



ISO/IEC JTC1/SC7
Software & System Engineering
Secretariat: CANADA (SCC)

ISO/IEC JTC1/SC7 N2536

2001-09-04

Doc. Type Supplier Declaration Of Conformity

Title Supplier's Declaration of Conformity of the MKII FAP Method to ISO/IEC 14143-1:1998.

Source UKSMA PAS Representative

Project

Status

References

Action ID FYI or ACT

Due Date

Mailing Date 2001-09-04

Distribution SC7_AG; JTC1 Sec.; P, O & L Members

Medium

No. of Pages 8

Note

Report of the UKSMA Conformity Evaluation of the MkII FPA Functional Sizing Method against the Requirements of ISO/IEC 14143-1:1988

Introduction

The MkII FPA functional size measurement method (FSM) has been submitted for standardization via the ISO PAS procedure. ISO/SC7 has been nominated as the responsible sub-committee, and the Chair of ISO/SC7 has requested that the PAS submitter prepare a Declaration of Conformity to ISO/IEC 14143-1: 1998.

The UKSMA Management Committee are pleased to submit this Supplier Declaration of Conformity, which has been prepared using example documents contained in FCD 14143-2, Annex C (Executive Summary) and Annex B (Evaluation Checklist). UKSMA grants permission to ISO/SC7 to reproduce and distribute the report, in any form, in its entirety, for use in the progression of the MkII FPA FSM PAS submission.

Executive summary (Annex C)

Report Title Conformity Evaluation of MkII Function Point Analysis FSM against ISO/IEC 14143-1:1998 in accordance with ISO/IEC 14143-2

Method

Identification

Name	MkII Function Point Analysis
Version Number	1.3.1
Author(s)	The United Kingdom Software Metrics Association
Date of Publication	September 1988
Publisher	The United Kingdom Software Metrics Association
Evaluator	The United Kingdom Software Metrics Association
Organization	
Type of Evaluation	Supplier

Evaluation result

Date	24 July 2001
Result	The conformity evaluation determined that version 1.3.1 of the MkII Function Point Analysis FSM conforms to the requirements of ISO/IEC 14143-1:1998 according to the evaluation criteria defined within ISO/IEC 14143-2.

Evaluation

Checklist Structure (Annex B)

The example conformity evaluation checklist is divided into three parts:

- a) part 1 contains evaluation questions relating to the requirements of ISO/IEC 14143-1:1998;
 - b) part 2 contains evaluation questions relating to the recommendations of ISO/IEC 14143-1:1998;
- and

NOTE part 2 is optional for a conformity evaluation checklist.

- c) part 3 contains a matrix cross-referencing the provisions in ISO/IEC 14143-1:1998 to the evaluation questions.

Abbreviations (as defined in ISO/IEC 14143-1: 1988)

FUR – Functional User
 BFC – Base Functional Component
 FSM – Functional Size Measurement

B.2.1 Part 1 - requirements

B.2.1.1 Labelling conventions

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Does the Candidate FSM Method use a name that distinguishes it from all other existing FSM Methods?	Introduction 1.1 Chapter 2 – Rule 6.1	Yes	Yes	7(a)
b) If the Candidate FSM Method implies that there are other versions of the Method, then does it also include the current version number that it appends to its name?	Chapter 2 – Rule 6.1			7(b)

B.2.1.2 Functional User Requirements

B.2.1.2.1 Source information

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Does the Candidate FSM Method use Functional User Requirements when deriving Functional Size?	Introduction 1.1 Chapter 2 – Rule 1.1 Chapter 3 – Para 2 Etc...	Yes	Yes	6 (b)
b) Does the Candidate FSM Method use a concept of functional size that corresponds to a size of the software derived by quantifying the Functional User Requirements?	Chapter 2 – Rules Chapter 3 – measurement	Yes	Yes	6 (b)
c) Does the Candidate FSM Method exclude Technical Requirements from the Functional User Requirements when deriving functional size?	Introduction – 1.1 para 3 Introduction 1.2 para 6 (Technical Complexity Adjustment)	Yes	Yes	5.1.1.1 (a)
d) Does the Candidate FSM Method exclude Quality Requirements from the Functional User Requirements when deriving Functional Size?	Introduction 1.1 para 3 qualifies user required function (i.e.FUR) as excluding technical and quality. All references to functional user requirement carry the same qualification throughout the manual	Yes	Yes	5.1.1.1 (a)

