CENTRAL CONNECTICUT STATE UNIVERSITY

Threads

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From the Chair's Desk . . . Announcing Digital & Optical Science Program

Joan Calvert

The Computer Science department, together with the departments of Physics, and Mathematical Sciences is pleased to announce that we have designed and developed a new bachelor of science degree program in the new field of ***Digital and Optical Science***. The program, offered jointly by computer science, physics, and mathematics includes 70 hours of physics, computer science, and mathematics courses selected to give the student a solid understanding of the field.

Courses include image processing and fiber optic communication topics in addition to a solid foundation in mathematics, physics, algorithms, and data and file structures, so students are not limited in what they pursue upon graduation.

In the past 15 years, developments in optics and computation have lead to a new field that combines both. Digital and optical processing of signals is now a vital aspect of science and commerce. Our proposed program prepares students for jobs and graduate study in this field.

Digital and optical processing of signals is now a vital aspect of science and commerce.

Interested students wishing to declare this as a Special Studies major or just wanting more detailed program-related information may contact Dr. Joan Calvert, at calvert@ccsu.edu. We encourage you to give this exciting course of study serious consideration!

A CS Degree Retrospect

Gregory Pawelczyk

As a CCSU CS—Honors student graduating this spring, I will have to say that my 3 years at CCSU were enjoyable. The CS faculty are always free to answer any questions that might be inquired and the classes for the Honors track give a good explanation to the theory of computer science. In retrospect to the degree itself, I thought that the degree was well balanced and gave the students a fundamental knowledge of programming that would increase the efficiency of learning new languages. In today's ever changing world of technology and programming we must be able to adapt or we'll become obsolete. The CS Honors program has taught the ability to adapt and become marketable to businesses who are looking for universal programmers. I highly recommend the CS Honors program at CCSU for those who want to learn the universal similarities of understanding code regardless of the language being used.

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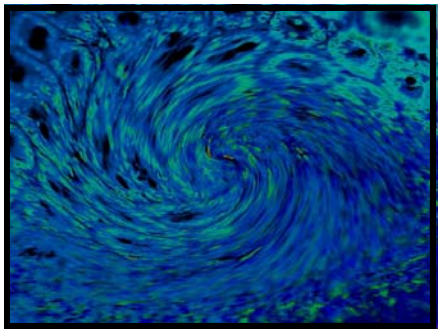
FEATURED FACULTY – Professor Robert White

Professor Robert White, anglicized from the Acadian LeBlanc, is currently a part-time instructor for the Computer Science department. He brings with him many years of experience in teaching, programming, and art. We are very fortunate that he has brought his expertise to our department by instructing our CS 207 – *Introduction to Computer Graphics* course. While

attending this course, students are required to produce documents incorporating abstract designs and images with the aid of ArcSoft PhotoStudio software. Displayed are a few examples of students' creativity.

Rob, has many other interests that include writing short stories, sculpture and painting, photography, and genealogy. Two of his sculptures have been on

display at the Science Center at Wesleyan University for over 10 years. Rob's works have also been on exhibit at Ringling School of Design in Florida, the main concourse at Bradley International Airport, Wesleyan's Zilka Gallery, The DFN Gallery in New York City, and Gibbs Science Lab at Yale University. During the exhibit on "Art in Science --Science in Art" his sculpture, "The Cellars of Cosmic



Manipulation" was on display in Budapest at the Hungarian Museum of Art (Kiallitott muvek). Rob's sculpture "City of Glass" was featured on the cover of the Wesleyan Alumni Magazine. He regularly exhibits at the NOMA gallery in Middletown and through local distributors such as Datura, A New Page, Record Express, Buttonwood Tree and others. Rob was part of a local task force who created the Mountain Laurel Sudbury School presently in operation in New Britain. Rob's children's tales, "Time Enough For All," are read in the Scandinavian Schools. You can read some of his stories, as well as view his photography and journals, by going to http://www.wesleyan.edu/av/gronican.htm

