

## CMMI / SPiCE:

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#### 1. Subscription Services

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2.



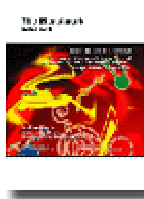
##### ***The Benchmark 10 - Project Planning edition***

Format: Book (PDF via email)

CHF 90 EUR

An essential reference book for all Chief Information Officers, IT Managers, Project Managers and Team Leaders, offering valuable assistance in the planning, management and benchmarking of development and enhancement software projects

3.



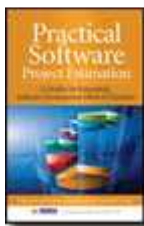
##### ***The Benchmark 8 - Software Defect & Quality edition***

Format: Book (PDF via email)

CHF 90 EUR

This book provides analysis of the factors that affect the software project duration, quality and productivity of software development and enhancement projects and package customisation projects

4.



##### ***Practical Software Project Estimation 3rd edition***

Format: Book

CHF 56 EUR

This new, hardback (McGraw-Hill) edition explains how to accurately forecast the size, cost, and schedule of software projects. Get expert advice on generating accurate estimates, minimizing risks, and planning and managing projects. Valuable appendices provide estimation equations, delivery rate tables, and the ISBSG Repository demographics.

5.



## Special Analysis Reports

Format: White paper

Price: CHF 200 each report (allows Corporate-wide distribution)

The ISBSG regularly releases special analyses reports offering valuable information to CEOs, IT Managers, Project Managers, Maintenance & Support management personnel, QA personnel and practitioners. Each special report provides knowledge to improve planning and management of IT projects.

### Available Special Analysis Reports

#### a) Team Size Impact on Project Delivery Rate

Despite the legendary 'Mythical Man Month', software project estimation often ignores the impact of team size. Adding more people to a project can have a negative impact on productivity and duration. The ISBSG data clearly shows this.

This report looks at the impact that both team size and software size have on productivity. The report provides data in tables and charts, and examples that you can use to produce more accurate estimates by taking into account the impact of team size and software size when you are estimating.

#### b) Project Durations by Size and Effort

Effort and duration are the two main factors that are sought from software estimation exercises. Customers for software want to know how long it will take to develop the software and how much it will cost. Cost can be derived once the effort is known.

This report concentrates on project duration. It provides useful information that can be used to obtain an approximate duration for a software project based on the known software size or effort, or to provide a "reality check" of an existing estimate of duration.

#### c) The Performance of Real-Time Business Application and Component Software Projects

A Special Analysis using COSMIC and IFPUG Sized Software Project data sets. □

This forty-five page report provides valuable insight into the development and enhancement performance of three different types of applications: Real-Time, Infrastructure and Business. The analysis is based on two data sets, one set comprising 334 projects that have been sized using the COSMIC method and one set comprising 272 IFPUG/NESMA sized projects.

The analysis results underline the importance of treating these three types of applications differently when estimating and benchmarking. Project Delivery rates and duration times are provided along with useful charts of the correlations of Effort, Productivity and Duration to software size. The productivity rates of different Programming Languages are compared, as is the impact of software size on productivity.

#### d) Managing Your Maintenance & Support Environment (2010 Update)

Two main sizing methods are used to help manage maintenance and support. Applications are either sized using Logical Lines of Code (KSLOC) or Function Points (FP). The first ISBSG report on managing M&S support environments could only provide statistics for applications sized with FP, but now we have enough applications that have been sized using KSLOC, so we have updated the report to provide that additional analysis, and we have updated our analysis for factors where the size measurement is not significant (e.g. activity effort percentages).

#### e) Outsourcing, Offshoring, Inhouse – How do they compare?

In this report we present the results of an analysis of the projects in the ISBSG R10 Development & Enhancement repository in order to answer the following questions:

1. How do outsourced projects compare to in-house projects? Are there any differences in the types of projects, the methods used, or the indicators of project performance?
2. How do onshore projects compare to offshore projects?

#### f) Early Lifecycle Software Estimation

Often, when a software project is simply an idea, you need to provide an indicative estimate of the possible cost and duration to provide an indication of whether the project idea is feasible. This paper describes an early lifecycle estimating technique that uses a combination of formulae and the ISBSG project delivery rate tables. Using the information in this paper you can produce an estimate range for the effort and duration of a proposed software development. Practical examples and the required tables are provided.

#### g) Package Customisation – What to expect

This ISBSG special analysis reveals that choosing and implementing a package has advantages over developing new software, provided that the implementation is either turnkey or utilises customisation facilities provided with the package. Package projects that involve changes to the package source code perform worse than development projects.

