A Context Aware Architecture For Iptv Services Personalization

Mobile Sensors and Context-Aware Computing is a useful guide that explains how hardware, software, sensors, and operating systems converge to create a new generation of context-aware mobile applications. This cohesive guide to the mobile computing landscape demonstrates innovative mobile and sensor solutions for platforms that deliver enhanced, personalized user experiences, with examples including the fast-growing domains of mobile health and vehicular networking. Users will learn how the convergence of mobile and sensors facilitates cyber-physical systems and the Internet of Things, and how applications which directly interact with the physical world are becoming more and more compatible. The authors cover both the platform components and key issues of security, privacy, power management, and wireless interaction with other systems. Shows how sensor validation, calibration, and integration impact application design and power management Explains specific implementations for pervasive and context-aware computing, such as navigation and timing Demonstrates how mobile applications can satisfy usability concerns, such as know me, free me, link me, and express me Covers a broad range of application areas, including ad-hoc networking, gaming, and photography

The field of ubiquitous computing has recently proliferated with a view to providing applications and services that are able to adapt to the rapidly changing situations in dynamic environments and act accordingly. The seamless adaptation to contexts and the alterations to behaviour require the applications to implement mechanisms for acquiring the context information. The required context information is usually diverse and scattered throughout the environment. On account of this, the processing of the context information and its compilation from separate sources is a requirement for the applications to reach adequate context-awareness for successful adaptation. To facilitate the development of context-aware applications, service-oriented architectures for supporting the context-awareness have emerged. In this work the research problem was to find a solution for dynamic acquisition and representation of distributed context information and its efficient provisioning for ubiquitous applications. As a solution to the research problem this work provides a service architecture called Context Monitoring Service (CMS), which utilizes a dynamically evolving semantic model of context information that the applications can access. A requirement analysis for such architecture was carried out by a literature review in the field of context-awareness. The architecture of the CMS was designed according to the identified requirements and a prototype implementation was created for validation purposes. The prototype implementation successfully validated the architecture's functionality and also opened issues for future research and development in this field.

This two-volume set CCIS 166 and 167 constitutes the refereed proceedings of the International Conference on Digital Information and Communication Technology and its Applications, DICTAP 2011, held in Dijon, France, in June 2010. The 128 revised full papers presented in both volumes were carefully reviewed and selected from 330 submissions. The papers are organized in topical sections on Web applications; image processing; visual interfaces and user experience; network security; ad hoc network; cloud computing; Data Compression; Software Engineering; Networking and Mobiles; Distributed and Parallel processing; social networks; ontology; algorithms; multimedia; e-learning; interactive environments and emergent technologies for e-learning; signal processing; information and data management.

Welcometotheproceedingsofthe2ndInternationalSymposiumonParalleland Distributed Processing and Applications (ISPA2004) which was held in Hong Kong, China, 13–15 December, 2004. With the advance of computer networks and hardware technology, parallel and distributed processing has become a key technology which plays an imp- tant part in determining future research and development activities in many academic and industrial branches. It provides a means to solve computati- ally intensive problems by improving processing speed. It is also the only - ableapproachtobuildinghighlyreliableandinherentlydistributedapplications. ISPA2004 provided a forum for scientists and engineers in academia and ind- try to exchange and discuss their experiences, new ideas, research results, and applications about all aspects of parallel and distributed computing. There was a very large number of paper submissions (361) from 26 countries and regions, including not only Asia and the Paci?c, but also Europe and North America. All submissions were reviewed by at least three program or technical committee members or external reviewers. It was extremely di?cult to select the presentations for the conference because there were so many excellent and interesting submissions. In order to allocate as many papers as possible and keep the high quality of the conference, we ?nally decided to accept 78 regular papers and 38 short papers for oral technical presentations. We believe that all of these papers and topics not only provide novel ideas, new results, work in progress and state-of-the-art techniques in this ?eld, but also stimulate the future research activities in the area of parallel and distributed computing with applications.