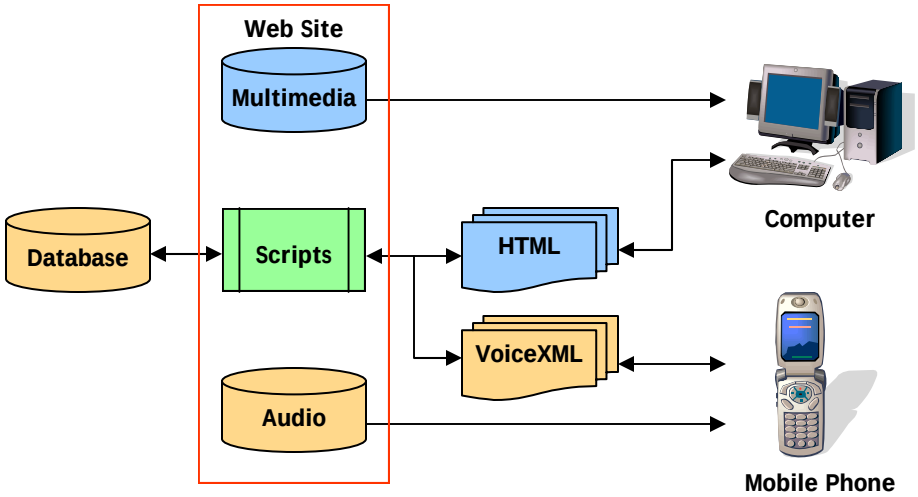
New Chair of Connecticut Section for IEEE

Brian M. O'Connell, Associate Professor of Computer Science and Philosophy has been elected chair of the Connecticut Section of the Institute of Electrical and Electronics Engineers (IEEE) for the 2006 term. The Connecticut IEEE is comprised of over 3,000 engineers working in industry, research and academics. It is active in the fields of professional education, fostering student awareness of engineering careers and maintaining a public dialogue about engineering and technical issues with the public. The IEEE consists of more than 350,000 members in 40 countries and is the leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace engineering and consumer electronics, among others.

Everything but the Anchovies

Adam P. Sharp — Computer Science Undergraduate

We've all had run-ins with them before; those automated, and thoroughly annoying, customer service systems where we need to "press 1" if we wish to speak with sales, and "press 2" if we wish to speak with technical support, ad nauseum. Some of us have even been asked to speak our selection aloud, instead of pushing a button on our phones — making the process a bit less painful… but what if this technology were used for good, rather than for evil?



Typical VoiceXML Usage

Just as HTML allows a computer's browser to view information, VoiceXML allows them to use their phone. When a user calls the designated phone number, the VoiceXML gateway will answer the call, retrieving and executing a VoiceXML script from a server. The VoiceXML gateway uses both speech recognition software as well as text-to-speech (TTS), acting as a go-between for the caller and the applications on the server. As shown in the diagram *Typical VoiceXML Usage*, the VoiceXML scripts can (and often are) on the same server as HTML scripts, and often relay the same data back to the user, merely over different media. A simple Voice XML example is shown in *Simple Hello World VoiceXML Example*, where a caller would be greeted by a TTS audio message of "Hello World" once they have called in to the designated number and the VoiceXML gateway has answered the call. Now that you know a little bit (yeah, I know, that's an understatement) about VoiceXML, it's time to return to our main focus.

```
<?xml version="1.0" ?>
<vxml xmlns="http://www.w3.org/2001/vxml" version="2.0">
      <form id="hello">
            <block>Hello World!</block>
      </form>
</vxml>
```

Simple Hello World VoiceXML Example

Perhaps a group of friends have decided to go to a city that they've never been to before, and along the way want to find a restaurant where they could get a meal. If someone in the group has had the foresight (and, *really*, who thinks about things like this beforehand?) to locate a restaurant and can guide the group there, everything's all set. If not, it can take quite a while to find somewhere that will suit the palates of the entire group. Wouldn't it be much easier if they could just call a number, say where they are and what type of food they're looking for, and be given directions from where they are now to the restaurant of their choosing?

Under the *benevolent* guidance of Dr. Stan Kurkovsky, this is exactly the kind of project that has been underway over the past semester.

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Sources of Personal Privacy

Edward H. Freeman

In a 1981 episode of the classic situation comedy *Taxi*, Louie DiPalma, the comically repulsive dispatcher, was apprehended spying on the female cab drivers through a peephole into the Ladies Room. Louie was quickly fired from his job. In a story that could only occur in a sitcom, he was rehired before the final commercial.

Throughout *Taxi's* run, Louis was a thoroughly detestable character (within the confines of television comedy, of course). As the petty despot of the decrepit garage, he stole from his employers, extorted money from the cabbies and performed countless acts of trivial churlishness. This episode was the only time that he lost his job. He was only able to get it back by begging and ultimately telling of a time when his own privacy was violated.

Our society has developed a strong sense of privacy and the limits of acceptable behavior in our relationships with others. Louie's actions caused the female cabbies no physical injuries or financial loss. Their reputations were not compromised in any way. If he had not been "caught in the act," they would not even have been aware of the violation. Yet, his actions as a Peeping Tom were considered so vulgar that his position was terminated.

