

BS ISO 12651-2:2014



BSI Standards Publication

Electronic document management — Vocabulary

Part 2: Workflow management

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of ISO 12651-2:2014. Together with BS ISO 12651-1:2012, this standard supersedes BS ISO 12651:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IDT/1, Document Management Applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 73547 9

ICS 01.040.37; 37.080

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2014.

Amendments issued since publication

Date	Text affected
------	---------------

INTERNATIONAL
STANDARD

ISO
12651-2

First edition
2014-12-15

**Electronic document management —
Vocabulary —**

Part 2:
Workflow management

Gestion de documents électroniques — Vocabulaire —

Partie 2: Gestion électronique de processus



Reference number
ISO 12651-2:2014(E)

© ISO 2014



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Principles and rules followed	1
2.1 Definition, formatting and organization of an entry	1
2.2 Spelling	1
3 Terms and definitions	1
Bibliography	9

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 171, *Document management applications*, Subcommittee SC 3, *General issues*.

This first edition of ISO 12651-2 cancels and replaces the first edition of ISO 12651:1999 which has been technically revised.

ISO 12651 consists of the following parts, under the general title *Electronic document management — Vocabulary*:

- *Part 1: Electronic document imaging*
- *Part 2: Workflow management*

Electronic document management — Vocabulary —

Part 2: Workflow management

1 Scope

This part of ISO 12651 defines terms and concepts relevant to electronic document workflow management.

It is intended to facilitate communication in the field of electronic document management and translation of the terms and concepts it contains into other languages. It identifies the terminology used to describe the concepts and general structure of a workflow management system for electronic images and other electronic documents, its major functional components, and their interfaces. It also provides a list of synonyms variously used within the industry as alternative terms to the preferred terminology

2 Principles and rules followed

2.1 Definition, formatting and organization of an entry

All terms and definitions in [Clause 3](#) meet the requirements of ISO 10241-1.

2.2 Spelling

In the English language version of ISO 12651-2, terms, definitions, examples, and notes are given in the spelling preferred in the United Kingdom. Other correct spellings may be used without violating this International Standard.

3 Terms and definitions

3.1 action

task that affects an electronic document or *folder* ([3.14](#))

EXAMPLE Updating an index value for an electronic document, modifying a form for user input, executing a script, moving electronic documents to the next step of a process, or performing a lookup to another system.

3.2 activity

a piece of work that forms one logical *step* ([3.38](#))

3.3 administrator

workflow ([3.46](#)) system user who has special privileges allowing various system set-up, control, and management functions to be performed

EXAMPLE set up and management of user names, passwords, and roles, assignment or re-assignment of work items, monitoring of work progress; or system audit functions.

3.4 AND-join

join point within a *workflow* ([3.46](#)) where two or more parallel executing *steps* ([3.38](#)) converge into a single common thread of control

3.5
AND-split
split

point within a *workflow* (3.46) where a single thread of control splits into two or more parallel *steps* (3.38)

3.6
application data

data that is application specific and not accessible by a *workflow management system* (3.52)

3.7
audit trail

complete record of activities taking place within a *workflow* (3.46) or part thereof

EXAMPLE Date, time or type of work performed.

3.8
branch

one of a set of parallel *steps* (3.38) within a *workflow* (3.46)

Note 1 to entry: Branches can be added to existing branches and merged with other branches.

3.9
conditional route

route between two *steps* (3.38) within a *workflow* (3.46) that is followed only when certain conditions are met

3.10
constraint

condition (typically pertaining to *activity* (3.2)) that must be met during work processing

3.11
deadline

time based scheduling *constraint* (3.10) which requires that a certain *activity* (3.2) (or *work item* (3.58)) be completed by a certain time

Note 1 to entry: Activity scheduling by a workflow management system will attempt to meet deadline constraints set against particular activities. Escalation procedures may be invoked if deadlines are not met.