Research in context-aware computing has produced a number of middleware systems for context management. However, development of ubiquitous context-aware applications is still a challenge because most current middleware systems are still focused on isolated and static context-aware environments. Context-aware environments are inherently dynamic as a result of occasional additions or upgrade of sensors, applications or context inference mechanisms. Context Management for Distributed and Dynamic Context-Aware Computing proposes a novel architecture for context management based on the concept of context domains, allowing applications to keep context interests across distributed context management systems. The authors describe a distributed middleware that implements the aforementioned concepts, without compromising scalability and efficiency of context access.

This book introduces context-aware computing, providing definitions, categories, characteristics, and context awareness itself and discussing its applications with a particular focus on smart learning environments. It also examines the elements of a context-aware system, including acquisition, modelling, reasoning, and distribution of context. It also reviews applications of context-aware computing – both past and present – to offer readers the knowledge needed to critically analyse how context awareness can be put to use. It is particularly to those new to the subject area who are interested in learning how to develop context-aware computing-oriented applications, as well as postgraduates and researchers in computer engineering, communications engineering related areas of information technology (IT). Further it provides practical know-how for professionals working in IT support and technology, consultants and business decision-makers and those working in the medical, human, and social sciences.

Anxiety, whether an illness or emotion, is a term with historical roots even in the Bible, but it was not popular until the modern age. Today, we can group, diagnose and treat several anxiety disorders to an extent, but the assessment of symptoms and severity, dealing with resistant conditions, new treatment modalities and specific patient population, such as children, are still the

challenging aspects of anxiety disorders. This book intends to present anxiety disorders from a different view and discuss a wide variety of topics in anxiety from a multidimensional approach. This Open Access book addresses not only psychiatrists but also a broad range of specialists, including psychologists, neuroscientists and other mental health professionals.

Research Paper from the year 2009 in the subject Information Management, grade: 2:2, The University of Liverpool, course: MSc in Information Technology, language: English, abstract: The ever-growing incorporation of information technology in day-to-day applications presents new opportunities to develop computer systems that can be aware of the context in which they are operating. Such computer-systems can be inherently more responsive to the expectations of their users. Context-aware systems offer developers and programmers exciting new prospects to gather contextual data and adapt the behavior of their dynamic systems according to user expectations. In conjunction with mobile devices, such mechanisms can be extremely valuable in increasing the usability of information systems. However, it is now accepted widely that the efforts to adapt the usability and capability of the desktop PC in to the mobile environment are limited in their scope. The debate in present literature seems to focus in particular on the trade-offs and compromises between the performance of such systems in theoretical or laboratory environments, and the actual results when tested in the field. This essay will aim to critically evaluate the success of making context-aware information systems into a feasible reality.

This textbook explores the current challenges in and future prospects of context-aware pervasive systems and applications. The phenomenal advances in broadband technology and ubiquitous access to the Internet have transformed Internet computing into the Internet of Things (IoT), which is now evolving toward the Internet of Everything. Modern scientific, engineering, and business applications are increasingly dependent on machine-to-machine communication, wherein there is less human intervention. In turn, this creates a need for context-aware pervasive systems and applications in which RFID, sensors, and smartphones play a key role. The book provides an essential overview of context, context management, and how to perform context management in various use cases. In addition, it addresses context-aware computing and personalization, various architectures for context-aware systems, and security issues. The content is explained using straightforward language and easy-to-follow examples, case studies, technical descriptions, procedures, algorithms, and protocols for context-aware systems.

This book constitutes the refereed proceedings of the 5th International Conference on Convergence and Hybrid Information Technology, ICHIT 2011, held in Daejeon, Korea, in September 2011. The 94 revised full papers were carefully selected from 323 initial submissions. The papers are organized in topical sections on communications and networking, intelligent systems and applications, sensor network and cloud systems, information retrieval and scheduling, hardware and software engineering, security systems, robotics and RFID Systems, pattern recognition, image processing and clustering, data mining, as well as human computer interaction.