We live in an age where the Internet and databases provide a real threat to these basic rights. These issues are very complex and controversial, with the legitimate needs and desires of various groups and individuals often in direct opposition. To resolve these conflicts, an understanding of the human needs and history of privacy is essential.

THE NEED FOR PRIVACY

Privacy is one of many abstract, conceptual terms that defy simple definition. The classic definition, as outlined in an 1890 law review article, states that individuals have "the right to be let alone."[1] Privacy is the expectation that individuals have in maintaining a personal space, free from outside interference. Information told in confidence should not be disclosed to others. Disclosure may cause embarrassment and emotional distress to a person of reasonable sensitivities. "Privacy, as a whole or in part, represents the control of transactions between person(s) and other(s), the ultimate aim of which is to enhance autonomy and/or to minimize vulnerability."[2] Privacy has always been present in human development. All early societies had some level of privacy, with different levels of emphasis.

Why do people feel that there is a need and a right for privacy? In a 1980 law review article, Ruth Gavison defines privacy as an integral aspect of the human need for control of one's life:[3]

Control suggests that the important aspect of privacy is the ability to choose it and see that the choice is respected. All possible choices are consistent with enjoyment of control, however, so that defining privacy in terms of control relates it to the power to make certain choices rather than to the way in which we choose to exercise this power.

Privacy needs are constantly changing. Faced with a personal problem, an individual may choose to keep to himself. He may choose to share his feelings with a close friend, psychiatrist or spiritual leader. He may even turn to a complete stranger (i.e. a bartender in a strange city).

It is precisely the right to control who knows what that makes privacy a fundamental part of our liberties. If we lose the basic ability to choose when to remain private and when to talk to others, we cannot exercise many other basic freedoms. Without this level of control, we have lost our fundamental constitutional rights to decide personal situations for ourselves.

SOURCES FOR PRIVACY LAW

The development of privacy rights has been a slow and deliberate (cont'd page 5)

Computer Science Honor Student

Steven Bazinet has been named honor student of the Computer Science department. Departmental Honors are awarded annually to undergraduate students with outstanding academic achievements who have also participated significantly in the life of the University. The Honors Convocation was held on Thursday, May 11, 2006. Congratulations to Steve for all of his accomplishments!

Sources of Personal Privacy

(cont'd from page 4)

process reaching back thousands of years. Numerous writings have formulated these rights.

Biblical Law - The foundations for the legal recognition of privacy and the boundaries between the public and private realms of social lives date back to Ancient Greece. Such rights are also recognized in the Mishnah, the code of Jewish law compiled in the second Century of the Common Era. The Mishnah (Baba Batra 3:7) states:

In a shared courtyard, a man should not build a door facing another person's door nor a window facing another person's window. If it is small, he should not enlarge it.

Invasion of privacy is tantamount to trespass or theft, and similarly punishable.

We can see the importance of the privacy of an individual's behavior in a private space. Not only is the intrusion upon privacy forbidden, the creation of circumstances wherein privacy intrusion can take place is forbidden.
Invasion of privacy is tantamount to trespass or theft, and similarly punishable. There are ample precedents through centuries of Jewish legal writings to indicate that the individual is entitled to prevent the public from intruding upon or sometimes even knowing about his private doings, correspondence, and other aspects of his private domain.[4]

Other passages deal with repeating gossip. Leviticus 19:16 states: "Thou shalt not go up and down as a tale bearer among thy people." One may not pass on any information concerning a person to a third party, no matter how that information has been obtained. Even if the statement is true, gossip is considered a violation of privacy.
Under extreme circumstances, information may be passed on:

If not passing on the information will definitely cause financial damage or personal tragedy, and

The information must be believed to be accurate, and

The intent of the person passing the information must be to prevent financial damage or personal tragedy, not for some personal motive.

If the damage will be averted only if the information is passed on.[5]

De May v. Roberts - In 1880, Dr. John De May attended the birth of Alvira Roberts' fourth child in rural Michigan. Dr. De May brought Alfred Scattergood, an unmarried jeweler and watch repairman, along to the birth. Mrs. Roberts thought that Scattergood was a medical student or medical assistant. In truth, he was an unmarried jeweler and watch repairman. When Mrs. Roberts learned the truth, she sued De May and Scattergood. Despite their claims that they should not be found liable for acts "involving solely the question of taste or propriety", a jury awarded Mrs. Roberts $5,000.

