INTERNATIONAL STANDARD

ISO/IEC 29138-1

First edition 2018-11

Information technology — User interface accessibility —

Part 1: **User accessibility needs**

Technologies de l'information — Accessibilité de l'interface utilisateur —

Partie 1: Besoins d'accessibilité de l'usager



ISO/IEC 29138-1:2018(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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 CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org

Website: www.iso.org Published in Switzerland

Co	ntent	S		Page				
For	eword			vii				
Intr	oductio	n		viii				
1	Scop	e		1				
2	-							
		Normative references						
3			efinitions					
4	Acce	ssibility	goals	3				
5	User	accessil	bility needs and related information	4				
	5.1		al					
			Needs					
	F 0	5.1.2	Some users need					
	5.2		rganization of this set of user accessibility needs					
		5.2.1		5				
	5.3	5.2.2	Heuristics for the organization of this set of user accessibility needsed information on needs					
	3.3	5.3.1	The statement of the need					
		5.3.2	Need identifier					
		5.3.3	Description of the need					
		5.3.4	Instances of the need					
		5.3.5	Examples of the need					
		5.3.6	Examples of an instance					
		5.3.7	Short versions of the needs and their instances	7				
	5.4	Applyi	ing the needs					
		5.4.1	Users and uses of the set of needs					
		5.4.2	General activities involving user needs					
		5.4.3	Identifying system and context specific user needs					
		5.4.4	Developing system requirements					
		5.4.5	Evaluating systems					
6	Deta		e user accessibility needs					
	6.1		s of the needs related to suitability for the widest range of users					
		6.1.1						
		6.1.2	To have accessible support for using the system					
	6.0	6.1.3	J					
	6.2		s of the needs related to conformity with user expectations					
		6.2.1 6.2.2	To not be surprised by the results of interactions with the system To apply personal knowledge and experience to interact successfully with	10				
		0.2.2	the systemthe system	11				
		6.2.3	To receive instruction or training directed at preparing users for new	1 1				
		0.2.0	knowledge needed to interact successfully with the system	11				
		6.2.4	To obtain immediate and easily accessible help or further instructions,					
			where such help can be provided by the system	11				
	6.3	Details	s of the needs related to support for individualization	12				
		6.3.1	To be provided with (and to choose) the way of interacting with a system					
			that best works for them (including activating and deactivating built-in					
			accessibility features)	12				
		6.3.2	To choose between the available input/output modalities and their					
			configuration without requiring restart of the system					
		6.3.3	To have simultaneous use of alternate interaction modalities	13				
		6.3.4	To be provided with information on available options for interacting with	12				
		6.3.5	a system on which to base a choice of interaction methods To be provided an accessible means to choose individualization features					
		6.3.6	To have individualization features maintained for future uses of the	13				
		0.0.0	10 may comary magnification reactines might than 101 factor as a second file					

system, until changed by the user ______14

ISO/IEC 29138-1:2018(E)

