USCSoftwareSystems

HORIZONS

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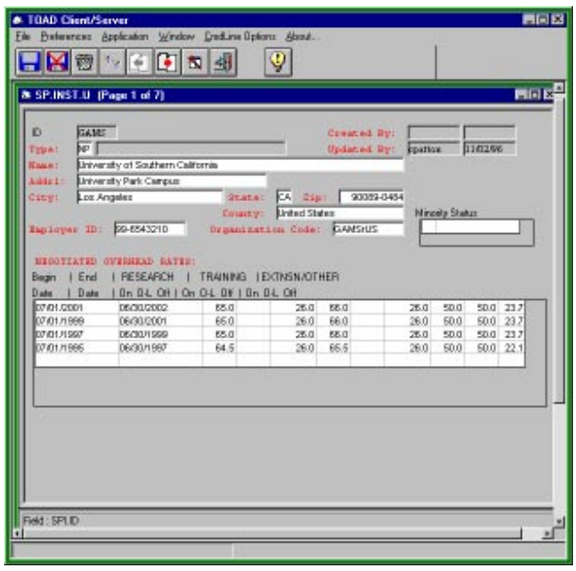
Visual TOADS! *Graphic Client/Server Technology Breaks New Ground*

USC Software Systems announced that Visual TOADS, an all new GUI client/server solution available for TOADS '97 would begin shipping during Spring 1997.

The most crucial element of the USC Software Systems approach is that Visual TOADS doesn't try to do everything Windows applications can do. Why bother? Users will have their favorite apps right there on their PC. Instead, Visual TOADS has decided to make Windows work for the user, and for it. USC Software Systems realized while developing Visual TOADS that many of the features that our engineers wanted to include were already a part of the Windows' solution. Why build a text editor when a user already has fantastic word processors? Why build an elaborate reporting module that creates graphs, charts, and spreadsheets when a user already has these things at their fingertips? Why make users have to relearn what they're already happy with? The simple answer is not to, and this was the route USC Software Systems chose. Visual TOADS deploys a GUI, Windows-like interface that takes advantage of the strengths of the Windows OS with a powerfully streamlined client/server strategy.

Visual TOADS operates like any other Windows application. It has the standard Windows fare: pull down menus, scrollable windows, point-and-click buttons. It even allows users to customize its look to add a more personal touch. Long time TOADS users will appreciate the multi-column SELECT list boxes, and the ability for TOADS menus to remain active to allow users to jump easily from application to application (and programmers will appreciate the fact that no new code needs to be written for them to do it!) Also, message input boxes can be called from user subroutines, and data entry is formatted to make its presentation just as sharp going in as it does coming out. The exciting part comes from how these standard TOADS and Windows elements combine to create a synergistic link between user PC and UniVerse database.



Visual TOADS gives users a look and feel consistent with their Windows™ environment.

Visual TOADS, employing DDE (Dynamic Data Exchange) will be able to 'kick off' Windows applications capable of DDE exchange. This will give users the ability to interact with their data in the Windows applications that they're familiar with. Data collected and input through TOADS can be retrieved and transferred to spreadsheet programs for reporting, or can be brought up in a layout design application so that a user can create an invoice for a client using a template of their own design. Visual TOADS acts as the data coordinator, allowing users to access their data dynamically through TOADS applications, then export it to Windows applications. The possibilities for this capability are as limitless as the bounty of software available for Windows.

DDE isn't the only feature of Visual TOADS to take advantage of desktop PC computing power. Current client/server relationships are largely server oriented. Most of the computing is handled by the server with information piped to it by the client. As desktop computers have grown in power and performance to nearly match servers in many instances, this relationship between the client and server is no longer as efficient as it once was with character terminals. Visual TOADS puts the client back into the client/server relationship by offloading some tasks that the client can handle more efficiently than the server. The client is 'event-driven', handling many of the needlessly processor-intensive tasks of the client/server interaction. The

Visual TOADS continued on page 4

USCSS Announces Release of TOADS '97

Latest Release Marks Beginning Of New Era For TOADS Rapid Application Development Tool