De May and Scattergood appealed the decision to the Michigan Supreme Court. The court affirmed the jury's decision. Mrs. Roberts "had a legal right to the privacy of her apartment at such a time, and the law secures to her this right by requiring others to observe it, and to abstain from its violation."[6]

De May is generally considered the first United States case where the right to privacy was mentioned explicitly. It was also the first case to award damages for violating that right. *De May* was decided when privacy was becoming an established right and a legal concept.

The Right to Privacy - In Boston during the 1890's, Mrs. Samuel D. Warren, a leading local socialite, was considered an outstanding party hostess. Before long, the local newspapers began printing her guest lists and descriptions of her décor and food. On different occasions, the *Saturday Evening Gazette* reported that Mrs. Warren had given a dinner party for 12 friends and that she and her husband had transformed their home into a "veritable floral bower" for a wedding breakfast for his cousin.

The Warrens, both of whom came from politically prominent families, were outraged at the intrusiveness of the Boston press. Samuel Warren, a respected attorney, asked his friend and former law partner, Louis D. Brandeis (later a Supreme Court judge), to write an article on privacy with him. The article appeared in the Harvard Law Review in 1890. It is generally credited with creating the "right to privacy" and, consequently, the right to sue for "invasion of privacy."[7]

In their article, Brandeis and Warren stipulated that individuals have the "right to be let alone." For the first time, legal scholars advanced an articulate legal theory to meet the threats of new technology. Their theory of privacy rights

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Sources of Personal Privacy

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evolved from the common law, developed over centuries. Common law protected a person not only from the physical attack on his life and property but also from intangible attack as well.

Warren and Brandeis recognized that an increasingly technical and intrusive society would require new protections for privacy. They also realized that invasion of privacy would usually cause emotional harm rather than physical injury, but argued that the damage was just as serious and should be compensated through legal action.

History has shown that new technology brings on new concerns for maintaining and protecting our privacy rights.

Courts soon began to accept Warren and Brandeis's arguments and the legal right to privacy was born. In 1905, a Georgia court held that the unauthorized use of a person's photograph for commercial purposes was a violation of a person's privacy interest.[8] By 1947, only nine jurisdictions recognized a common law right of privacy. Progress was sometimes slow until the 1960's, but the article first established the concept of privacy as a legal principle.

Griswold v. Connecticut - In this landmark case, the Supreme Court finally recognized a constitutional right to privacy.[9] A Connecticut statute made it a crime to use or counsel anyone in the use of contraceptives. A New Haven doctor and the executive director of the local Planned Parenthood had been arrested, and each fined $100, for counseling married couples regarding birth control.

Most of the justices in *Griswold* concluded that the Constitution provides a fundamental right to privacy, which in turn includes the right to decide whether to use contraceptives. The only way to enforce such a statute was to "allow the police to search the sacred precincts of marital bedrooms for tell tale signs." Justice William O. Douglas found that the spirit, structure and specific provisions of the Bill of Rights created "zones of privacy" which are broad enough to protect aspects of personal and family life.

CONCLUSION

History has shown that new technology brings on new concerns for maintaining and protecting our privacy rights. In modern society, where individuals are not afraid to speak up and bring litigation, companies are accountable when their employees and policies do not measure up to the current standards. Embarrassing and expensive lawsuits are real concerns. Many organizations have created high--level executive positions just to deal exclusively with privacy issues. It is hoped that its lessons will lead to a more thorough knowledge of the legal, historical, ethical and moral needs for a comprehensive privacy policy.

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[1] Samuel D. Warren and Louis Brandeis, *The Right to Privacy*, 4 Harvard Law Review 193 (1890).
[2]Stephen T. Margolis, *Conceptions of Privacy*, 33 Journal of Social Issues no 3 p. 10 (1977).
[3]Ruth Gavison, *Privacy and the Limits of Law*, 89 Yale Law Journal 421 (1980).
[4]Alfred S. Cohen, *Privacy: A Jewish Perspective*, Journal of Halacha and Contemporary Society, Volume 1, Number 1, Spring 1981, pages 53-102.
[5]J. David Bleich, *Privacy of Personal Correspondence*, The Jewish Law Annual (1980) pages 128-131.
[6]*De May v. Roberts*, 46 Mich. 160, 165-166 (1881).
[7]Ellen Alderman and Caroline Kennedy, The Right to Privacy, (New York: Alfred A. Knopf, 1995).
[8]Pasevich v. *New England Life Ins. Co.*, 122 Ga. 190 (1905).
[9]*Griswold v. Connecticut*, 381 U.S. 479 (1965).