	6.3.7	To have the system use complete standardized sets of needs or preferences from specific standards	1.4
	6.3.8	To take or give up control of functions that could be performed by either	14
	0.3.0		1 5
	620	the user or the system.	13
	6.3.9	To have the option to use the system with a minimum of setup or	1 5
6.4	Dotoila	configuration	
0.4		of the needs related to approachability	
	6.4.1	To have the system free from any physical barriers	
	6.4.2	To have the system free from any psychological barriers	
	6.4.3	To have the system maintain the user's attention	
	6.4.4	To have interaction options clearly presented	
	6.4.5	To have appropriate levels of privacy and security	1/
	6.4.6	To avoid patterns that cause psychological or physical discomfort or	1 7
	C 4 5	disturbance	
	6.4.7	To use the system remotely as well as directly	
. -	6.4.8	To have the system free from environmental barriers	
6.5		of the needs related to perceivability	19
	6.5.1	To use a specific sensory modality (or a set of specific modalities) to	4.0
		perceive information	
	6.5.2	To have information presented visually	
	6.5.3	To have visual information available in other modalities	
	6.5.4	To have information presented in auditory form	20
	6.5.5	To have audio information available in other modalities	
	6.5.6	To have information in tactile form	21
	6.5.7	To have tactile information available in other modalities	
	6.5.8	To experience information via multiple simultaneous modalities	
	6.5.9	To have presentation attributes of a modality that match an individual's need	ds.22
	6.5.10	To have presentation attributes specific to the visual modality that match	
		an individual's needs	
	6.5.11	To have manageable textual material	
	6.5.12	To have sign language perceivable	24
	6.5.13	To have 3-dimensional visual information presented using only two	
		dimensions	24
	6.5.14	To have presentation attributes specific to the auditory modality that	
		match an individual's needs	
	6.5.15	To select/deselect different audio streams	25
	6.5.16	To have presentation attributes specific to the tactile modality that match	
		an individual's needs	
	6.5.17	To have visual or tactile feedback occur at the same location as the control	26
	6.5.18	To distinguish among the different components of information that are	
		being presented	26
	6.5.19	To distinguish between different components without them interfering	
		with one another	26
	6.5.20	To prevent actions which would decrease information perceivability	27
	6.5.21	To locate and identify all actionable components without activating them	27
	6.5.22	To be able to distinguish between actionable and non- actionable	
		components in any modality	27
	6.5.23	To have sufficient landmarks and cues to quickly navigate to the	
		necessary locations, functionalities or controls to carry out a task	28
	6.5.24	To have distinct recognisable signals for different alerts or other	
		messages that use signals	28
	6.5.25	To perceive information regardless of environmental or other conditions	
		that might interfere	29
	6.5.26	To perceive foreground information in the presence of background	
		information	29
	6.5.27	To avoid distractions that prevent focusing on a task	
	6.5.28	To have accessibility features not interfere with perception of standard	
		information	30

		To have only the content necessary for the current task presented	30
	6.5.30	To have haptic input and output from devices not interfere with the	
		perception of information	30
	6.5.31	To not have one's senses overloaded	31
	6.5.32	To have attention drawn to critically important information in the	
		appropriate modality, form, and language	31
6.6	Details	of the needs related to understandability	31
	6.6.1	To obtain information on the system and its components and functionalities	31
	6.6.2	To get an overview and to orient themselves to the system and its	
		functions/components (independent of actual use)	32
	6.6.3	To obtain and use unique names for every user interface component	32
	6.6.4	To receive training that supports an individual's cognitive needs	
	6.6.5	To receive help that supports an individual's cognitive needs	33
	6.6.6	To receive recommendations that aid a user's understanding	33
	6.6.7	To understand information presented by the system	
	6.6.8	To have presented information as easy to understand as possible	
	6.6.9	To have individual linguistic requirements supported by the system	
	6.6.10	To have individual cultural requirements supported by the system	
	6.6.11	To have text alternatives be provided for all non-textual information	
	6.6.12	To have information provided pictorially as well as via text	
	6.6.13	To customize abstract symbols with alternative representations	35
	6.6.14	To have language presented in a particular modality and format	36
	6.6.15	To have information that supports an individual's cognitive needs	
	6.6.16	To have information presented in a manner that supports an individual's	30
	0.0.10	styles of reasoning	26
	6617	To avoid unnecessary high cognitive demands	
	6.6.17 6.6.18		
		To have navigation that supports an individual's thinking style	3 / 27
	6.6.19	To have assistance with remembering and recalling information	3 /
	6.6.20	To have the steps for completing tasks optimized to match an individual's	20
	(()1	needs and clearly explained	
	6.6.21	To have cues to support the individual in completing tasks	
	6.6.22	To have feedback showing the results of actions	
	6.6.23	To have sufficient time to interact with the system	
	6.6.24	To have sufficient time to understand displayed or presented information	
	6.6.25	To have information necessary to plan actions available in advance	
	6.6.26	To plan a series of actions in advance	
- -	6.6.27	To access support when needed	40
6.7		of the needs related to controllability	40
	6.7.1	To use a specific sensory modality (or a set of specific sensory modalities)	
		for inputs to the system	
	6.7.2	To have alternate modalities of input to the system	41
	6.7.3	To use the tactile modality as a source of inputs to the system	
	6.7.4	To use sound as a source of inputs	
	6.7.5	To use visual recognition as a source of inputs	42
	6.7.6	To control attributes of an input or interaction modality to match an	
		individual's needs	42
	6.7.7	To have acceptable input or interaction attributes specific to the tactile	
		modality	42
	6.7.8	To have acceptable input or interaction attributes specific to the auditory	
		modality	42
	6.7.9	To have acceptable input or interaction attributes specific to the visual	
		modality	
	6.7.10	To position system components and devices in suitable locations for their use	
	6.7.11	To use a specific interaction method to provide inputs to the system	
	6.7.12	To perform the task using specific types of action	
	6.7.13	To have a means of shifting the input focus from one interface component	
	-	to another interface component	44
	6.7.14	To perform the task using various parts of the body	
		1 1	_