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
e) Is the representation of the Functional User Requirements used by the Candidate FSM Method based on the perspective of the users?	The BFC of the method is the Logical Transaction, which is a representation of the FUR	Yes	Yes	5.1.1.1 (a)
f) Can the Candidate FSM Method be applied as soon as any Functional User Requirements are defined and while they are available?	The BFC of the method is the Logical Transaction, which is a representation of the FUR. The BFC can therefore be identified as soon as the FUR have been stated.	Yes	Yes	5.1.1.1 (b)
g) Are the Functional User Requirements used by the Candidate FSM Method a sub-set of the user requirements, and do they represent the user practices and procedures that the software must perform to fulfil the users' needs?	Introduction 1.1 para 3 recognises that FURs are a subset of user requirements that excludes functions related to quality and technical considerations	Yes	yes	5.1.1.1 (a)

B.2.1.2.2 Scope of the Measurement

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Is the determination of the Scope of the FSM an activity required to derive Functional Size?	Chapter 3 Step 1 states the scope in terms of Viewpoint, Purpose and Type of count	Yes	Yes	6 (a)
b) Is the identification of which Functional User Requirements are to be included within the Scope of the FSM an activity required to derive Functional Size?	Chapter 3 Step 2. The boundary determines the functionality to be included	Yes	Yes	6 (b)
c) Does the Candidate FSM Method describe how to identify which Functional User Requirements will be included within the Scope of the FSM?	Chapter 3 Step 2. The user is referred to Sections 4.2 and 4.3 for guidelines.	Yes	Yes	5.2.2 (b)
d) Does the Candidate FSM Method have a concept of the Scope of the FSM that corresponds to the set of Functional User Requirements to be included in a specific FSM instance?	Chapter 3 Steps 1 and 2 together represent an instance of an FSM	Yes	Yes	6 (b)

B.2.1.2.3 Boundary

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Does the boundary correspond to the conceptual interface between the software under study and its users? Only answer this question if it is applicable to the FSM Method being evaluated.	Chapter 2 Rule 1	Yes	Yes	5.2.2 (f)
b) Where the Candidate FSM Method implies a relationship exists between a Base Functional Component (BFC) Type and the boundary, is there a definition of that relationship for each BFC Type?	Chapter 2 Rule 2. The Logical Transaction relates the Boundary and the user	Yes	Yes	5.2.2 (f)

B.2.1.2.4 Functional Domain

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Does the Candidate FSM Method use the concept of Functional Domain which corresponds to a class of software based on the characteristics of Functional User Requirements which are pertinent to FSM?	Introduction 1.2 para 4 Bullet 1 Introduction 1.5	Yes	Yes	5.2.1.1 (d)
b) Is there a description of the Functional Domains to which the Candidate FSM Method can be applied?	Introduction 1.5	Yes	yes	5.2.1.1 (d)

B.2.1.3 Application of an FSM**B.2.1.3.1 Base Functional Component (BFC)**

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Does the Candidate FSM Method have, or refer to, a definition for the concept of a BFC?	Chapter 2 Rule 2. The Logical Transaction is the BFC.	Yes	Yes	5.2.1.1 (a)
b) Does this definition for a BFC correspond to being an elementary unit of Functional User Requirements?	Chapter 2 Rule 2.2	Yes	Yes	5.1.2 (a)
c) Does the FSM Method use these elementary units of Functional User Requirements for measurement purposes?	Chapter 2 Rule 2.1	Yes	yes	5.2.2 (a)
d) Does the Candidate FSM Method define the attributes of BFCs?	Chapter 2 Rule 2.2. (Input, Entity Refs, Outputs)	Yes	Yes	5.2.1.1 (a)
e) Does the Candidate FSM Method define rules used to assess the BFCs?	Chapter 3 Step 3 Chapter 3 Step 5 Chap 4 - 4.4.4	Yes	Yes	5.2.1.1 (b)
f) Is there a description of how to identify the BFCs within the Functional User Requirements?	Chapter 4 – 4.4.	Yes	Yes	5.2.2 (c)
g) Are the characteristics of a BFC such that they only express Functional User Requirements?	The BFC of the method is the Logical Transaction, which is a representation of the FUR.	Yes	Yes	5.1.2 (a)
h) Are the characteristics of a BFC such that they do not express Technical Requirements?	Introduction 1.1 para 3 The BFC of the method is the Logical Transaction, which is a representation of the FUR. FURs exclude functions related to technical considerations	Yes	Yes	5.1.2 (b)
i) Are the characteristics of a BFC such that they do not express Quality Requirements?	Introduction 1.1 para 3 The BFC of the method is the Logical Transaction, which is a representation of the FUR. FURs exclude functions related to quality considerations	Yes	Yes	5.1.2 (c)
j) Is the identification of the BFCs within the Functional User Requirements an activity required to derive Functional Size?	Chapter 3 Step 3	Yes	Yes	6 (c)