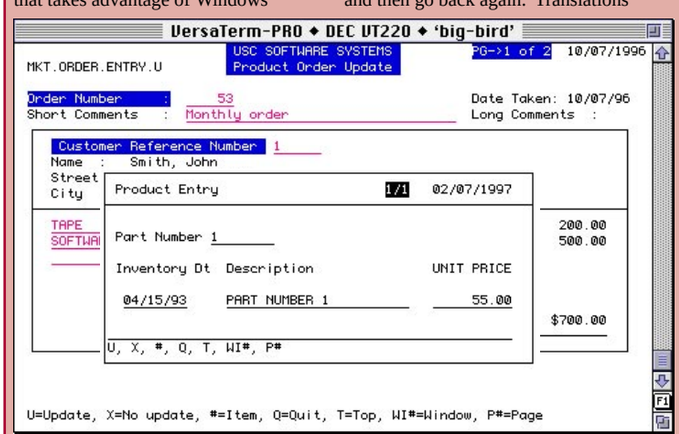
USC Software Systems announced the release of the latest version of the award-winning Rapid Application Development Tool TOADS. This latest release, TOADS '97, incorporates many exciting new features, dramatically accelerates TOADS response time, and marks the beginning of a new era in TOADS development that takes advantage of Windows' applications and client PC power.

The key new features available with TOADS '97 offer a wide range of new capabilities to TOADS developers. MiniTOADS are now available. MiniTOADS give developers the ability to call smaller TOADS applications as pop-up styled windows without making a user leave a process to enter another and then go back again. Translations have been greatly enhanced with new development options including the ability to jump a user directly to a MiniTOADS process if a translate record does not yet exist. A major enhancement of the interface design module has been completed for TOADS '97. New features for this module include page scrolling within screen painting, cut and paste of field definitions along with their painted images, and a preview function that lets the user see what the finished interface will look like.

Many new runtime features have been added with the TOADS '97 release. Multiple versions of TOADS can now run on the same machine at the same time, and multiple versions of your systems can now run on the same machine. Both options allow users to take greater advantage of their server's space and eliminate the need to make expensive hardware upgrades.

All of these new features have streamlined the TOADS Rapid

TOADS '97 continued on page 4



Mini TOADS are here! Add pop-up functionality to your TOADS applications.

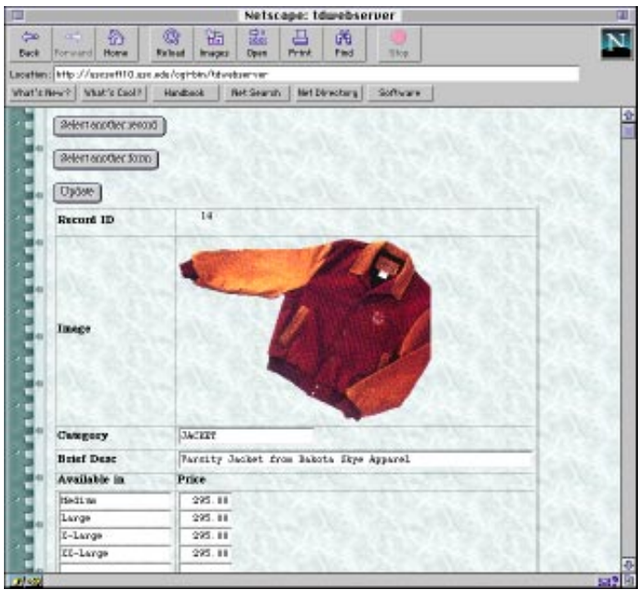
INSIDE THIS ISSUE

Bring Your Post-Relational Database To The World Wide Web

USCSS Announces TOADS/Web Server Release For TOADS '97

TOADS/Web, the popular TOADS Web access tool, is now available for TOADS '97, the latest release of the award-winning TOADS rapid application development software. The TOADS/Web Server represents the first product of its kind: an easy-to-use set of tools to access your post-relational database on the World Wide Web. Used with the award-winning TOADS 4GL rapid application development system, TOADS/Web merges the best of database design with the power of the Internet, all at your fingertips.

Recently, many businesses have begun to use the Web as powerful method of marketing and information disbursal. Most, however, have only offered text-based information, some nice logos and the occasional email address. They haven't connected the Web user to their most important asset: the corporate database. It seems as though



TOADS/Web brings your TOADS applications to the World Wide Web!

businesses can't afford or aren't able to develop sophisticated forms for users to read and update over the Web. TOADS/Web Server makes it possible for any department or company to take their data warehouse to the World Wide Web with ease.

