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Responsible committee: BCT/1 Brain Computer Interfaces

Interested committees:

Title: BS EN ISO/IEC 27572 Information technology - Brain-computer interfaces - Reference architecture

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



JTC1-SC43/122/CD

COMMITTEE DRAFT (CD)

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DATE OF CIRCULATION:
2024-10-18

CLOSING DATE FOR COMMENTS:
2024-12-13

SUPERSEDES DOCUMENTS:
JTC1-SC43/72/NP, JTC1-SC43/83/RVN

IEC ISO/IEC JTC 1/SC 43 : BRAIN-COMPUTER INTERFACES		
SECRETARIAT: China		SECRETARY: Mr Bing Cui
OF INTEREST TO THE FOLLOWING COMMITTEES: ISO/IEC JTC 1/SC 41		HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED:		

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TITLE:

Information Technology - Brain-computer Interfaces - Reference Architecture

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REFERENCE ARCHITECTURE****FOREWORD**

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ISO/IEC IS XXXXX has been prepared by subcommittee 43: Brain-Computer Interface, of ISO/IEC joint technical committee 1: Information Technology.

The text of this standard is based on the following documents:

FDIS	Report on voting
1/#####/FDIS	1/#####/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The language used for the development of this International Standard is English.

INTRODUCTION

Brain-computer interface (BCI) is a revolutionary technology that aims to establish a direct communication pathway between the brain and an external device, such as a computer or a prosthetic limb. It holds immense potential for enhancing capabilities, enabling individuals with disabilities to regain lost functions, and providing new avenues for human-computer interaction.

The development of a BCI system involves the integration of various components. These components work in synergy to decode the electrical or neurochemical signals generated by the brain, translating them into meaningful commands or actions that can be used to control external devices.

This document presents a comprehensive reference architecture (RA) for BCI. The BCI RA identifies and highlights architectural concerns commonly found in BCI systems across industrial sectors and classifies them into viewpoints along with their respective stakeholders. It describes, analyzes and, where appropriate, provides guidance to resolve these concerns in these viewpoints, resulting in a certain abstract architecture representation.