ISO/IEC 29138-1:2018(E)

simultaneous actions 6.7.16 To have a method to fully operate the system that does not require direct body contact. 6.7.18 To perform supporting and maintenance tasks related to the use of the system that other users are expected to undertake 6.7.19 To control the environment (to the extent possible) to prevent interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features. 6.7.21 To have a suitable level of autonomy. 4.6.8 Details of the needs related to usability. 6.8.1 To be provided a means to successfully accomplish tasks. 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities. 6.8.4 To perform tasks with a minimum of polysical exertion. 6.8.5 To perform tasks with a minimum of polysical exertion. 6.8.6 To operate the system without becoming fatigued. 6.8.7 To complete tasks within the available time. 6.8.8 To be satisfied with the outcome of interacting with the system. 6.8.9 Details of the needs related to error tolerance. 6.9.1 To have comparable satisfaction that the system is worth using to that of other users. 6.9.2 Details of the needs related to error tolerance. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 5.6.9.1 To have a system in a manner that is equivalent to that of other users. 6.10 Details of the needs related to compatibility with other system (whenever possible). 6.10 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To use a system in a manner that is equivalent to that of other users, e		6.7.15	to nave a method to fully operate the system that does not require	
6.7.17 To have a method to fully operate the system that does not require direct body contact. 6.7.18 To perform supporting and maintenance tasks related to the use of the system that other users are expected to undertake. 6.7.19 To control the environment (to the extent possible) to prevent interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features. 6.7.21 To have a suitable level of autonomy. 6.8 Details of the needs related to usability. 6.8.1 To be provided a means to successfully accomplish tasks. 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities. 6.8.4 To perform tasks with a minimum of physical exertion. 6.8.5 To perform tasks with a minimum of physical exertion. 6.8.6 To operate the system without becoming fatigued. 6.8.7 To complete tasks within the available time. 6.8.8 To be satisfied with the outcome of interacting with the system. 6.9 Details of the needs related to error tolerance. 6.9.1 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance. 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 5.6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To void errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10 Details of the needs related to equitable use. 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To have a		(716		
body contact 6.7.18 To perform supporting and maintenance tasks related to the use of the system that other users are expected to undertake 6.7.19 To control the environment (to the extent possible) to prevent interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features 6.7.21 To have a suitable level of autonomy. 4 6.8 Details of the needs related to usability 6.8.1 To be provided a means to successfully accomplish tasks 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities 6.8.4 To perform tasks with a minimum of physical exertion 6.8.5 To perform tasks with a minimum of cognitive exertion 6.8.6 To operate the system without becoming fatigued 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors 6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible) 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 6.10 Details of the needs related to equitable use 6.10.1 To use a system in a manner that is a similar as possible to other users 6.10.2 To use a system in a manner that is as similar as possible to other users 6.11 Details of the needs related to compatibility with other systems 6.12 To have their own assistive products or assistive technology to interact with all the functionalitie				45
6.7.18 To perform supporting and maintenance tasks related to the use of the system that other users are expected to undertake. 6.7.19 To control the environment (to the extent possible) to prevent interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features. 6.7.21 To have a suitable level of autonomy. 4. 6.8 Details of the needs related to usability. 6.8.1 To be provided a means to successfully accomplish tasks. 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities. 6.8.4 To perform tasks with a minimum of physical exertion. 6.8.5 To perform tasks with a minimum of cognitive exertion. 6.8.6 To operate the system without becoming fatigued. 6.8.7 To complete tasks within the available time. 6.8.8 To be astisfied with the outcome of interacting with the system. 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance. 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 5.6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.1 To use a system in a manner that is as similar as possible to other users, even if the manner of use is different. 6.11.1 to use their own assistive products or assistive technology be without interference. 6.11.1 to use their own assistive		0.7.17	body contact	45
