INTERNATIONAL STANDARD

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Electronic document management — Vocabulary —

Part 2: Workflow management

Gestion de documents électroniques — Vocabulaire —

Partie 2: Gestion électronique de processus

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Foreword

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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).

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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)

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