3.12
escalation

procedure (automated or manual) which is invoked if a particular *constraint* (3.10) is not met

Note 1 to entry: Escalation procedures typically involve referring the issue to a level of management above the level that is currently addressing it.

3.13
event trigger

condition [which may be internal or external to a *workflow management system* (3.52)] which causes that *workflow* (3.46) management software to take one or more *actions* (3.1)

3.14
folder

container for electronic documents and folders

3.15
inbox

folder (3.14) that contains electronic documents or work files assigned to a specific user

3.16
instance

representation of a single enactment of a *process* (3.28), or *activity* (3.2) within a *process*, including its associated data

3.17

invoked application

workflow (3.46) application that is invoked by a *workflow management system* (3.52) to automate an *activity* (3.2), fully or in part, or to support a *workflow participant* (3.55) in processing a *work item* (3.58)

3.18

iteration

workflow loop

workflow (3.46) *activity* (3.2) cycle involving the repetitive execution of one (or more) workflow activity(s) until a condition is met

3.19

life cycle

actions (3.1) taken on an electronic document within a *workflow* (3.46)

Note 1 to entry: Electronic documents might exist in one or many life cycles at the same time, depending on the problem(s) being solved, the processes associated with the electronic document, and how they overlap.

3.20

load balancing

way to distribute work to specific user *queues* (3.34)

Note 1 to entry: Percentages, priority, sequence, index values, shortest list, and more complex rules can be applied to allocate electronic documents among individual users and groups of users to work on.

3.21

manual activity

manual step

activity (3.2) within a *process* (3.28) that is not capable of automation and hence lies outside the scope of a *workflow management system* (3.52)

Note 1 to entry: Such activities may be included within a process definition, for example to support modelling of the process, but do not form part of a resulting workflow.

3.22

milestone

milestone step

designated point within a *workflow* (3.46), used to track the progress of the workflow

3.23

OR-join

join

asynchronous join

point within a *workflow* (3.46) where two or more alternative *activity(ies)* (3.2) *workflow branches* (3.8) re-converge to a single common activity as the next *step* (3.38) within the workflow

3.24

OR-split

conditional routing

branch

point within a *workflow* (3.46) where a single thread of control makes a decision upon which *branch* (3.8) to take when encountered with multiple branches

3.25

parallel routing

parallel workflow processing

concurrent processing

segment of a *process instance* (3.32) under enactment by a *workflow management system* (3.52), where two or more *activity(ies)* (3.2) are executed in parallel within a *workflow* (3.46), creating multiple threads of control

EXAMPLE Once a form filling activity is complete, the three sections of form X, sections A, B and C, are processed in parallel by the corresponding activities, Process Section A activity, Process Section B activity and Process Section C activity.

3.26

pre-condition

logical expression which may be evaluated by a *workflow engine* (3.50) to decide whether a *process instance* (3.32) or *activity* (3.2) within a process instance may be started

Note 1 to entry: One or more pre-conditions may be defined as entry criteria to a particular activity or process instance. The pre-condition may refer to an external event of some kind.

3.27

post-condition

logical expression which may be evaluated by a *workflow engine* (3.50) to decide whether a *process instance* (3.32) or *activity* (3.2) within a process instance is completed

Note 1 to entry: *Usage*: One or more post-conditions may be defined as completion criteria for a particular activity or process instance. The post-condition may refer to an external event of some kind.

3.28

process

model

formalised view of a business process, represented as a co-ordinated (parallel and/or serial) set of *activity(ies)* (3.2) and *steps* (3.38) that are connected in order to achieve a common goal

3.29

process definition

model definition

routing definition

workflow script

representation of a business process in a form which supports automated manipulation, such as modelling, or enactment by a *workflow management system* (3.52)

Note 1 to entry: The process definition consists of a network of activities and their relationships, criteria to indicate the start and termination of the process, and information about the individual activities, such as participants, associated IT applications and data.