6.7.19 To control the environment (to the extent possible) to prevent interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features. 6.7.21 To have a suitable level of autonomy. 4. 6.8 Details of the needs related to usability. 4. 6.8.1 To be provided a means to successfully accomplish tasks. 4. 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities. 6.8.4 To perform tasks with a minimum of physical exertion. 6.8.5 To perform tasks with a minimum of physical exertion. 6.8.6 To operate the system without becoming fatigued. 6.8.7 To complete tasks within the available time. 6.8.8 To be satisfied with the outcome of interacting with the system. 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance. 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10 Details of the needs related to equitable use. 6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To lave a waisten in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To have available alternate ways of interacting with a system that match a		6.7.18	To perform supporting and maintenance tasks related to the use of the	
interference with performing the task. 6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features. 6.7.21 To have a suitable level of autonomy. 4. Betails of the needs related to usability. 4. Betails of the needs related to usability accomplish tasks. 4. Can avoid making mistakes in completing tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in completing tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in ompleting tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in ompleting tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in ompleting tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in ompleting tasks or in using the outcomes of tasks. 4. Can avoid making mistakes in ompleting tasks or in using the outcomes of tasks. 4. Can avoid making mistaks with a minimum of physical exertion. 4. Can avoid exertion. 5. Can avoid exerti		6.7.19	To control the environment (to the extent possible) to prevent	20
6.7.20 To access the controls that allow them to turn on and adjust the built-in accessibility features 6.7.21 To have a suitable level of autonomy. 4 6.8 Details of the needs related to usability. 4 6.8.1 To be provided a means to successfully accomplish tasks. 4 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks 6.8.3 To complete tasks in an efficient manner relative to one's own abilities 6.8.4 To perform tasks with a minimum of physical exertion. 6.8.5 To perform tasks with a minimum of cognitive exertion. 6.8.6 To operate the system without becoming fatigued. 6.8.7 To complete tasks within the available time. 6.8.8 To be satisfied with the outcome of interacting with the system. 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance. 5.6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.11.2 To have available alternate ways of interacting with a system that match a user's needs. 6.11.1 To bave their own assistive products or assistive technology be without interference. 6.11.2 To have specific accessibility functions available a			interference with performing the task	46
6.8. Details of the needs related to usability 6.8.1 To be provided a means to successfully accomplish tasks 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities 6.8.4 To perform tasks with a minimum of physical exertion 6.8.5 To perform tasks with a minimum of cognitive exertion 6.8.6 To operate the system without becoming fatigued 6.8.7 To complete tasks within the available time 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 6.10 Details of the needs related to equitable use 6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.1 To have their own assistive products or assistive technology to interact with all the functionalities of the system 6.11.1 To have specific accessibility functions available at all times, without disruption 5. 4. Annex A (informative) List of user needs and instances 6. Annex B (informative) List of user needs and instances		6.7.20	To access the controls that allow them to turn on and adjust the built-in	
6.8.1 To be provided a means to successfully accomplish tasks 4 6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks. 6.8.3 To complete tasks in an efficient manner relative to one's own abilities 4 6.8.4 To perform tasks with a minimum of physical exertion 4 6.8.5 To perform tasks with a minimum of cognitive exertion 4 6.8.6 To operate the system without becoming fatigued 4 6.8.7 To complete tasks within the available time 4 6.8.8 To be satisfied with the outcome of interacting with the system 6 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 5 6.9 Details of the needs related to error tolerance 5 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 5 6.9.2 to explore a system without unintentionally activating components or their functionality 5 6.9.3 To accomplish tasks in spite of the occurrence of errors 5 6.9.4 To detect when errors have been made 5 6.9.5 To recover from errors made from interacting with the system (whenever possible) 5 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 5 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 5 6.10 Details of the needs related to equitable use 5 6.10.1 To use a system in a manner that is a similar as possible to other users 6 6.10.1 To use a system in a manner that is a similar as possible to other users 6 6.10.1 To have available alternate ways of interacting with a system that match a user's needs 6 6.11 Details of the needs related to compatibility with other systems 5 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system and assistive technology be without interference 5 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user accessibility needs 6			To have a suitable level of autonomy	47
