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Functional Size Measurement – Validation and Verification

Source

Project

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Note For consideration at the Bangkok Plenary

1 Summary

This is the final report from the Study Group constituted to recommend future SC7 action regarding *TR* 14143-3:2003 Information technology – Software measurement – Functional size measurement – Verification of functional size measurement methods.

The Study Group recommends retaining *TR 14143-3:2003 Information technology – Software measurement – Functional size measurement – Verification of functional size measurement methods* as a TR without change. The Study Group also recommends that, after the successful FDIS ballot of the 3rd edition of the *International vocabulary of basic and general terms in metrology* (VIM), SC7 initiate a NWI to update the definitions in *TR 14143-3:2003 Information technology – Software measurement – Functional size measurement – Verification of functional size measurement methods* and to correct the editorial defects listed below.

2 Report Background

In Resolution 860, at the Closing Plenary of the Helsinki SC7 Meeting in May 2003, JTC1/SC7 instructed its Secretariat to establish a study group to review *TR 14143-3:2003 Information technology – Software measurement – Functional size measurement – Verification of functional size measurement methods*.

The terms of reference of this Study Group were to:

- Determine whether TR 14143-3:2003 should be converted to IS
- Establish whether TR 14143-3:2003 needs to be changed
- Establish justifications for any recommendations

Its membership was to consist of (but was not limited to):

Pam Morris (Australia), Martin D'Souza (Australia), Serge Oligny (Canada), Pekka Forselius (Finland), Eberhard Rudolph (Germany), Debbie Dickson (South Africa), Insoo Hwang (Korea), Shigeru Nishiyama (Japan) Mitsuhiro Takahashi (Japan), Peter Fagg (UK), Marie O'Neill (Ireland), Carol Dekkers (IFPUG and USA), Tony Rollo (COSMIC).

A request for views/recommendations on the future of ISO/IEC TR 14143-3 was issued on 31 August 2005. The only comments received were from Serge Oligny (Canada). For the benefit of members attending the Study Group meeting, an Interim Report was issued on 4 November 2005 listing the comments and providing a suggested disposition. With the exception of Pam Morris (Australia), Martin D'Souza (Australia) and Debbie Dickson (South Africa) who had sent apologies, the Study Group met on 8-9 November 2005 in Tokyo. The meeting was chaired by Carol Dekkers (IFPUG and USA) and discussed each of the comments in detail. A Second Interim Report was issued on 22 January 2006 to obtain final comments from the Study Group members.

3 Disposition of Comments

The Study Group agreed to the following disposition of comments:

1. comment

Need to verify whether there is a more recent version of the International vocabulary of basic and general terms in metrology than the 1993 edition cited.

disposition

The 3rd edition of the VIM has recently been balloted as a DIS. The revision of the VIM has been necessitated by the evolution of the treatment of metrological uncertainty from a Classical Approach (CA) to an Uncertainty Approach (UA), and is expected to contain numerous changes to definitions as well as a much larger number of terms. In some instances, a single term under CA has spawned multiple terms under UA. In order to maintain the integrity of *TR 14143-3:2003 Information technology – Software measurement – Functional size measurement – Verification of functional size measurement methods*, the definitions copied from the VIM should be reviewed to ensure that they are still appropriate.

2. comment

In respect of the definition of **discrimination (threshold)**, the expressions "stimulus" and "response of a measuring instrument" shall be instantiated with terms more specific to FSM.

disposition

Add the following to definition 3.4 (the definition already includes one note):

NOTE 2 In this part of ISO/IEC 14143, "stimulus" refers to an FUR and "response of a measuring instrument" refers to the Functional Size obtained by the application of the FSM Method.

project editor's note

The proposed new definition of **discrimination (threshold)** does not refer to either a "stimulus" or to a "response of a measuring instrument". However, instantiation of the replacement terminology will still be required.

3. comment

In respect of the definition of **measurand**, the expression "quantity subject to measurement" shall be instantiated with a term more specific to FSM.

disposition

Comment withdrawn

The TR contains an additional NOTE 2: In this part of ISO/IEC 14143, the measurand refers to the FUR.

4. comment

The definition of **measuring instrument** also needs to be instantiated.

disposition

The TR contains an additional NOTE:

In this part of ISO/IEC 14143, the core element of the measurement instrument is the FSM Method.

Comment withdrawn.

5. comment

In respect of the definition of **verification sponsor**, is this always the same person or org?

disposition

Add the following to definition 3.11

NOTE The verification sponsor may involve more than one party.

6. comment

Clause 4.1.2 a)

determining the correctness of the statements of the FSM Method and/or

shall read:

determining the correctness of the **performance** statements of the FSM Method and/or

disposition

In clause 4.1.2 a), insert "performance" before "statements".

7. comment

in respect of clause 4.3.1.2, last sentence

The verification team may select to admit the results of tests, performed by independent researchers, that have been carried out according to the provisions of this technical report.

the expression "researchers" is too restrictive – shall be replaced by "party" since statement refers to tests done in accordance with Part 3

disposition

In the last sentence of clause 4.3.1.2, replace "researchers", with "parties".

8. comment

in respect of clause B.1.1 NOTE 1

replace "accepted sample size" by "accepted minimum sample size

disposition

In clause B.1.1, NOTE 1, insert "minimum" before "sample".

9. comment

Bibliography obviously needs to be updated with relevant items published in the last 5 years.

disposition

Rejected. The Study Group has not been presented with any specific updates for the Bibliography.

10. comment

It would be appropriate to explore the possibility to bring this TR to the IS status.

disposition

Rejected. The Study Group does not believe that usage of the document would be enhanced by progressing it to an IS at this time.

Martin D'Souza (Standards Australia) Study Group Chair