B.2.1.3.2 Base Functional Component Type (BFC Type)

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Is there a concept of a BFC Type that corresponds to being a category of BFCs?	There is only one BFC Type, the Logical Transaction. It satisfies this requirement as, in this specification, there is no need to distinguish between BFC and BFC Type. They are one and the same in this FSM	Yes	Yes	5.2.2 (a)
b) Is there a definition for each BFC Type?	Chapter 2 Rule 2	Yes	Yes	5.2.2 (a)
c) Can a BFC be classified as one, and only one, BFC Type?	Chapter 2 Rule 2. There is only 1 BFC type	Yes	Yes	5.1.2 (d)
d) If there is more than one BFC Type, is there a definition of how to classify BFCs into the appropriate BFC Type?	Not applicable	N/a	N/a	5.2.2 (d)
e) If the Candidate FSM Method implies that there are relationships between BFC Types, then does it provide a definition of those relationships? Only answer this question if it is applicable to the FSM Method being evaluated.	Not applicable	N/a	N/a	5.2.2 (g)
f) If the Candidate FSM Method has more than one BFC Type, is the classification into types one of the activities required to derive Functional Size?	Not applicable	N/a	N/a	6 (d)

B.2.1.3.3 Deriving Functional Size

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Is the functional size derived through the evaluation of BFCs?	Chapter 2 Rule 2.1 Chapter 3 Step 6	Yes	Yes	5.1.1.1 (c)
b) Is the derivation of Functional Size independent of the effort required to develop the software being measured?	Chapter 2 Step 6 The method does not require the effort required to develop the software to determine functional size. Steps 7 and 8 are specific uses of functional size to derive other measures such as productivity and delivery rate. These metrics are outside the scope of ISO 14143-1	Yes	Yes	5.1.3 (a)
c) Is the derivation of Functional Size independent of the effort required to support the software being measured?	Chapter 5 Para 5.3 Chapter 5 Step6 The method does not require the effort required to support the software to determine functional size of a change	Yes	Yes	5.1.3 (b)
d) Is the derivation of Functional Size independent of the methods used to develop the software being measured ?	Chapter 2 Rule 2 Chapter 3 Step 6 The functional size is not dependent on the method used to develop the software.	Yes	Yes	5.1.3 (c)
e) Is the derivation of Functional Size independent of the methods used to support the software being measured?	Chapter 2 Rule 2 Chapter 3 Step 6 The functional size is not dependent on the method used to support the software.	Yes	Yes	5.1.3 (d)
f) Is the derivation of Functional Size independent of any physical components of the software being measured?	Chapter 2 Rule 2 Chapter 3 Step 6 The functional size is not dependent on any physical component of the software being measured	Yes	Yes	5.1.3 (e)

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
g) Is the derivation of Functional Size independent of any technological components of the software being measured?	Chapter 2 Rule 2 Chapter 3 Step 6 The functional size is not dependent on the technology components	Yes	Yes	5.1.3 (f)
h) Is there a definition of how to assign a numeric value to a BFC according to its BFC Type?	Chapter 2 Rule 2.1 Chapter 3 Step 6	Yes	Yes	5.2.2 (e)
i) Is assigning a numeric value to a BFC one of the activities required to derive Functional Size?	Chapter 3 Steps 1 - 6	Yes	Yes	6 (e)
j) Does the Candidate FSM Method define how to calculate the Functional Size?	Chapter 3 Step 6	Yes	Yes	6 (f)

B.2.1.3.4 Units of Functional Size

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding requirements
a) Is there a definition of the units in which the Functional Size is expressed?	Chapter 2 Rule 6	Yes	Yes	5.2.1.1 (c)
b) When reporting the Functional Size, is the user required to qualify it with the units specified by the Candidate FSM Method?	Chapter 2 Rule 6	Yes	Yes	5.2.3 (a)
c) When reporting the Functional Size, is the user required to qualify it with the name specified by the Candidate FSM Method?	Chapter 2 Rule 6	Yes	Yes	5.2.3 (b)
d) If the Candidate FSM Method is customised, is the user required to indicate this when reporting the Functional Size?	The specification does not allow for customisation. A customisation would by definition result in a new method. The owner of that new method would have to perform a separate assessment, which has a requirement to uniquely identify it. However, that is outside the scope of this specification, which is concerned only with MkII FPA V1.3.1.	N/a	N/a	5.2.3 (c)

B.2.2 Part 2 - recommendations

B.2.2.1 FSM Method

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding recommendations
a) Is the Candidate FSM Method independent of any particular software development method or technology?	There are no references in the specification requiring dependence on of any particular software development method or technology.	Yes	Yes	5.1.1.2