6.8.2 To avoid making mistakes in completing tasks or in using the outcomes of tasks 6.8.3 To complete tasks in an efficient manner relative to one's own abilities 6.8.4 To perform tasks with a minimum of physical exertion 6.8.5 To perform tasks with a minimum of cognitive exertion 6.8.6 To operate the system without becoming fatigued 6.8.7 To complete tasks within the available time 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors 6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible) 70 reset a system to an earlier or original condition as a means of responding to errors 71 avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 72 Avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 73 To use a system in a manner that is as similar as possible to other users if the manner of use is different 74 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 75 Alous a functional transfer of the eneds related to compatibility with other systems 75 Alous to the interaction between the system and assistive technology be without interference 75 Alous a function between the system and assistive technology be without interference 75 Alous a (informative) List of user accessibility needs 76 Annex B (informative) List of user accessibility needs	6.8		of the needs related to usability	47
tasks 4.8.3 To complete tasks in an efficient manner relative to one's own abilities 4.6.8.4 To perform tasks with a minimum of physical exertion 4.6.8.5 To perform tasks with a minimum of cognitive exertion 4.6.8.6 To operate the system without becoming fatigued 4.6.8.7 To complete tasks within the available time 4.6.8.7 To complete tasks within the available time 4.6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 5.6.9 Details of the needs related to error tolerance 5.6.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 5.6.9.2 to explore a system without unintentionally activating components or their functionality 5.6.9.3 To accomplish tasks in spite of the occurrence of errors 5.6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible) 5.6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 5.6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 5.6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 5.6.10.3 To have available alternate ways of interacting with a system that match a user's needs 5.6.10.1 To have available alternate ways of interacting with a system that match a user's needs 5.6.10.1 To have available alternate ways of interacting with a system that match a user's needs 5.6.10.1 To have available alternate ways of interacting with a system that match a user's needs 6.11.3 To have expected accessibility functions available at all times, without disruption 5.10 have specific accessibility functions available at all times, without disruption 6.11.3 To have specific accessibility needs 6.11.3 To have specific accessibility needs				47
6.8.3 To complete tasks in an efficient manner relative to one's own abilities 6.8.4 To perform tasks with a minimum of physical exertion. 4.6.8.5 To perform tasks with a minimum of cognitive exertion. 4.6.8.6 To operate the system without becoming fatigued. 4.7 To complete tasks within the available time. 4.6.8.7 To complete tasks within the available time. 4.6.8.8 To be satisfied with the outcome of interacting with the system. 4.6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 5.6.9 Details of the needs related to error tolerance. 5.6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 5.6.9.2 to explore a system without unintentionally activating components or their functionality. 5.7 To accomplish tasks in spite of the occurrence of errors. 5.6.9.4 To detect when errors have been made. 5.7 To recover from errors made from interacting with the system (whenever possible). 5.7 To recover from errors made from interacting with the system (whenever possible). 5.9 To recover from errors made from interacting with the system (whenever possible). 5.0.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 5.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 5.10.1 To use a system in a manner that is as similar as possible to other users. 5.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 5.10.1 To have available alternate ways of interacting with a system that match a user's needs. 5.10.1 To have available alternate ways of interacting with a system that match a user's needs. 5.10.1 To have the interaction between the system and assistive technology be without interference. 5.10.1 To have the interaction between the system and assistive technology be without interference. 5.10.1 To have the interaction between the system and assistive technology be without inter		6.8.2		40
6.8.4 To perform tasks with a minimum of physical exertion 6.8.5 To perform tasks with a minimum of cognitive exertion 4.6.8.6 To operate the system without becoming fatigued 6.8.7 To complete tasks within the available time 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality 6.9.3 To accomplish tasks in spite of the occurrence of errors 6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible) 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 6.10 Details of the needs related to equitable use 6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 6.11 Details of the needs related to compatibility with other systems 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 6.11.2 To have the interaction between the system and assistive technology be without interference 6.11.3 To have specific accessibility functions available at all times, without disruption 6.11.3 To have specific accessibility needs 6.11.4 Details of user needs and instances 6.11.5 To have the interaction between the system and assistive technology be without interference 6.11.1 To have the interaction between the system and assistive technology be without interferenc		602		