If you would like to see a completely functional demonstration of the TOADS/Web product, USC Software Systems urges those interested to check out their recently updated World Wide Web site. USC Software Systems uses the TOADS/Web product extensively on their World Wide Web site to provide a greater level of interactivity for visitors who want more information about USC Software Systems' products. Online forms that use pull down menus and updateable fields help to guide the visitor toward the information that they desire and help visitors contact individuals at USC Software Systems who can answer additional questions that they might have. The USC Software Systems World Wide Web site can be reached at the following address: **http://www.usc.edu/dept/uscss**

USC Software Systems' Professional Services In High Demand

Data General, FakTab Finans Porting/Conversion A Success

USC Software Systems successfully completed Porting/Conversion services for Data General, FakTab Finans. Data General subcontracted USC Software Systems to port FakTab Finans, a Swedish financial service company that uses the Total Online Application Development System (TOADS), from their previous hardware and software platforms to the top selling Data General Aviion running DGUX R4.11MUO2 with Unidata's MultiValue database software version 3.3.2. USC Software Systems successfully completed the port and upgraded the FakTab Finans release of the TOADS software to the most current version available for the 3.3.2 release of Unidata. The port was completed without having to compromise any files, proving the backward compatibility of the TOADS software as well as the flexibility of the Data General Aviion.

FakTab Finans, who purchased TOADS from a European distributor, approached Data General to acquire a more powerful machine, as well as new database software, but wanted to keep their current system and files running in TOADS. Data General connected FakTab with Unidata, and contacted USC Software Systems for assistance with the port and conversion of the TOADS software. Porting/Conversion Services are one of the many Professional Services USC Software Systems recently began to make available with international success. For more information about USC Software Systems' other Professional Services see their World Wide Web site, http://www.usc.edu/dept/uscss

USC Software Systems Relocates To Alhambra

USC Software Systems has moved to a new location in Alhambra, CA. This recent move will allow USC Software Systems to consolidate its engineering and marketing divisions, as well as its vertical applications teams, such as the GAMS (Grant Application Management System) and LAC + USC Medical Center HelpNet projects. This consolidation will bring about more market driven tools for the TOADS (Total Online Application Development Suite) like the recently released TOADS/Web Server product, which gives users the ability to connect their post-relational database to the World Wide Web. Please make note of USC Software Systems' new contact information:

1000 South Fremont, Suite 6429
Alhambra, CA, 91803.
Phone: (818) 457-4150
Fax: (818) 457-4155

TG^C For '97

Latest Release Continues Cross Platform, Client/Server Tradition of Excellence

TG^C, the TOADS GUI Client, is now available for the latest release of the Total Online Application Development System, TOADS '97. This latest release of TG^C offers the same cross platform and client/server performance that has become synonymous with the name 'TG^C'.

Originally, TG^C was designed for organizations that employed a multi-platform approach to their computing solution. These organizations often used PCs, Macintoshes, and workstations to access their data, but found end users become dependent on their platform's client and weren't as flexible as they needed to be. TG^C offered the exact same point-and-click interface across these computing platforms. The dramatic effect in workflow that groups using TG^C experienced was a testimony to the strength and practicality of TG^C.

USC Software Systems engineers didn't stop with a simple GUI client. While building TG^C, USCSS engineers decided to employ a radically new approach to the client/server relationship that shifted responsibilities from a server-centric configuration to one where the client is a much more active participant. In this way, server power was conserved and access times boosted.

USC Software Systems debuted TG^C last year just prior to the International Spectrum Conference in Anaheim. At that time, TG^C was the only product of its kind: a true cross platform computing solution. USC Software Systems touted TG^C as 'The Missing Link' for end users tired of having to relearn their interface just because they had moved to a different PC, terminal, or workstation. TG^C also was among the first GUI products offered in the MultiValue Database market that offered GUI interaction through a Macintosh or X-Windows workstation.

If you would like to see a demo of TG^C visit the USC Software Systems booth at this year's International Spectrum Conference in Las Vegas, or check out the USC Software Systems World Wide Web Site: http://www.usc.edu/dept/uscss.

