ISO/IEC TR 19760:2003-11 (E)

Systems engineering - A guide for the application of ISO/IEC 15288 (System life cycle processes)

Contents

Page

Foreword v

1 Scope 1
1.1 Purpose 1
1.2 Audience 1
1.3 Prerequisites 1

2 Normative references 2

3 Context of this Technical Report 2
3.1 Overview 2
3.2 Context of the International Standard 2
3.3 Process categories of the International Standard 4

4 Use of the International Standard 5
4.1 Overview 5
4.2 Concept of use 5
4.2.1 General 5
4.2.2 Scope tailoring 5
4.2.3 Process tailoring 5
4.3 Planning for use 6
4.4 Tailoring 8
4.4.1 General 8
4.4.2 Tailoring considerations 8
4.4.3 Tailoring guidance 9
4.4.4 Tailoring documentation 10

5 Application concepts 10
5.1 Overview 10
5.2 System related concepts 10
5.2.1 System structure 10
5.2.2 Kinds of systems 11
5.2.3 System boundary 12
5.3 Project related concepts 12
5.3.1 Project focus 12
5.3.2 Hierarchy of projects 15
5.3.3 Project organizational structure 15
5.4 System life cycle concept 16
5.5 Process application concepts 17
5.5.1 Process use 17
5.5.2 Life cycle processes 18
5.5.3 Recursive/iterative application of processes 20
5.5.4 Methods and tools 21

6 Application of the International Standard life cycle processes 22
6.1 Overview 22
6.2 Application of the technical processes to engineer a system 22
6.2.1 General 22
6.2.2 Related technical processes for system definition 23
6.2.3 System structure definition 26
6.2.4 Related technical processes for system realization 27

6.2.5 Enabling system definition and realization 29
6.3 Application of life cycle processes to form an agreement 30
6.4 Application of life cycle processes to satisfy an agreement 32

7 Application of International Standard processes using the system life cycle 33
7.1 Overview 33
7.2 Enterprise view 34
7.2.1 Approaches 34
7.2.2 Sequential approach 36
7.2.3 Incremental approach 37
7.2.4 Evolutionary approach 38
7.3 Engineering view 39
7.3.1 General 39
7.3.2 Technical reviews 41
7.3.3 Configuration audits 42

8 Application by organizations 42
8.1 Overview 42
8.2 Uses of the International Standard within an organization 43

Annex B (informative) References for design related special factors 47