take a picture of that pattern using our software, and it will recall and replay that sound for you.

Project Description

Two dimensional barcodes are a way of encoding data as a matrix of dots. This pattern can then be read back in by a camera, and the information decoded.

Project Goals:

- To interface with the camera hardware, and use it to read in the pattern.
- To create a simple black and white pattern that can store very simple information: to start with, a file name or URL.
- To write software which associates the decoded data with another set of files and provides a simple user interface.
- To expand on our encoding scheme, adding colors for bit depth and error correction.
- To increase the robustness of our system by compensating for skew and distortion.

Conclusions

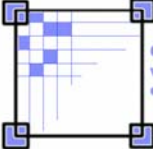
Functionality
 How well does the overall system work? Does it function as expected? How intuitive is the UI? What is our projection of how useful this would be as a product?

Robustness
 How much skew can the system tolerate? How much distortion? What is the range of the camera?

Error Correction
 Did we get an error correction code in place? How well does it work?

Data Storage
 What is the bit depth of the pattern? What compression schemes are used? How much information can be stored in the pattern?

Results



Close up Example Pattern with various details pointed out and highlighted goes here.

PLACEHOLDER FOR CHART

☐ → Encoded text

☐ → Encoded text

☐ → Encoded text

Example Patterns

You Have Male (or Female)

"Making Kelly better, one visitor at a time"


Team photo

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Mentor: Dr. Michael Bailey, mjb@eecs.oregonstate.edu



Introduction

With the recent relocation of the School of EECS to Kelley Engineer Center, the receptionist finds it hard to keep track of faculty members. The current system of using a third-party instant messaging program does not work.

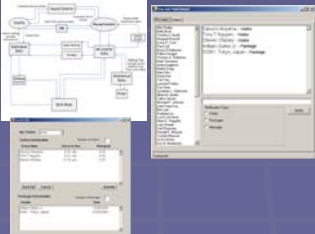


Results

- C++ best language for development
- Database Design took less time then planned
- Interfaces easy to develop
- Need to stick to time schedule
- Project moving forward

Project Description

The main feature of this project will allow the receptionist to notify faculty members that there are visitors waiting to see them, as well as allow the receptionist to see the status of the faculty member. Also to help improve efficacy a statistical analysis will be done on each faculty members time through the use of the system.





Conclusions

More on this when we have something to conclude. For now we will just fill this box with random information.

Kuon Go

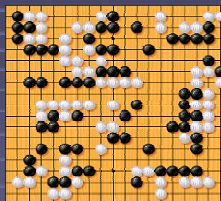
Enhancement of an ancient Chinese Board Game
 Mentor: Aaron Smith (AaronS@PIPEWORKS.com) Pipeworks Inc.
 CS 461/462 11/20/2005

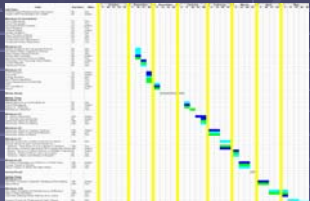


 School of EECS

Introduction

Go is an ancient Chinese board game that is played by two players. The purpose of the game is to capture the most territory by blocking off sections of the board and surrounding the opponents pieces to remove them from the board. Kuon Go will take the original game and hopefully improve it.





Project Description

Our version of Go will have the same basic rules as the original game but with additional features to enhance the game play. Our group will be responsible for the basic game play and the AI. Developing the AI will be the core of the project. There are currently no good solutions for a Go AI, but we expect to make up for that with the real time play. The project is prototype, so the features listed here will be expanded upon by Pipeworks for the final version. The purpose of the prototype is to show publishers and hopefully get the game published.

Results

- 2 Players, human or AI
- 2D Graphics
- Real time play
- Different piece shapes and sizes
- Customizable game boards
- Optional classic Go game play
- Multiple AI difficulties
- Multiple AI personalities
- Energy level based on board control, helps determine next piece
- Multiple, optional win conditions

Conclusions

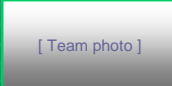
In the end we believe this reconstruction of Go will result in a fun and original game. The most difficult portion of this project is to create an efficient, effective and customizable AI.


Group Members

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Centralized Web Workspace


World Wide Word-processing

 [Team photo]



Introduction

Since current computing trends show an overall shift from distributed to centralized software organization, why not word-processing? Users all over the world can benefit from an online workspace.



Project Description

Utilizing current web technologies, the Centralized Web Workspace will allow people around the world to create, edit and store their written documents online.

An online workspace allows users to edit and print their documents from any Internet enabled workstation. A secure platform assures users their work is safe and private.

Increased productivity. Minimized data loss and time for transferring.

Results

Coming soon...

Conclusions

Coming soon...

Hoop Jam Tournament Scheduler

Corvallis 3-on-3 Basketball



Team Members : Marcus Fisher fishmarc@onid.orst.edu
Pete Garman garmanpe@onid.orst.edu
Sponsor : Biff Traber biff.traber@comcast.net



Introduction

This project schedules all teams by divisions for the annual Hoop Jam 3-on-3 basketball tournament.

Results

This project has been a great experience in professional relationships, teamwork, and database application.

Project Description

The scheduler is divided into two stages, the first day round robin and the second day double elimination.

Conclusions

We loved that establishing strong professional relationships and

Price Prediction for Ebay Auctions



We Keep Money In Your Wallet



Introduction

Previous research in the field of auction price prediction has been done by Rayid Ghani. This project seeks to expand on that. To do this, our mentor requires data (via an auction crawler /parser) and at least 2 machine learning algorithms to predict prices. **(Probably Will Change)**

Project Description

Our project aims to predict the price of three classes of Volume:

- Low
- Medium **(Probably Will Change)**
- High

From items placed onto an auction service such as Ebay. Using relevant data from the auctions we will predict the price of a similar item listed for auction. These results will be validated using a variety of statistical methods / metrics such as classification accuracy, 0-1 loss, mean squared error, and ROC curves.

Team: [Fly on the Wall](#)

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Mentor: Weng-Keen Wong
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Team photo

Graphs, charts, imagery

Picture Of Results From Data
(Price Prediction Of An Item)

Graphs, charts,
imagery

Graphs,
charts,
imagery

Results

We found that ...

Conclusions

Success We Can Predict The FUTURE

Goals: Spread This To Other Fields.

- Real Estate
- Fantasy Sports

Introduction:

This project was undertaken to further our knowledge about graphical design and implementation. Our goal is to successfully create purposeful software program that renders digital images and videos as painted mediums.

Project Description:

-What we did: based upon a prior method for rendering images to paintings, we improved upon the process and incorporated video transformations as well.

-How did we do it: Using OpenGL and MFC we built a user friendly program that allows for the client to transform their images into paintings.

-Why we did it this way: To provide the most accessible and efficient method for converting images to high quality rendered paintings.

PAINTERLY RENDERING

Transforming Reality

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Bryan Beck (beck@omid.orst.edu)

Mentor: Eugene Zhang (zhang@eecs.orst.edu)



Results:

The program successfully renders images in an artistic fashion that complies with the specifications of the user. The project allows for easy manipulation of various artistic styles as well as custom settings to accommodate for a variety of results.



Conclusion:

We realized that mimicking artistic styles is more of an art than a science as it was difficult for a single algorithm to achieve accuracy in representing a wide range of artistic styles.

References:

Image and Video Based Painterly Animation:
<http://www.cc.gatech.edu/cpl/projects/artstyling>