



TCSC Newsletter

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*The Official
Newsletter of the
IEEE Computer
Society's
Technical
Community for
Services
Computing
(TCSC)*

IEEE Computer Society Approved Technical Community for Services Computing (TCSC)

The IEEE Computer Society has been sensitive to the new developments of computer science and has published a few special issues or articles on Web services, business computing, Grid computing, and autonomic computing in IEEE magazines, conference proceedings, and journals.

In November 2003, IEEE Computer Society (CS) officially approved Technical Community for Services Computing (TCSC). The TCSC is mainly to foster cross-disciplinary interaction in the Web services centric computing, namely e-business computing, Grid computing, and autonomic computing. The TCSC is the ideal and suitable organization to coordinate all the activities related to those services computing technologies and applications, as well as to provide a more active forum for research and engineering colleagues to exchange information.

The TCSC is aligned very well with IEEE Computer Society SP-5 (Strategic Planning) that focuses on transforming the IEEE Computer Society to Service-centric Community-driven Society. The TCSC seeks scientists, educators, industry people, policy makers, decision makers, and others who have some insight and vision and understanding of the big challenges in service computing technologies and applications. In particular, the TCSC aims to convene a diverse group from a variety of fields and at all career stages. The insight and vision would shape the research agenda in services computing over the next few decades.

What is Services Computing?

Services Computing is the evolution of Internet computing by leveraging service-oriented architecture (SOA). It encompasses a new class of ground breaking technology suite: SOA & Web services, service-oriented Grid/Utility computing, e-Business computing, and autonomic computing. As the core foundation, SOA & Web services are finding pervasive applications in new products and applications. For example, Grid computing has been leveraging Web services standards to provide standard interfaces for Grid resources. As for e-Business solutions, the service collaboration and management afforded by service computing enables disaggregated businesses to form value chains for improving an organization's productivity. Therefore, the paradigm shift in focus from data management to process management is also leading to large-

scale implementations based on services-oriented architecture.

What is Web Services and Its Solution Areas?



Web services are network-based application components with service-oriented architecture using standard interface description languages (e.g., WSDL) and uniform communication protocols (e.g., SOAP).

Web services can enhance efficiency by enabling dynamic provisioning of resources from a pool of distributed resources based on a standard interface definition language and standard communication protocol as well as accessible Web services registries (e.g., UDDI registries and WS-Inspection documents). Due to the importance of the field, there is a substantial amount of ongoing research in the areas. However, there is still no general agreement on standards among major technology vendors. In a parallel effort, standardization organizations such as ISO JTC1, WS-I, W3C, OASIS, IETF, and Liberty Alliance are actively developing standards for Web services. Web services are creating what will definitely become one of the most significant industries of the new century.

The rapid explosion of information and system/solution integration has resulted in many complicated systems that need people to manage in an efficient and autonomous way. For example, in a distributed data storage application or system, when one data storage device is out of order, the backup system should become operative automatically and seamlessly. Even in collaborative e-Business solutions, when a business process is interrupted due to business exceptions, an escalation process should be automatically launched to handle the exceptions and restore the interrupted business process into the automation mode. Autonomic computing is trying to explore the services-oriented solution framework and foundation to address those challenging issues by exploring the systems' capability of self-learning, self-healing, self-recovery, self-configuring, self-expanding, self-adapting, etc. The final goal of Autonomic computing is to find ways to build an 'autonomic nervous system' in the scientific research work and business solutions.

Typical industry solution areas of Web services are business-to-business integration, e-Business process integration and management, content management, e-sourcing, composite Web services creation, design collaboration for computer engineering, multimedia communication, digital TV, and interactive Web solutions.

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List of Topics of TCSC

Service-Oriented Architecture (SOA) based Services Computing covers

- SOA & Web services
- Services-oriented Grid/Utility computing
- Services-oriented Business computing (Business Process Integration & Management) and solutions
- Services-oriented autonomic computing technologies and applications

Conference Announcements



The 2004 IEEE International Conference on Web Services (ICWS 2004) is to be held in San Diego, California, USA, from July 6-9, 2004. ICWS is a forum for researchers and industry practitioner to exchange information regarding advancements in the state of the art and practice of Web Services, as well as to identify the emerging research topics and define the future of Web Services computing.

ICWS 2004 is sponsored by the IEEE Computer Society Technical Community for Services Computing.

Conference URL: <http://conferences.computer.org/icws/2004>.

Conference History: ICWS 2003

As the first academic conference in the field of Web services, the 2003 First International Conference on Web Services (ICWS'03) was held at the Monte Carlo Resort in Las Vegas, Nevada, June 23-26, 2003. Attracting hundreds of participants from 25 countries and regions (USA, India, France, China, Hong Kong, Taiwan, Singapore, Australia, Canada, UK, Sweden, Switzerland, The Netherlands, Germany, Japan, Italy, Korea, Thailand, Finland, Austria, New Zealand, Poland, and Turkey). The sister event is the 2003 International Conference on Web Services - Europe (ICWS-Europe'03), held in Erfurt, Germany, September 23-24, 2003. ICWS'03 and ICWS-Europe'03 have proven to be excellent catalysts for research and collaboration, and we fully expect that ICWS 2004 will continue this trend.

The long-term goal of ICWS is to build a reputable and respectable conference for the international community. It is very clear that ICWS belongs to everyone.

Conference Report: GCC 2003

The Second International Workshop on Grid and Cooperative Computing (GCC2003) was held from December 7-10, 2003, in Shanghai, one of the most active cities in China. GCC2003 is the follow-up of the highly successful GCC2002 Workshop held in SanYa, HaiNan, and has become one of the most important events of China Grid Computing. GCC serves as a forum to present current and future work as well as to exchange research ideas by researchers, developers, practitioners, and users in Grid computing. There were about 400 participants attending this event.

Conference URL: <http://www.cs.sjtu.edu.cn/gcc2003/index.htm>

We're on the Web!
<http://tab.computer.org/tcsc>

Call for Information for TCSC Newsletter

The purpose of the TCSC Newsletter is to provide dated information on Services Computing activities in a timely manner. Also, we will accept short articles written by TCSC members. The plan is to initially "publish" four issues a year. The editor is soliciting items pertaining to Services Computing for the following categories:

- Announcements about TCSC activities and achievements
- Conference announcements
- Call for papers - conferences and journals
- New publication announcements on Services Computing
- Special issues on Services Computing in journals
- Workshops, tutorials and book announcements
- New Web sites and research group on Services Computing
- Short articles on the latest development of Services Computing (8 pages)

TCSC Executive Committee



The TCSC Executive Committee discusses and defines the strategic directions for the IEEE Technical Community for Services Computing.

The executive committee members are from different regions and institutions, presenting a joint force between research institutes and corporations.

- Ephraim Feig, Kintera Inc, USA
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- Jeffrey Tsai, University of Illinois at Chicago, USA
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