The recent convergence of ubiquitous computing and context-aware computing has seen a considerable rise in interest that exploit aspects of the contextual environment to enhance implicit user interaction, offer services, present information, tailor application behavior or trigger adaptation. However, as a result of the lack of generic mechanisms for supporting context-awareness, context-aware applications remain very difficult to build and developers must deal with a wide range of issues related to representing, sensing, aggregating, storing, querying and reasoning of context. In order to remedy this situation, there is a need for better understanding of the design process associated with context-aware applications, architectural support for the entire context processing flow, and improved programming abstractions that ease the prototyping of applications.This research in context-aware computing has focused on the architectural support for context-aware application development. This dissertation presents a set of requirements for context-aware applications, based on wich we designed and implemented our architectural support, including an ontology-based context model, a context-aware architecture (namely Context Aware Explorer) and a set of programming abstractions. This research reported here is investigating : how context can be acquired, ditributed, and used and how it changes human computer interaction in Ubiquitous Computing. The Context Aware Explorer includes common steps required to build context applications (acquisition, interpretation, presentation, reasoning and application), thus it ensures the adaptation situated at the level of User Environment Interaction. The case study, Assistive Environment, validates our work, and illustrates, in concrete form, the process and issues involved in the design of context-aware software. Finally, the research presents an overview of how Ubiquitous Computing systems can be evaluated. Different techniques are assessed, and the concept of probing users and developers with prototypes is presented.

Provides research developments on mobile technologies and services. Explains how users of such applications access intelligent and adaptable information services, maximizing convenience and minimizing intrusion.

Fast and Efficient Context-Aware Services gives a thorough explanation of the state-of-the-art in Context-Aware-Services (CAS). The authors describe all major terms and components of CAS, defining context and discussing the requirements of context-aware applications and their use in 3rd generation services. The text covers the service creation problem as well as the network technology alternatives to support these services and discusses active and programmable networks in detail. It gives an insight into the practical approach followed in the CONTEXT project, supplying concrete guidelines for building successful context-aware services. Fast and Efficient Context-Aware Services: * Provides comprehensive and in-depth information on state-of-the-art CAS technology. * Proposes a system architecture for CAS creation and delivery, discussing service management and active network layers. * Describes the service lifecycle functional architecture, covering service authoring, customization, invocation, and assurance. * Explains system design considerations and details, system evaluation criteria, test-bed requirements, and evaluation results. Fast and Efficient Context-Aware Services is an invaluable resource for telecommunications developers, researchers in academia and industry, advanced students in Computer Science and Electrical Engineering, telecoms operators, as well as telecommunication management and operator personnel.

Collection of newspaper cuttings concerning the history of North Queensland.

Here are the refereed proceedings of the 6th International and Interdisciplinary Conference on Modeling and Using Context. The 42 papers deal with the interdisciplinary topic of modeling and using context from various perspectives, including computer science, artificial intelligence, cognitive science, linguistics, organizational science, philosophy, and psychology. In addition, readers discover applications in areas such as medicine and law.

The cellular phone network has been increasing rapidly during the last years. For many people the mobile phone has become an every day gadget with a wide performance and functional

range. The usage of technologies like GPRS, HSCSD, EDGE and UMTS as well as the bandwidth of networks and consequently the connectivity of the phones has also increased persistently. Coming along with that, three technologies, which are ubiquitous or pervasive computing, mobile and wireless networks and location-based technologies, are making rapid progress. The aim of this book is to offer an architecture for a context-aware user interface in the intersection of the three technologies mentioned above. The system should work with a minimum of special hardware requirement. Not to overload the user with information, the user interface should be adaptable, context-aware and location-based. The contextdata should remain extendible and adaptable.

This book constitutes the thoroughly refereed proceedings of the 4th International Conference on Context-Aware Systems and Applications, ICCASA 2015, held in Vung Tau, Vietnam, in November 2015. The 44 revised full papers presented were carefully selected and reviewed from over 100 submissions. The papers cover a wide spectrum of issues in the area of context-aware systems (CAS) and context-based recommendation systems. CAS is characterized by its self- facets such as self-organization, self-configuration, self-healing, self-optimization, self-protection and so on whose context awareness used to dynamically control computing and networking functions. The overall goal of CAS is to realize nature-inspired autonomic systems that can manage themselves without direct human interventions.