USC Software Systems Announces Release Of TOADS for PICK

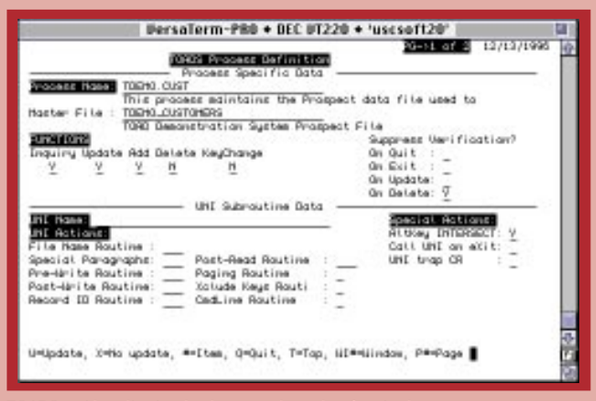
New Release Brings Award Winning 4GL To Members Of Growing PICK Market

USC Software Systems has begun to ship the first release of the award winning TOADS Rapid Application Development tool for Advanced PICK.

"The market for PICK's outstanding software is growing all over the world. Internationally, the total market for products based on Pick technology is over 4,000,000 seats supported by 4,000 VARs. Demand from this user base for TOADS on PICK became so great that we had no choice but to apply our resources to getting a version available," said Dianne Bozler, Executive Director of USC Software Systems.

TOADS, the Total Online Application Development System, offers PICK developers and users a fresh and exciting approach to application design for the PICK MultiValue database. TOADS adds to the developers bag of tricks with several key capabilities instead of prohibiting a developer (and hence, a user) as many simple code generators do. First, TOADS provides three different types of alternate keys. Alternate keys allow users to access a file from a record key, a name, a date, and even a partial name. This feature takes the guess work out of easy data retrieval, increasing the flexibility of any TOADS system. TOADS can also read data from any file to another file, and developers don't have to write lengthy code to create this correspondence. This process, called 'automatic translates', is an excellent example of the course TOADS takes when it eliminates the need, but not the option, of extensive code writing and replaces it with powerful features instead of restrictive file structures.

USC Software Systems also plans to port the complete Application Development Suite which compliments the TOADS product. Other products in the TOADS Suite include TOADS/Web, the first 4GL tool to offer World Wide Web connectivity, TG^{C}, the only graphical user interface that presents data to users through the same interface across computing platforms, Visual TOADS, an exciting new graphical Windows' client that maximizes server power, and Web Report Writer, a reporting tool that publishes any report created in TOADS directly to the World Wide Web. USC Software Systems wants to provide this impressive tool set to the PICK market after the initial release of TOADS for PICK.



TOADS rapid application development takes only a few simple steps.

USC Software Systems believes that it's the PICK users who will ultimately gain the most from this new release of TOADS, because the PICK market will now offer them a greater variety of 4GLs to choose from. "We're looking forward to providing the comprehensive, award-winning computing solutions for the PICK market that we have been supplying for nearly ten years to the users of uniVerse, PI/Open, Prime Information, Unidata, Windows NT, and UNIX," Executive Director Dianne Bozler said.

University of Massachusetts Amherst, University of Michigan Ann Arbor Join GAMS Consortium

Latest Members Part of Growing University List

USC Software Systems announced that the University of Massachusetts at Amherst and the University of Michigan at Ann Arbor have joined the GAMS (Grant Application Management System) Consortium of nationally respected universities. The GAMS Consortium uses software developed in TOADS (Total Online Application Development System) by USC Software Systems as a subcontractor for IBM, whose Higher Education department is responsible for GAMS Project Management.

Last year the GAMS Consortium's number began growing when several nationally respected universities expressed their interest in joining. The grassroots movement among the academic community toward a standardized grant management process has long been building momentum. Each university now in the GAMS Consortium had been developing their own innovative approach to streamlining grant management electronically, but they found that by working together they could produce a comprehensive system that could benefit all non-profit organizations that require grant money to continue their valuable work. Several universities including North Carolina State University, Ohio State University, Oklahoma State University, and the University of Southern California banded together with IBM and using TOADS, the Total Online Application Development System, built the GAMS software, the only system of its kind to track grants from the proposal to award close out. The announcement that both the University of Massachusetts and the University of Michigan are joining the GAMS Consortium confirms the continued importance of electronic grant management systems to the academic research community, as well as the growing popularity of GAMS.