3.30

process definition mode

process modelling

time period when manual and/or automated *workflow* (3.46) descriptions of a *process* (3.28) are defined and/or modified electronically

3.31

process execution

time period during which a *process* (3.46) is operational, with *process instances* (3.32) being created and managed

3.32

process instance

representation of a single execution of a *process* (3.28)

Note 1 to entry: A process instance is created, managed, and (eventually) terminated by a workflow management system. Each process instance is complete when a unit of work passes through the workflow management system (for example, the processing of one insurance claim, or the production of one engineering design).

3.33

process role

role

mechanism that associates *workflow participants* (3.55) to a collection of *workflow* (3.46) *activity(ies)* (3.2)

3.34

queue

defined *work folder* (3.57) where electronic document(s) await processing

Note 1 to entry: A queue assigned to a particular user is a user queue or an inbox.

3.35

related documents

electronic documents that share an index value or associated content with the main electronic document

Note 1 to entry: Some workflow actions take place on related electronic documents and not the electronic document.

3.36

rule

question that evaluates True or False, used to test whether a specific data condition is met to enable conditional programming

3.37

sequential routing

serial routing

segment of a *process instance* (3.32) under enactment by a *workflow management system* (3.52), in which several *activity(s)* (3.2) are executed in sequence under a single thread of execution

Note 1 to entry: No AND-split, AND-join, OR-split, OR-join may occur during sequential routing.

3.38

step

stage within a *workflow* (3.46) where distinct, clearly defined *action* (3.1) is performed. A workflow consists of two or more steps

Note 1 to entry: Each step on a workflow map represents an activity or task in the process described by the map. A workflow consists of two or more steps.

3.39

sub process

process (3.28) that is enacted or called from another (initiating) process and which forms part of the overall (initiating) process

Note 1 to entry: Multiple levels of sub processes may be supported.

Note 2 to entry: A sub process is useful for defining reusable components within other processes. A sub-process will have its own process definition.

3.40

timers

software polling that automates non-interactive execution of *rules* (3.36) or *actions* (3.1) on electronic documents within a *work folder* (3.57)

Note 1 to entry: Polling intervals can be as frequent as every minute, occur after a certain amount of time, or occur at an exact point in time.

3.41

transition

(n) process flows an electronic document can take from one *queue* (3.34) or *work folder* (3.57) to another queue or work folder during its *life cycle* (3.19)

Note 1 to entry: All of the transitions, taken together, define the paths that an electronic document can take during the process

3.42

transition

(v) process of moving an electronic document from one *queue* (3.34) or *work folder* (3.57) to another queue or work folder

3.43

transition condition

routing condition

process or transition rule

logical expression which may be evaluated by a *workflow engine* (3.50) to decide the sequence of *activity* (3.2) execution within a *process* (3.28)

3.44

user queue

defined queue that holds *work items* (3.58) waiting to be completed by a user rather than by an automated process. Each user's *queue* (3.34) displays as an *inbox* (3.15)

3.45

WAPI

workflow APIs

specifications to enable interoperability between different components of *workflow management systems* (3.52) and applications

Note 1 to entry: Refers specifically to Workflow APIs and Interchange Formats published by the Workflow Management Coalition.

3.46

workflow

workflow management

automation of a *process* (3.28), in whole or part, during which electronic documents, information or tasks are passed from one participant to another for action, according to a set of procedural *rules* (3.36)

Note 1 to entry: The automation of a process is defined within a process definition, which identifies the various process activities, procedural rules, and associated control data used to manage a workflow. A loose distinction is sometimes drawn between production workflow, in which most of the procedural rules are defined in advance, and ad hoc workflow, in which the procedural rules may be modified or created during the operation of the process.

