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Endorsements; Preface; Background to writing Competitive Engineering; Major influences on Planguage; How to use this book; Some book conventions; Acknowledgements; Further acknowledgements; Introduction; What is in Competitive Engineering?; How was

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How to use Competitive Engineering; Structure of Competitive

Engineering: Format of Competitive Engineering: A friendly warning: 1 Planguage Basics and Process Control: The Purpose of Planguage 1.1 Introduction: Why We Need a Different 'Systems Engineering' Approach Learning through Rapid Feedback; Dynamic Adaptability; Capturing the Requirements: Focus on Results: Interdisciplinary Communication; Leadership and Motivation; Receptiveness to Organizational Change; Continuous Process Improvement; Practical Strategies for Systems Engineering: 1.2 Practical Example: Twelve Tough Questions; 1.3 Language Core: Planguage Basics and Process

Control; Planguage Specification Language; A Set of Defined Concepts;

A Set of Defined Parameters and Grammar: A Set of Icons

Planguage Process Descriptions Requirement Specification (RS); Design Engineering (DE); Specification Quality Control (SQC); Impact Estimation (IE); Evolutionary Project Management (EVO, also known as Evo); Standards; Rules; Process Descriptions; Entry Conditions; Procedure; Exit Conditions; 1.4 Rules: Generic Rules for Technical and Management Specification; 1.5 Process Description: Generic Project; Entry Conditions; Procedure; Exit Conditions; Generic Entry and Exit Process and Conditions; Process: Generic Entry or Generic Exit; Procedure: 1.6 Principles: Generic Project 1.7 Additional Ideas Continuous Process Improvement; 1.8 Further Example/Case Study: Continuous Process Improvement at Raytheon; Background; Aim; Financing the Improvements; Measuring the Effects; Calculating Savings; 1.9 Diagrams/Icons; Some Basic Planguage Icons; Document or Specification; Plan-Do-Study-Act Process Cycle; 1.10 Summary: Planguage Basics and Process Control; 2 Introduction to Requirements: Why?; 2.1 Introduction to Requirements Specification; Definition of Requirements; Key Issues for Requirements; Identifying the critical stakeholders; Separating Ends and Means Identifying the key requirements Quantifying success and failure; Understanding the past and the future - benchmarks and state-of-theart; Considering the timescales for delivery of requirements; Avoiding the 'ambiguity trap'; Handling complex requirements; Allowing requirements to evolve; 2.2 Practical Example: What is 'Flexibility Improvement'?: Analyzing a requirement: Decomposition of Requirements; Scalar Requirements; 2.3 Language Core: System Attributes and Requirement Specification Types; System Attributes; System: Attribute: Function: Performance: Resource: Design: Requirement Types Vision

Sommario/riassunto

Competitive Engineering documents Tom Gilb's unique, ground-breaking approach to communicating management objectives and systems engineering requirements, clearly and unambiguously. Competitive Engineering is a revelation for anyone involved in management and risk control. Already used by thousands of project managers and systems engineers around the world, this is a handbook for initiating, controlling and delivering complex projects on time and within budget. The Competitive Engineering methodology provides a practical set of tools and techniques that enable readers to effectively