6.8.5 To perform tasks with a minimum of cognitive exertion 6.8.6 To operate the system without becoming fatigued 6.8.7 To complete tasks within the available time 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality 6.9.3 To accomplish tasks in spite of the occurrence of errors 6.9.4 To detect when errors have been made 6.9.5 To recover from errors made from interacting with the system (whenever possible) 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 6.10 Details of the needs related to equitable use 6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 6.11 Details of the needs related to compatibility with other systems 6.11.1 to use their own assistive products or assistive technology be without interference 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user needs and instances 6 Annex B (informative) List of user needs and instances				
6.8.6 To operate the system without becoming fatigued 6.8.7 To complete tasks within the available time 4.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 5.6.10.1 To use a system in a manner that is as similar as possible to other users 6.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 6.11 Details of the needs related to compatibility with other systems 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 6.11.2 To have the interaction between the system and assistive technology be without interference 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user needs and instances 6 Annex B (informative) List of user needs and instances				
6.8.7 To complete tasks within the available time. 6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10 Details of the needs related to equitable use. 6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 5.10.1 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 5.10.1 To use a valiable alternate ways of interacting with a system that match a user's needs. 5.10.1 To have their own assistive products or assistive technology to interact with all the functionalities of the system. 5.10.1 To have their own assistive products or assistive technology be without interference. 5.10.1 To have specific accessibility functions available at all times, without disruption. 5.10.1 To have reacted and instances. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility needs. 6.11.4 To be specific accessibility needs. 6.11.5 To have the interaction between the system and assistive technology be without interference. 6.11.2 To have the interaction between the system and assistive technology				
6.8.8 To be satisfied with the outcome of interacting with the system 6.8.9 To have comparable satisfaction that the system is worth using to that of other users. 6.9 Details of the needs related to error tolerance. 6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 6.9.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10 Details of the needs related to equitable use. 6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.3 To have available alternate ways of interacting with a system that match a user's needs. 6.11 Details of the needs related to compatibility with other systems. 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 6.11.2 To have raccessibility needs. 6.11.3 To hore accessibility needs. 6.11.4 Control of the receds and instances. 6.11.5 Control of the receds and instances. 6.11.6 Control of the receds and instances.			To complete tasks within the available time	49
6.8.9 To have comparable satisfaction that the system is worth using to that of other users				
6.9.1 To have confidence that using the system will be free from negative consequences or unacceptable risks. 6.9.2 to explore a system without unintentionally activating components or their functionality. 6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made. 5.5 To recover from errors made from interacting with the system (whenever possible). 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors. 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger. 6.10 Details of the needs related to equitable use. 6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.3 To have available alternate ways of interacting with a system that match a user's needs. 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 5 Annex A (informative) List of user needs and instances. 6 Annex B (informative) List of user needs and instances.		6.8.9	To have comparable satisfaction that the system is worth using to that of	
consequences or unacceptable risks 5 6.9.2 to explore a system without unintentionally activating components or their functionality 5 6.9.3 To accomplish tasks in spite of the occurrence of errors 5 6.9.4 To detect when errors have been made 5 6.9.5 To recover from errors made from interacting with the system (whenever possible) 5 6.9.6 To reset a system to an earlier or original condition as a means of responding to errors 7 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 5 6.10 Details of the needs related to equitable use 5 6.10.1 To use a system in a manner that is as similar as possible to other users 5 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 5 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 5 6.11 Details of the needs related to compatibility with other systems 5 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 5 6.11.2 To have the interaction between the system and assistive technology be without interference 5 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user needs and instances 6 6 Annex B (informative) List of user needs and instances 6	6.9			50
their functionality		6.9.1		50
6.9.3 To accomplish tasks in spite of the occurrence of errors. 6.9.4 To detect when errors have been made 5.6.9.5 To recover from errors made from interacting with the system (whenever possible)		6.9.2	their functionality	50
6.9.5 To recover from errors made from interacting with the system (whenever possible)			To accomplish tasks in spite of the occurrence of errors	51
possible)				51