#### **h) Planning Projects – Phase Effort Ratios**

The ISBSG collects data about the effort for each of six phases of a project: Plan, Specify, Design, Build, Test and Implement. Knowing the percentage ratios of these phases is very useful for project estimation, project management and benchmarking. This report presents these phase ratios for both enhancement and new development projects and provides an example of their use.

For this report we looked into the ISBSG data to provide a guide for the percentage effort that each role is likely to require during a project. The report lays out the findings of our investigation & statistical analysis and provides useful charts of the role effort ratios for all projects and then for outsourced and in-house projects.

#### **i) Software Project Characteristics that Impact Productivity**

This short paper serves as a useful reminder of some of the project characteristics that should be taken into account when estimating projects or benchmarking their performance.

#### **j) Software Project Costs**

In this report we look at costs per function point and costs per hour, and provide some useful rules of thumb.

#### **k) Software Project Estimates – how accurate are they?**

We look at estimates of size, effort, duration and cost; how people have gone about estimating their projects; the accuracy of the estimates and the relationships between estimates. Here are some of the findings:

1. Size estimates are usually based on a data model; functional specification or analogy with a previous project
2. Project effort estimates are only accurate for less than a quarter of projects
3. Despite effort being poorly estimated 51% of projects were delivered on time
4. When functional size-based techniques are used for a cost estimate, the estimate is within 20% of the actual cost 90% of the time.

#### **l) Team Size Impacts – Special Report**

The ISBSG data shows that there are three main factors that impact software development productivity: *programming language*, *development platform* and *team size*. The first two have the most significant effect but it is also important to consider the impact of team size. The latest ISBSG Special Report reveals that teams of nine or more are significantly less productive than smaller teams. Project managers faced with larger teams should adjust their project estimates to reflect this lower productivity expectation.

#### **m) Techniques & Tools – Special Report II**

In the first paper on techniques & tools we primarily reported on their impact on the Project Delivery Rate of projects. The research for that report led to more questions about what impact tools & techniques have on other aspects of projects. In this report we look beyond PDR to provide information about Speed of Delivery; Defect Density; Team Sizes and any changes in project Phase Ratios that have resulted from the use of a technique or tool. We also provide a comparison with research done by Capers Jones of SPR. What works and what doesn't? Are there any silver bullets?

#### **n) Web Projects – how are they different?**

In this paper we present the results of an analysis of the web projects in the ISBSG R10 repository and compare them to non-web projects. The intent of this analysis is to gain an understanding of any factors that make web projects different, so that project estimation, planning and benchmarking of web projects can be better managed.

There are four main areas of analysis reported in this document:

1. A comparison of key project measures – web and non-web project data sets
2. Effort by development phase – a comparison – web and non-web projects
3. Use of techniques and tools – a comparison – web and non-web projects
4. Typical team sizes for web projects.

# Preisliste / Bestellformular

**Bitte das Bestellformular (2 Seiten) ausdrucken, ausfüllen und an SwissICT senden.**

**SwissICT, Vulkanstrasse 120, 8048 Zürich oder Fax 043 336 40 22.**

**Sie können die Bestellung auch an [eshop@swissict.ch](mailto:eshop@swissict.ch) senden.**

## Special Analysis Reports (Format: PDF delivered by email)

Note: Corporate wide distribution permitted

	Price	Quantity	Total
Maintaining and Supporting New Software Applications	CHF 200		
Software Defect Density	CHF 200		
Team Size Impact on Project Delivery Rate	CHF 200		
Project Duration by Size and Effort	CHF 200		
Managing Your Maintenance & Support Environment	CHF 200		
Outsourcing, Offshoring, Inhouse - how do they compare?	CHF 200		
Software Project Characteristics that impact Productivity	CHF 200		
Web Projects - how are they different?	CHF 200		
Techniques & Tools - Special Report II	CHF 200		
Planning Projects - Phase Effort Ratios	CHF 200		
Early Lifecycle Project Estimation	CHF 200		
Software Project Costs – Special report	CHF 200		
Package Customisation - What to expect	CHF 200		
Software Project Estimates - How accurate?	CHF 200		
Team Size Impact – Special Report	CHF 200		
Planning Projects - Role Effort Ratios	CHF 200		
Real Time vs Business and Component Projects: Using COSMIC & IFPUG project data (Single User License Only)	CHF 80		

## Books

	Price	Quantity	Total
<b>The Benchmark 8</b>	CHF 90		
<b>The Benchmark 10</b>	CHF 90		
<b>Practical Software Project Estimation 3<sup>rd</sup> Edition</b>	CHF 56		

**Industry Data** (ZIP file delivery)**Estimating, Benchmarking & Research Suite - R11 (data for 5,052 projects)**

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