Distributed applications are a necessity in most central application sectors of the contemporary information society, including e-commerce, e-banking, e-learning, e-health, telecommunication and transportation. This results from a tremendous growth of the role that the Internet plays in business, administration and our everyday activities. This trend is going to be even further expanded in the context of advances in broadband wireless communication. New Developments in Distributed Applications and Interoperable Systems focuses on the techniques available or under development with the goal to ease the burden of constructing reliable and maintainable interoperable information systems providing services in the global communicating environment. The topics covered in this book include: Context-aware applications; Integration and interoperability of distributed systems; Software architectures and services for open distributed systems; Management, security and quality of service issues in distributed systems; Software agents and mobility; Internet and other related problem areas. The book contains the proceedings of the Third International Working Conference on Distributed Applications and Interoperable Systems (DAIS'2001), which was held in September 2001 in Kraków, Poland, and sponsored by the International Federation on Information Processing (IFIP). The conference program presents the state of the art in research concerning distributed and interoperable systems. This is a topical research area where much activity is currently in progress. Interesting new aspects and innovative contributions are still arising regularly. The DAIS series of conferences is one of the main international forums where these important findings are reported.

Context-aware systems aim to deliver a rich user experience by taking into account the current user context (location, time, activity, etc.), possibly captured without his intervention. For example, cell phones are now able to continuously update a user’s location while, at the same time, users execute an increasing amount of activities online, where their actions may be easily captured (e.g. login in a web application) without user consent. In the last decade, this topic has seen numerous developments that demonstrate its relevance and usefulness. The trend was accelerated with the widespread availability of powerful mobile devices (e.g. smartphones) that include a myriad of sensors which enable applications to capture the user context. However, there are several challenges that must be addressed; we focus on scalability (large number of context aware messages) and privacy (personal data that may be propagated). This book is organized in five chapters starting with an introduction to the theme raising the most important challenges. Then, chapter two presents several important definitions (establishing a common ground for the following chapters) and taxonomy. These are important to chapter three which describes some of the most relevant distributed context-aware systems that can be classified according to the taxonomy. Privacy is addressed in chapter four and chapter five presents some important conclusions. The audience for this book is wide; researchers, students and professionals interested in the areas addressed will find the most relevant information regarding scalability and privacy in distributed context-aware systems.

With recent advances in radio-frequency identification (RFID) technology, sensor networks, and enhanced Web services, the original World Wide Web is continuing its evolution into what is being called the Web of Things and Services. Such a Web will support an ultimately interactive environment where everyday physical objects such as buildings, sidewalks, and commodities become recognizable, addressable, and even controllable via a mostly ubiquitous Web. This integration of the physical and virtual worlds will fundamentally impact the way we live and in doing so afford tremendous new business opportunities with great human benefit, such as support services to keep the elderly independent, and intelligent traffic management that will cut wasted hours from every day. More efficient supply chains, improved environmental monitoring, better access to health services ... the list is endless. Enabling Context-Aware Web Services: Methods, Architectures, and Technologies compiles the newest developments and advances driving this new age forward. With contributions from leading researchers across the world this pioneering work bridges the gap between context-awareness and Web services. A comprehensive presentation of what’s already accomplished and what is possible, the chapters of this book are systematically organized into three major sections: Methods focuses on the principle of context awareness in Web services and various ways to model those services at the specification level. Architectures details the infrastructures, frameworks, and standards needed to build context-aware Web services. Technologies presents a cornucopia of techniques adapted from once isolated research areas including semantic Web, database, and artificial intelligence development, as well as formal methods being employed to improve the development of context-aware Web services. Researchers, engineers, entrepreneurs, and educators across any number of fields will find new ideas worth considering, jumping-off points for developing improved software and applications, and seeds for business ventures that efficiently deliver needed products, information, or services. The possibilities are as limitless as we dare to imagine.