responding to errors. 5 6.9.7 To avoid errors by having negative consequences be obvious, easy to avoid, and difficult to trigger 5 6.10 Details of the needs related to equitable use 5 6.10.1 To use a system in a manner that is as similar as possible to other users 5 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 5 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 5 6.11 Details of the needs related to compatibility with other systems 5 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 5 6.11.2 To have the interaction between the system and assistive technology be without interference 5 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user accessibility needs 6 Annex B (informative) List of user needs and instances 6				52
avoid, and difficult to trigger 5 6.10 Details of the needs related to equitable use 5 6.10.1 To use a system in a manner that is as similar as possible to other users 5 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 5 6.10.3 To have available alternate ways of interacting with a system that match a user's needs 5 6.11 Details of the needs related to compatibility with other systems 5 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 5 6.11.2 To have the interaction between the system and assistive technology be without interference 5 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user accessibility needs 5 Annex B (informative) List of user needs and instances 6		6.9.6		52
6.10 Details of the needs related to equitable use 5.6.10.1 To use a system in a manner that is as similar as possible to other users 5.6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different 5.6.10.3 To have available alternate ways of interacting with a system that match a user's needs 5.6.11 Details of the needs related to compatibility with other systems 5.6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 5.6.11.2 To have the interaction between the system and assistive technology be without interference 5.6.11.3 To have specific accessibility functions available at all times, without disruption 5.6.11.3 To have accessibility needs 5.6.11.3 It of user needs and instances 5.6.11.3 It of user needs and instances 5.6.11.3 Solution 5.6.11.3 To have specific accessibility needs 5.6.11.3 To have spec		6.9.7	To avoid errors by having negative consequences be obvious, easy to	52
6.10.1 To use a system in a manner that is as similar as possible to other users. 6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.3 To have available alternate ways of interacting with a system that match a user's needs. 6.11 Details of the needs related to compatibility with other systems. 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 5. 6.11.4 Annex A (informative) List of user accessibility needs. 6.11.5 Given that is as similar as possible to other users. 5. 6.10.6 Interacting with a system that match a user's needs. 5. 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system. 5. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 5. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 5. 6.11.1 To have the interaction between the system and assistive technology be without interference. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption.	6.10	Details	of the needs related to equitable use	52
6.10.2 To use a system in a manner that is equivalent to that of other users, even if the manner of use is different. 6.10.3 To have available alternate ways of interacting with a system that match a user's needs. 6.11 Details of the needs related to compatibility with other systems. 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system. 6.11.2 To have the interaction between the system and assistive technology be without interference. 6.11.3 To have specific accessibility functions available at all times, without disruption. 5. Annex A (informative) List of user accessibility needs. 6.6 Annex B (informative) List of user needs and instances. 6.7 6.8 6.9 6.9 6.9 6.9 6.9 6.9 6.9	0.20			
6.10.3 To have available alternate ways of interacting with a system that match a user's needs			To use a system in a manner that is equivalent to that of other users, even	
user's needs 5 6.11 Details of the needs related to compatibility with other systems 5 6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system 5 6.11.2 To have the interaction between the system and assistive technology be without interference 5 6.11.3 To have specific accessibility functions available at all times, without disruption 5 Annex A (informative) List of user accessibility needs 5 Annex B (informative) List of user needs and instances 6				53
6.11.1 to use their own assistive products or assistive technology to interact with all the functionalities of the system		6.10.3	To have available alternate ways of interacting with a system that match a user's needs	53
with all the functionalities of the system	6.11			54
without interference 5.6.11.3 To have specific accessibility functions available at all times, without disruption 5.6.11.3 Annex A (informative) List of user accessibility needs 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Annex B (informative) List of user needs and instances 5.6.11.3 Ann			with all the functionalities of the system	54
Annex A (informative) List of user accessibility needs		6.11.2	without interference	54
Annex B (informative) List of user needs and instances		6.11.3	To have specific accessibility functions available at all times, without disruption	55
	Annex A (infe	ormative	e) List of user accessibility needs	56
	Annex B (inf	ormative) List of user needs and instances	61
Annex D (informative) Applying needs to specific purposes8	Annex D (inf	ormative	e) Applying needs to specific purposes	88
Bibliography99	Bibliography	y		90