Everything but the Anchovies

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From anywhere in the US, anyone can call into our system and, after stating their zip-code and selecting a type of cuisine, find out what restaurants are in the area, as well as get directions to the restaurant of their choice. Using the VoiceXML service from the BeVOCAL Café (located at http://cafe.bevocal.com), as well as some PERL scripts on a private server, we have been able to set up an interactive system that can be easily used as a template to allow for a user to search for just about anything in the given area (hotels, theatres, etc.), with very little modification.

At the moment, we are polishing up the system by adding more user-friendly prompts and features, as well as conducting usability studies with human subjects.

CCSU Library Resources for Computer Science Students

The library at CCSU is abundant in resources for Computer Science students to utilize. Among the resources is the ***ACM Guide to the Computing Literature***. This Guide is a collection of more than 750,000 citations from major publishers in computing, including ACM. Please note: This "free" version has basic search and browse functions only. Also available to access is ***ArVix*** which is an e-print service in the fields of physics, mathematics, non-linear science, computer science, and quantitative biology that is owned, operated and funded by Cornell University and is partially funded by the National Science Foundation. ***Encyclopedia of Information Science and Technology*** is an online version of the five-volume encyclopedia including more that 550 articles highlighting current concepts, issues and emerging technologies. These articles are enhanced by special attention that is paid to over 5,000 technical and managerial terms. Topics covered include data mining, distance education, database design, ERP, E-commerce, global information technology, knowledge management, and web applications and usability. ***Applied Science and Technology Abstracts*** contains coverage of more than 560 core English-language, scientific and technical publications. Topics include engineering, acoustics, chemistry, computers, metallurgy, physics, plastics, telecommunications, transportation, and waste management. Indexing spans from 1983 to the present. ***CiteSeer*** is a scientific literature digital library and search engine that focuses primarily on the literature in computer and information science. The newest additional resource is the ***IEEE Computer Society Digital Library***. This library provides online access to 22 society magazines and transactions, and more than 1,700 selected conference proceedings.

Be sure to tap into all the resources the CCSU library has to offer. Most applications have off-campus access.

CCSU Computer Club

The CCSU Computer Club meets in the Computer Projects Laboratory in room 314 of the Maria Sanford Hall. The club hosts a variety of activities including the Wiki web server, a Linux gaming server, and free student web hosting. If you are interested in joining the Computer Club you can contact one of the following people for more information:

President: Robert Quast
quastr@ccsu.edu

Vice President: Adam Sharp
sharp_adp@ccsu.edu

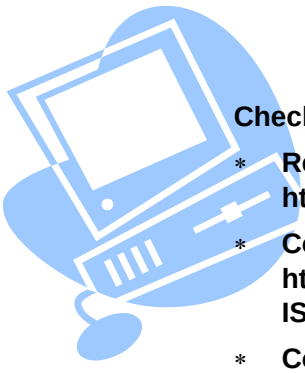
Treasurer: Conrad Akier
school@akier.net

Secretary: Andrew Sotzing
sotzinganj@ccsu.edu

Advisor: Brian O'Connell
oconnellb@ccsu.edu

Home computers are being called upon to perform many new functions, including the consumption of homework formerly eaten by the dog.
~Doug Larson

Notable Web Sites



Check these out!

* **Research with the use of computers: http://www.apple.com/science/profiles**
* **Computer discoveries & innovations: http://www.nsf.gov/discoveries/index.jsp?org=CISE**
* **Computer Ethics: http://www.cpsr.org/**

Check us out at www.cs.ccsu.edu

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Upsilon Pi Epsilon

International Honor Society for the Computing Sciences

The Gamma Chapter of Upsilon Pi Epsilon at Central Connecticut State University

The Gamma Chapter of Upsilon Pi Epsilon Honor Society at CCSU held their induction ceremony on Friday, April 28, 2006. New members to the Honor Society include: Daniela S. Hristova; David A. Maddock, Jr.; Ronald L. Packard, Jr.; and Andrew J. Sotzing. To be eligible to join UPE you must be a Computer Science Major and maintain a grade point average of 3.5 or greater. For more information about UPE contact Dr. Rathika Rajaravivarma at rajaravivarmar@ccsu.edu.

Distinguished Honors in Computer Science

Congratulations to all the Computer Science Majors who have maintained a grade point average of 3.5 and higher.

CS—Honors Program

Steven Bazinet
Anthony DeCusati
Justin Gatzen
Daniela Hristova
Devin Krevetski
Andrew Sotzing

CS—Alternative Program

Daniel Bernier
James Gleckler
Konrad Krupa
Bao Le
Joseph Maciejko
David Maddock

Dedicated to preparing students for successful computing careers.

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