

News from the Centre

Conference 2000

Our November conference was very successful particularly Kent Beck's piece on eXtreme Programming which generated a lot of discussion. We hope to follow up on this with some CSE workshops later this year.

We have already started talking about our 2001 Conference and will keep you posted as it takes shape.

New e-Research Project

CSE are starting on an Informatics project in the area of e-business. The aim of the project is to create a coherent set of techniques, along with a sample set of components, to help software development organisations build high quality, flexible, e-business applications in Internet time with the minimum of difficulty.

The research will be based around tackling head on the stresses that Web development puts on the software engineering process.

Typically e-business development has the following concerns.

Complexity: An e-business system is rich in complexity due to the fact that it involves functionality from many different systems, which must be integrated in a consistent and secure manner to meet the needs of many concurrent, distributed clients.

Constant Change: Traditionally, software developers view changing user requirements as a major risk factor that must be carefully managed. However, change is pervasive in the world of e-business as the dynamics of the global market place rather than the specific internal needs of an organisation are

constantly shaping e-business system requirements. The bottom line is that e-Development needs to embrace change rather than just cope with it.

High Quality Required: Problems with your e-business application will have global exposure. E-business systems need to be highly secure, have high availability (24 hours by 365 days), and have easy to use interfaces. For the system's users to be able to enjoy these external qualities, the developers must pay attention to internal quality factors, such as making sure the software is modular and understandable.

The research will have two main themes, a process and a technology theme. Initially on the process side we will be adopting an eXtreme Programming (XP) approach to development. XP views application development as a series of fine adjustments to a quality code base that are the results of a continuous dialogue between developer and customer. This style of development turns the process dial way down and the discipline dial way up. For example, the developer writes unit tests for every system function, and automated regression testing is done every time the developer makes a

change to the application. This generative approach to development should allow our team to naturally familiarize itself with the bewildering array of e-business technology options.

The team will initially focus on the Java 2 platform, specifically Java Servlets, JavaServer Pages, RMI, JDBC, and the XML parsing packages. Once we have built up a competency with these technologies we will be in a position to evaluate alternatives such as J2EE, Corba, MicroSoft DNA and the new MicroSoft .NET technology.

The project will be completed in three years time, and is broken down into three main phases. The first phase, due for completion this September, will involve a team of four CSE researchers developing an initial sample e-business application and a repository of e-business code components and process patterns. This repository will be available online to CSE Associate Members, for them to review and contribute to. The second and third phases will involve working with software vendors and IT departments trying to build scalable web based business applications with a high reuse value.

CSE Online

<http://www.cse.dcu.ie>

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We would encourage you to contact us to discuss issues arising from articles in this newsletter or with any other queries you might have, all CSE emails follow the same pattern, <firstname>@cse.dcu.ie.

Improvement for Small Companies Programme (ISCP6)

by Jill Pritchett

Here we are at the start of another year so what better time is there to consider implementation of a Quality System.

Quality Systems do not need to be a bureaucratic nightmare; handled the right way a Quality System can greatly enhance your business and enable you to handle growth more effectively. Don't just take my word for it; look at the evidence:

- CSE has run the ISCP programme 5 times previously specifically to help smaller organisations to implement a unique quality system that works for them.
- Where appropriate, participant companies have gone on to get ISO certification, although, some use the programme without requiring formal certification.
- From the current ISCP5 programme four of the six companies that participated will be applying for ISO certification in Quarter 1, 2001 (see * below).
- CSE has assisted with Quality System implementation for companies in many parts of the country, so whatever your location we can help.

The new version of the ISO standard (ISO 9001:2000) which was launched in December has made quality system implementation much more viable by removing the bureaucracy previously associated with Quality Systems. There are only 6 core procedures required now. In addition, you need relevant records that are your proof that you have done the right things in each of the key areas. This is a common sense approach as most of these records you would find useful anyway.

The standard now uses a process model approach, which can be equated to the Software Life Cycle; and is therefore easier for Software Companies to implement.

The next run of the ISCP programme is scheduled to start in March 2001. If you missed the briefing session held at CSE and think the programme might be of interest to you please contact us to find out more by emailing jill@cse.dcu.ie.

Congratulations

We would like to congratulate International Test Technologies, Donegal who were awarded their ISO 9001 certificate in September 2000 following successful completion of the ISCP programme.

.... and Good Luck

*Good luck to Cylon Controls, CardBase Technologies, Ivertex and EMC2 [Software Development group] who have recently completed the programme and will be going for ISO certification in the near future. We look forward to seeing them added to the list of ISO 9001 certified companies shortly. Watch this space for an update.

The Final Word

If a structured programme like ISCP is not what you are looking for CSE also provides individual consultancy assistance with Quality System Implementation on a one-to-one basis. We are currently working with companies like Scientific Systems and Autosoft International on a tailored basis, if this is of interest contact CSE for a quotation.