The book addresses the impact of ambient intelligence, particularly its user-centric context-awareness requirement on data management strategies and solutions. Techniques of conceptualizing, capturing, protecting, modelling, and querying context information, as well as context-aware data management application are discussed, making the book is an essential reference for computer scientists, information scientists and industrial engineers.

Learn how to develop and employ an ontology, the secret weapon for successfully using artificial intelligence to create a powerful competitive advantage in your business. The AI-Powered Enterprise examines two fundamental questions: First, how will the future be different as a result of artificial intelligence? And second, what must companies do to stake their claim on that future? When the Web came along in the mid-90s, it transformed the behavior of customers and remade whole industries. Now, as part of its promise to bring revolutionary change in untold ways to human activity, artificial intelligence—AI—is about to create another complete transformation in how companies create and deliver value to customers. But despite the billions spent so far on bots and other tools, AI continues to

stumble. Why can't it magically use all the data organizations generate to make them run faster and better? Because something is missing. AI works only when it understands the soul of the business. An ontology is a holistic digital model of every piece of information that matters to the business, from processes to products to people, and it's what makes the difference between the promise of AI and delivering on that promise. Business leaders who want to catch the AI wave—rather than be crushed by it—need to read The AI-Powered Enterprise. The book is the first to combine a sophisticated explanation of how AI works with a practical approach to applying AI to the problems of business, from customer experience to business operations to product development.

In ubiquitous computing the environment constraints are often regarded as static and software applications are allowed to function in a mobile ecospace. However, in context-aware systems the environment attributes of software applications are dynamically changing. This dynamism of contexts must be accounted for in order to provide the true intended effect on the application of services. Consequently, context-aware software applications should perceive their context in a continuous manner and seamlessly adapt to it. This thesis investigates the process of constructing context-aware applications and identifies the main challenges in this domain. The two principal requirements are (1) formally defining what context is and expressing the enclosed semantics, (2) formally defining dynamic compositions of adaptations and triggering their responses to changes in the environment context. This thesis proposes a component-based architecture for a Context-aware Framework that would be used to bring awareness capabilities into applications. Two languages are formally designed. One is to formally express situations, leading to a context reasoner, and another is to formally express workflow, leading to timely triggering of reactions and enforcing policies. With these formalisms and a component design that can be formalized, the thesis work fulfills a formal approach to construct context-aware applications. A proof-ofconcept case study is implemented to examine the expressiveness of the framework design and test its implementation.

The concept of aware systems is among the most exciting trends in computing today, fueled by recent developments in pervasive computing, including new computers worn by users, embedded devices, smart appliances, sensors, and varieties of wireless networking technology. Context-Aware Pervasive Systems: The Architecture of a New Breed of Applications introduces a diverse set of application areas and provides blueprints for building context-aware behavior into applications. Reviewing the anatomy of context-aware pervasive applications, this resource covers abstract architecture. It examines mobile services, appliances, smart devices, software agents, electronic communication, sensor networks, security frameworks, and intelligent software agents. The book also discusses the use of context awareness for communication among people, devices, and software agents and how sensors can be aware of their own situations. Exploring the use of physical context for controlling and enhancing security in pervasive computing environments, this guide addresses mirror worlds and elucidates design perspectives based on a declarative programming language paradigm. This carefully paced volume presents a timely and relevant introduction to the emergence of context-aware systems and brings together architectures and principles of context-aware computing in one source.