3.47

workflow application

general term for a software program that interacts with a *workflow* (3.46) enactment service, handling part of the processing required to support a particular *activity* (3.2) (or activities)

3.48

workflow definition

routing definition

part of the *process definition* (3.29) which comprises the *activity(s)* (3.2) that can be automated

3.49

workflow domain

workflow service

workflow (3.46) management service that consists of one or more *workflow engines* (3.50) which are managed as an homogeneous unit, operating to a common administrative model

Note 1 to entry: A single workflow domain will normally exhibit common administrative functions, including: common workflow naming (processes/activities), common user naming, common organisational model and roles, common supervisory interface, and common audit trail.

3.50

workflow engine

workflow management engine

software service or “engine” that provides the run time execution environment for a *process instance* (3.32)

3.51

workflow interoperability

ability for two or more *workflow engines* (3.50) to communicate and work together to coordinate work

3.52

workflow management system

workflow manager

system that defines, creates and manages the execution of *workflows* (3.46) through the use of software, running on one or more *workflow engines* (3.50), which is able to interpret the *process definition* (3.29), interact with *workflow participants* (3.55) and, where required, invoke the use of IT tools and applications

3.53

workflow map

graphical representation of a *workflow* (3.46) that shows the sequences of *steps* (3.38) needed to complete the process

3.54

workflow monitoring

workflow tracking

ability to track and report on *workflow* (3.46) *event triggers* (3.13), *deadlines*, (3.11) and *milestones* (3.22) during workflow execution

3.55

workflow participant

participant resource which performs the work represented by a *workflow* (3.46) *activity* (3.2)

Note 1 to entry: The term workflow participant is normally applied to a human resource but it could conceptually include machine based resources such as an intelligent agent.

3.56

workflow reference model

architectural representation of a *workflow management system* (3.52), identifying the most important system interfaces

Note 1 to entry: The official *Workflow Reference Model* (WfMC-TC-1003) was developed by the Workflow Management Coalition (WfMC).

3.57

work folder

folders (3.14) used to contain supporting documents for the main document passing through a *workflow* (3.46)

Note 1 to entry: Typically, these supporting documents would be associated by a shared index value with the main document.

Note 2 to entry: Work lists, queue, and work queues are different types of work folders.

EXAMPLE Folder in an Accounts Payable Life Cycle that contains purchase orders and vendor invoices.

3.58

work item

single unit of work, the smallest component of work to be done within a *workflow* ([3.46](#))

3.59

work item pool

total work queue

representation of all *work items* ([3.58](#)) accessible from a particular *workflow engine* ([3.50](#))

3.60

worklist

actions list

work queue

list of *work items* ([3.58](#)) associated with a given *workflow participant* ([3.55](#)) or in some cases with a group of workflow participants

3.61

worklist handler

workflow management front end

workflow management application

software component that manages the interaction between the user (or group of users) and the *worklist* ([3.60](#)) maintained by a *workflow engine* ([3.50](#))

Note 1 to entry: A worklist handler may be vendor supplied as a component of workflow management software, or may be developed as a standalone custom application. A worklist handler may communicate with several workflow systems, consolidating user work items into a single list of actions for presentation to the user. This principle may be extended to include other external information sources such as mail in-tray items. Possible functions that may be performed by the worklist handler include: selecting a work item, reassigning a work item, notifying completion of a work item, and invocation of a tool or client application as part of the work item processing.

3.62

work queue

queue

worklist

queue holding *work items* ([3.58](#)) that can be completed by one of a number of users, rather than by a specific participant, or work items that can be completed by an automated *process* ([3.28](#))

Bibliography

- [1] ISO 10241-1, *Terminological entries in standards — Part 1: General requirements and examples of presentation*
- [2] ISO 12651-1, *Electronic document management — Vocabulary — Part 1: Electronic document imaging*
- [3] WFMC TC00-1003. The Workflow Reference Model, Issue 1.1. January 19, 1995. Author: David Hollingsworth. Workflow Management Coalition

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

Useful Contacts:

Customer Services

Tel: +44 845 086 9001

Email (orders): orders@bsigroup.com

Email (enquiries): cservices@bsigroup.com

Subscriptions

Tel: +44 845 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com



...making excellence a habit.™