B.2.2.2 Documentation of the result of applying an FSM

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding recommendations
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evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding recommendations
a) Is there a description of the kind of information necessary to enable the Candidate FSM Method to be applied?	Chapter 4. Contains extensive information regarding the types of information that may be available, and how they can be used in the context of the MkII FPA method	Yes	Yes	5.2.1.2 (a)
b) Are there guidelines provided on how to document a specific instance of FSM?	Chapter 2 Rule 6, in conjunction with Appendix II.	Yes	Yes	5.2.1.2 (b)

B.2.2.3 Using the Functional Size Results

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding recommendations
a) Is there a description of the purposes for which the FSM Method can best be used, such that the users of the FSM can judge its suitability for their purpose?	Introduction 1.5 Chapters 7,8, and 9 gives information about the possible uses of the FPI	Yes	Yes	5.2.1.2 (c)

B.2.2.4 Convertibility of Functional Size

evaluation question	locations	satisfies 4.4.1?	satisfies the requirements of evaluation question?	corresponding recommendations
a) Is there a statement of the degree of convertibility to other size measurement methods?	Introduction 1.5. This specification is concerned only with the measurement of functional size using the procedures it contains. Advice is given about the relationship between MkII FPA and Albrecht/IFPUG. It give no specific conversion factors, and cautions against mixing measure derived using the two methods	Yes	Yes	5.2.1.2 (d)

B.2.3 Part 3 - cross-reference between provisions of ISO/IEC 14143-1:1998 and evaluation questions

ISO/IEC 14143-1:1998		Cross-reference to evaluation questions for:		Conformity evaluation
Section	Provision	Requirements	Recommendations	Result
5.1.1 FSM Method Characteristics	5.1.1.1 (a)	B.2.1.2.1 (c,d,e,g)		
	5.1.1.1 (b)	B.2.1.2.1 (f)		
	5.1.1.1 (c)	B.2.1.3.3 (a)		
	5.1.1.2		B.2.2.1 (a)	
5.1.2 Base Functional Component Characteristics	5.1.2 (a)	B.2.1.3.1 (b,g)		
	5.1.2 (b)	B.2.1.3.1 (h)		
	5.1.2 (c)	B.2.1.3.1 (i)		
	5.1.2 (d)	B.2.1.3.2 (c)		
5.1.3 Functional Size Characteristics	5.1.3 (a)	B.2.1.3.3 (b)		
	5.1.3 (b)	B.2.1.3.3 (c)		
	5.1.3 (c)	B.2.1.3.3 (d)		
	5.1.3 (d)	B.2.1.3.3 (e)		
	5.1.3 (e)	B.2.1.3.3 (f)		
	5.1.3 (f)	B.2.1.3.3 (g)		
5.2.1 FSM Method Requirements	5.2.1.1 (a)	B.2.1.3.1 (a,d)		
	5.2.1.1 (b)	B.2.1.3.1 (e)		
	5.2.1.1 (c)	B.2.1.3.4 (a)		
	5.2.1.1 (d)	B.2.1.2.4 (a,b)		
	5.2.1.2 (a)		B.2.2.2 (a)	
	5.2.1.2 (b)		B.2.2.2 (b)	
	5.2.1.2 (c)		B.2.2.3 (a)	
	5.2.1.2 (d)		B.2.2.4 (a)	
5.2.2 Base Functional Component assessment requirements	5.2.2 (a)	B.2.1.3.1 (c), B.2.1.3.2 (a,b)		
	5.2.2 (b)	B.2.1.2.2 (c)		
	5.2.2 (c)	B.2.1.3.1 (f)		
	5.2.2 (d)	B.2.1.3.2 (d)		
	5.2.2 (e)	B.2.1.3.3 (h)		
	5.2.2 (f)	B.2.1.2.3 (a,b)		
	5.2.2 (g)	B.2.1.3.2 (e)		
5.2.3 Designation of Functional Size	5.2.3 (a)	B.2.1.3.4 (b)		
	5.2.3 (b)	B.2.1.3.4 (c)		
	5.2.3 (c)	B.2.1.3.4 (d)		
6. Process for applying an FSM Method	6 (a)	B.2.1.2.2 (a)		
	6 (b)	B.2.1.2.1 (a,b), B.2.1.2.2 (b,d)		
	6 (c)	B.2.1.3.1 (j)		
	6 (d)	B.2.1.3.2 (f)		
	6 (e)	B.2.1.3.3 (i)		
	6 (f)	B.2.1.3.3 (j)		
7. FSM Method Labelling Conventions	7 (a)	B.2.1.1 (a)		
	7 (b)	B.2.1.1 (b)		