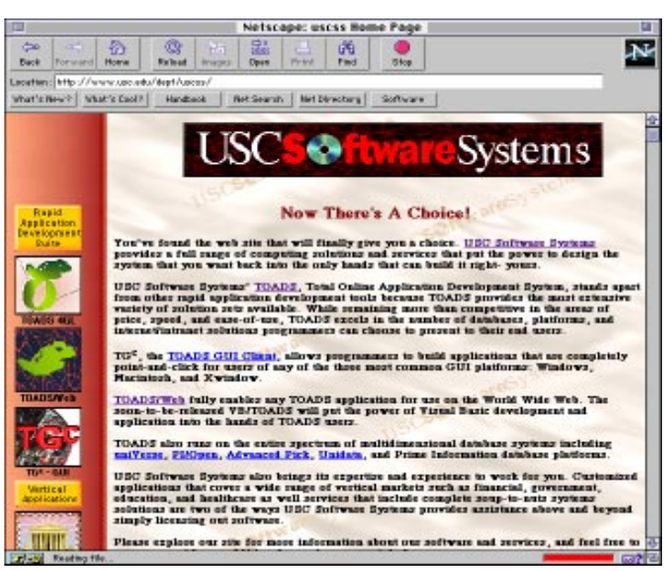
Dr. Russ Lea, of NCSU, is the current Director of the GAMS Consortium. James P. McKee is the IBM GAMS Project Manager for their Higher Education department. Dianne Bozler is the Executive Director of USC Software Systems. For any information about the GAMS software, or the GAMS Consortium, please contact USC Software Systems.

USC Software Systems Debuts Its Latest Web Site

New Version Incorporates Greater Interactivity, Cutting Edge Web Technology

USC Software Systems announced a major update of their World Wide Web page that offers visitors to the site more direct access to information about USC Software Systems products. You can visit the site at **http://www.usc.edu/dept/uscss**

This latest USC Software Systems Web page more than any previous version incorporates the developments in Web technology that have revolutionized the medium. GIF animation, Java scripts, image maps, and online forms developed with TOADS/Web all converge on the USC Software Systems page to create an exciting, informative experience for site visitors.



Forms built in TOADS/Web were developed for visitors to request more information about products, services, and even upgrades. Exclusive, access-restricted links were also created to provide special TOADS/Web reporting features for clients. USC Software Systems also plans to add even greater functionality to the site as more features become available. Among planned additions to the Web page are VRML (or three dimensional) visuals, a downloadable multi-media TOADS demo, and Active-X interactivity.

Come visit our new web site at http://www.usc.edu/dept/uscss!

Tech Talk: 'Sir J' A Knight In Hot Site Armor:

USC Debuts New Server-to-Server Record Journaling System

USC Software Systems debuted its new Server-to-Server Record Journaling System, SSRJ (pronounced 'Sir J') this month. SSRJ maintains a mirror image of any VMARK database on a separate server. This second machine can then be brought online instantly if the first machine runs into difficulty. To end users, the data on the two machines will always appear identical.

You can also use a second machine as a reporting machine, running CPU- or I/O intensive reports against your current data without slowing down your production system. Why use SSRJ instead of another disk mirroring option?

- SSRJ can maintain parallel databases on two machines of different types.
- SSRJ can mirror the addition or deletion of accounts and files.
- SSRJ can be enhanced to change file structures as it copies them, flattening hierarchical files, for example, to ease reporting on the second machine.
- SSRJ can be enhanced to copy only the fields you choose, for security reasons or any other considerations.

SSRJ collects its data by using 'triggers' planted in the DICTs of the files you want to mirror. A trigger can be created for any dynamic or hashed VMARK file - file types 1 and 19 (directories) do not support triggers. You can start out by creating a trigger in every file's DICT, and then use the SSRJ menu to toggle triggers on or off for different files!

TOADS '97 from page 1

Application Development tool, making it an even faster, more efficient tool for software developers to employ. The new features also boost speeds for current TOADS users and their pre-existing systems, a tantalizing reason to upgrade.