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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 document 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 and IEC 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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

This first edition cancels and replaces the Technical Report ISO/IEC TR 29138-1:2009, which has been technically revised.

Compared to the previous edition, all clauses in the document have been technically revised. Annex C provides a full comparison of the content with the first edition.

A list of all parts in the ISO/IEC 29138 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

It is important for the whole of society that all people, regardless of their age, size or ability, have access to the broadest range of systems. Issues of accessibility to, and usability of, systems have become more critical as recognition of the number of people (such as older persons, children, persons with reduced abilities and persons with disabilities) with diverse user accessibility needs has increased, technology has diversified and it has become increasingly necessary to use technology to participate fully in life.

The number of people using information and communications technology (ICT) products and services, which combine hardware, software, and network technologies, is increasing, as is the variety of ICT products and services. Our everyday lives are filled with such products and services. Currently available ICT products and services, however, are not always accessible. Typically, the people most excluded by poor accessibility of products and services are those with disabilities and those with limitations due to age. However, they are not the only ones who experience difficulty in operating ICT products, such as personal computers (PCs). It is essential to improve ICT accessibility, so that all people with whatever user accessibility needs can have access to ICT products and services, leading to an inclusive e-society.

This document identifies a set of user accessibility needs that can be used to understand and improve the accessibility of ICT and other systems for diverse users in diverse contexts of use. It recognizes that different users will have different combinations of needs including different combinations of user accessibility needs. By being as comprehensive as possible (at the time of publication), it aims to identify a diverse set of user accessibility needs that, if met, can lead to accessibility for these diverse users. It also recognizes that, as technologies evolve along with increases in our understanding of accessibility, further user accessibility needs might be uncovered. However, this document will still provide the major portion of the total set of all user accessibility needs.

This set of user accessibility needs has evolved from the Technical Report ISO/IEC TR 29138-1:2009 and from the accessibility goals and high-level user accessibility needs of ISO/IEC Guide 71:2014. ISO/IEC TR 29138-1 was developed from the original user needs summary submitted to ISO/IEC JTC1/SWG-Accessibility by the Trace R&D Center of the University of Wisconsin-Madison, developed under funding from the National Institute on Disability Independent Living and Rehabilitation Research (NIDILRR), under grant # H133E030012. This set of user accessibility needs also takes into account accessibility guidance from a number of other ISO and ISO/IEC standards as well as from additional sources.

This document is intended for a wider audience than the previous Technical Report (which was only addressed to standards developers). This expanded audience includes system and service developers and other persons responsible for accessibility.

The set of user accessibility needs contained in this document can be especially useful in identifying needs that might be missing in the requirements of existing accessibility regulations and standards. Consideration of this set of user accessibility needs can lead to greater accessibility in the systems to which they are applied in every domain.

Information technology — User interface accessibility —

Part 1:

User accessibility needs

1 Scope

This document identifies a collection of user accessibility needs that diverse users have of ICT systems to make these systems accessible to them. Each user accessibility need might be required of a system by an individual. Different users can have different sets of user accessibility needs in different contexts.

While this set of user accessibility needs was developed for the domain of ICT, many of the user accessibility needs in this set also apply in other domains.

This document does not provide requirements or specific processes and methods for the application and evaluation of user accessibility needs. However, it could inform the development of such requirements (see 5.4).

This document is not designed for certification purposes or regulatory or contractual use.

The user accessibility needs in this document are intended to inform and encourage those responsible for accessibility to go beyond the minimum provisions of accessibility legislation and regulations.

2 Normative references

There are no normative references in this document.