– Martin Walker:NewParadigmsforComputationalScience – Yong Shi:MultipleCriteriaMathematicalProgrammingandDataMining – Hank Childs: Why Petascale Visualization and Analysis Will Change the Rules – Fabrizio Gagliardi:HPCOpportunitiesandChallengesine-Science – Pawel Gepner:Intel'sTechnologyVisionandProductsforHPC – Jarek Nieplocha:IntegratedDataandTaskManagementforScienti?c- plications – Neil F. Johnson:WhatDoFinancialMarkets,WorldofWarcraft,andthe War in Iraq, all Have in Common? Computational Insights into Human CrowdDynamics We would like to thank all keynote speakers for their interesting and inspiring talks and for submitting the abstracts and papers for these proceedings. Fig. 1. Number of papers in the general track by topic The main track of ICSS 2008 was divided into approximately 20 parallel sessions (see Fig. 1) addressing the following topics: 1. e-Science Applications and Systems 2. Scheduling and Load Balancing 3. Software Services and Tools Preface VII 4. New Hardware and Its Applications 5. Computer Networks 6. Simulation of Complex Systems 7. Image Processing and Visualization 8. Optimization Techniques 9. Numerical Linear Algebra 10. Numerical Algorithms # papers 25 23 19 20 17 14 14 15 10 10 10 10 9 10 8 8 8 7 5 0 Fig. 2. Number of papers in workshops The conference included the following workshops (Fig. 2): 1. 7th Workshop on Computer Graphics and Geometric Modeling 2. 5th Workshop on Simulation of Multiphysics Multiscale Systems 3. 3rd Workshop on Computational Chemistry and Its Applications 4. Workshop on Computational Finance and Business Intelligence 5. Workshop on Physical, Biological and Social Networks 6. Workshop on GeoComputation 7. 2nd Workshop on Teaching Computational Science 8.

Any system that is said to be context-aware is capable of monitoring continuously the surrounding environment, that is, capable of prompt reaction to events and changing conditions of the environment. The main objective of a context-aware system is to be continuously recognizing the state of the environment and the users present, in order to adjust the environment to an ideal state and to provide personalized information and services to users considering the user profile. In this chapter, we describe an architecture that relies on the incorporation of intelligent multi-agent systems (MAS), sensor networks, mobile sensors, actuators, Web services and ontologies. We describe the interaction of these technologies into the architecture aiming at facilitating the construction of context-aware systems.

Esta enciclopedia presenta numerosas experiencias y discernimientos de profesionales de todo el mundo sobre discusiones y perspectivas de la la interacción hombre-computadoras

Context-awareness is one of the drivers of the ubiquitous computing paradigm. Well-designed context modeling and context retrieval approaches are key p- requisites in any context-aware system. Location is one of the primary aspects of all major context models — together with time, identity and activity. From the technical side, sensing, fusing and distributing location and other context information is as important as providing context-awareness to applications and services in pervasive systems. Thematerialsummarizedinthisvolumewasselectedforthe1stInternational Workshop on Location- and Context-Awareness (LoCA 2005) held in coope- tion with the 3rd International Conference on Pervasive Computing 2005. The workshop was organized by the Institute of Communications and Navigation of the German Aerospace Center (DLR) in Oberpfa?enhofen, and the Mobile and Distributed Systems Group of the University of Munich. During the workshop, novel positioning algorithms and location sensing te- niques were discussed, comprising not only enhancements of singular systems, like positioning in GSM or WLAN, but also hybrid technologies, such as the integration of global satellite systems with inertial positioning. Furthermore, - provements in sensor technology, as well as the integration and fusion of sensors, were addressed both on a theoretical and on an implementation level. Personal and con?dential data, such as location data of users, have p- found implications for personal information privacy. Thus privacy protection, privacy-oriented location-aware systems, and how privacy a?ects the feasibility and usefulness of systems were also addressed in the workshop.

Being infrastructure-less and without central administration control, wireless ad-hoc networking is playing a more and more important role in extending the coverage of traditional wireless infrastructure (cellular networks, wireless LAN, etc). This book includes state-of the-art techniques and solutions for wireless ad-hoc networks. It focuses on the following topics in ad-hoc networks: vehicular ad-hoc networks, security and caching, TCP in ad-hoc networks and emerging applications. It is targeted to provide network engineers and researchers with design guidelines for large scale wireless ad hoc networks.