To discuss your specific requirements individually contact:

Jill Pritchett on 700 8055,
jill@cse.dcu.ie or

Ian Lawthers on 700 5353,
ian@cse.dcu.ie.

NEWS FLASH

Since this article was written Cylon Controls have been awarded their ISO certificate.

So congratulations once again to the team!



UPDATE

If you are considering a Software Process Improvement project, and are not sure how to start, why not buy a copy of the SPIRE Handbook for only 25 Euro per copy. The Handbook provides a step by step approach to SPI that can be used by everyone. Copies can be ordered from the CSE web site www.cse.dcu.ie.

For those of you who would prefer to have direct assistance with your improvement projects CSE will be putting together a SPIRE Cluster starting in the autumn. A briefing session will be held at CSE at 2pm on the 9th March for companies interested in participating. Further information can be found on the CSE web site www.cse.dcu.ie

To discuss SPIRE contact Jill Pritchett on 700 8055 (jill@cse.dcu.ie) or Ian Lawthers 700 5353 (ian@cse.dcu.ie).

CSE Consultancy Services

We offer a range of consultancy services which can be carried out as individual assignments or which can be packaged together with in-house training (from our portfolio of public courses, or specifically tailored for you needs). While providing a service to all size of companies, we are particularly conscious of the issues which are specific to SMEs (small and medium sized enterprises).

Our approach allows us to combine our expertise with your problems to produce a solution both appropriate and relevant to your specific situation. Our consultants will be able to give you an independent view of your strengths and weaknesses by drawing upon:

- their own background in software development
- their knowledge of international Best Practice
- their experience of having helped others through similar problems and knowing the practical difficulties that might arise
- their understanding of the cultural issues involved in implementing change and how to obtain company buy-in

We will help you work out a strategy for change and improvement and help you to implement it. In this way you gain and retain valuable knowledge that will help your company both now and in the future.

Our aim is not to do things for you but to help you to do them for yourself.

Services we provide include:

- mentoring for companies to help them implement a Quality System including preparation and pre-assessment for ISO 9001:2000
- informal and formal CMM[®] assessments
- process improvement strategy and implementation of an improvement programme suitable for your organisation
- advice and assistance on introducing RAD, object technologies and component-based development
- advice and assistance on product strategy
- product evaluations in terms of the feasibility of product development and also end product quality
- advice and assistance on business strategy
- advice and assistance on implementing cultural change
- advice and assistance on evaluating and introducing emerging software technologies
- advice and assistance on IPR issues
- a mediation and arbitration service

**If you would like more information about any of our services please contact us:
admin@cse.dcu.ie, Tel 01 700 5750**

Training Calendar for January - June 2000

Event	Days	Jan	Feb	Mar	Apr	May	Jun
Quality and Software Process Improvement							
➤ Fundamentals of Software Engineering	2			29-30			28-29
➤ SPI Approaches	1				20		
➤ Upgrading Existing Quality Systems to ISO 9001:2000	1			20			19
➤ Introduction to Capability Maturity Model	2			1-2			7-8
➤ Internal Auditing	1	12			10		
➤ Software Inspections	1			13			21
➤ Tmap - A Structured Approach To Software Testing	2	29-30				17-18	
Object Orientation & Component Based Development							
➤ Introduction to Object Orientation	1		28		24		
➤ Overview of the UML Notation	1	26		21		3	
➤ Object Oriented Analysis and Design using UML	3		14-16			9-11	
➤ Component Based Development Overview	1			22			21
➤ OO Development Processes: an evaluation	1		26				1
➤ Java, C++, VB or C? - Making the Right Choice for Projects!	1	Available on-site only					
RAD - Dynamic Systems Development Method							
➤ Overview of DSDM	1		9		30		
➤ DSDM Practitioner	3	Available on request					
• DSDM Interest Group	0.5				☎		
Requirements Engineering							
➤ Requirements Capture - Gathering User Requirements	2		6-7			15-16	
➤ Requirements Management - Managing Requirements from Capture to Design	2			6-7			14-15
Project Management							
➤ Project Management Fundamentals	2		21-22			23-24	
➤ Overview of Configuration Management	1					30	
➤ Configuration Management Practitioner	2						26-27
➤ Successful Risk Management for Software Projects	1					31	
➤ Software Estimation	2				5-6		
Business Strategy							
➤ Winning Strategies - Introduction	1		23		19		
➤ Intellectual Property Rights	1		16		25		
➤ R&D Management for Software Organisations - Overview Course	1		20			22	
➤ R&D Strategy	1		27			29	
➤ R&D Management	3			14-16			
People Issues							
➤ Facilitation Skills	2	Available on-site only					

Dates shown are subject to change.

Events marked with a, •, are awareness events and are usually free of charge to Associate Members.

Events marked with a, ➤, are training courses and are usually discounted to Associate Members.

For more information and booking details please contact our admin department:

Phone: +353 (0)1 700 5750, Fax: +353 (0)1 700 5605, Email: events@cse.dcu.ie

Or check our web site at: <http://www.cse.dcu.ie/training.html>