A new era for TOADS dawns with the release of TOADS '97 as well, and is the source of its name - a play on Microsoft's 'Windows 95''. With TOADS '97 and each subsequent release, character-based terminals will be supported through a backward-compatibility policy, while future development of TOADS will be steered toward PC-based solution strategies like the recently announced Visual TOADS graphical client. These strategies will increase the speed and response of servers using TOADS by off-loading many of the server's tasks to the client. In recent years, the power of the desktop PC has come close to the performance expected of servers, and TOADS '97 is the first release of TOADS that will begin to take advantage of this largely untapped power source. Additionally, users will be able to customize their Windows' applications like Word' and Excel' to interact with TOADS applications, and the learning curve will be much smoother with users already familiar with Windows and its products.

USC Software Systems believes that TOADS '97 will be a release that users both new and experienced will remember. The latest release of TOADS brings a healthy list of advances that current users of TOADS can benefit from immediately with a simple upgrade. The incorporation of more Windows'-enabled and compatible features in TOADS '97 proves to new users who want a computing solution that evolves with their organization that TOADS is exactly what they've been looking for.

Visual TOADS from page 1

business logic, however, that runs a system or application remains on the server where this information can be maintained and developed much more easily by IS officers, and where it can be deployed with much more satisfying speed and response.

Another key feature of Visual TOADS client/server strategy is its soon-to-be-added compliance with Active X, also known as OLE 3. Though the World Wide Web has grown in its importance to modern business and largely been attributed as the most integral element of the information age boom, it has been locked into an outdated method of communication. The Web communication model has shuffled users back to the 70's block-mode transmission style that, again, puts all the responsibility in the hands of the server, draining response time and end user efficiency dry. Active X promises to change this by bringing to the Web interactive applications that, using OLE (Object Linked Environments), will function in much the same way that Visual TOADS does on the PC. Active X allows users to 'kick off' their Windows applications using an Active X app that runs from their Web browser, and exchange data between the two. Again, the possibilities are as limitless as a user's palette of applications on his/her PC, but the remarkable aspect of this feature that needs to be pointed out is that users aren't tied to direct link to their server. Through the Web, users can dial in and access or upload data from anywhere in the world. Active X has made workflow solutions global. It may be the most expansive groupware product ever made.

Plans to add this compliance to the next major release of the Visual TOADS product roughly equate to this exciting statement: TOADS developers can now deploy their TOADS applications in Active X through the Web, or a Web-like network. No other UniVerse product currently available on the market offers its users the ability to take advantage of this cutting edge technology. TOADS was the first rapid application development tool to take users to the Web, and now it is the first to take users into the future of the Web. Current plans have Visual TOADS designed to run 16 bit Active X applications (and 16 bit in general), because most USC Software Systems users have chosen to hold off on upgrading to Windows 95; however, complete 32 bit releases are planned for the near future.

Visual TOADS has been designed to be compatible with TOADS '97, the latest release of TOADS. Most TOADS '97 applications will run native with Visual TOADS without any upgrading. In most cases, all current TOADS users will need to do to be ready to run Visual TOADS is upgrade to TOADS '97! Of course, when programmers see the possibilities that Visual TOADS offers them, they may think a renovation doesn't sound like such a bad idea after all!

Visual TOADS is the latest addition to the TOADS Rapid Application Development Suite. The TOADS Suite of products is known for its innovative design firsts. TG^C, the TOADS Graphical Client, was the first client product to provide the same interface across computing platforms. TOADS/Web was the first UniVerse database tool to provide easy-to-build online forms straight from your UniVerse database for the World Wide Web. The TOADS Web Report Writer was the first product of its kind to translate reports built in TOADS instantly into World Wide Web documents. Visual TOADS rounds out this product family, providing new client/server technology for more robust and comprehensive computing solutions.

USCSoftwareSystems

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About USC Software Systems

USC Software Systems is an independent division of Administrative Information Systems at the University of Southern California created in 1988 to market and support administrative software developed at USC. USC Software Systems markets TOADS (Total Online Application Development System), TOADS/Web Server, and TG^C (TOADS GUI Client) for a world-wide UNIX, Windows NT, Prime Information, VMARK UniVerse and PI/Open, PICK, and Unidata user base. USC Software Systems also offers a wide variety of Professional Services, including comprehensive consulting for the complete computing needs of business, government, and education industries. For more information about these products and USC Software Systems look them up on the World Wide Web: **http://www.usc.edu/dept/uscss/**

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