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Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk

Technologies de l'information — Supports enregistrés numériquement pour échange et stockage d'information — Disques BD réinscriptibles de 120 mm triple couche (100,0 Go par disque)

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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 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).

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The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 23, *Digitally recorded media for information interchange and storage*.

This second edition cancels and replaces the first edition (ISO/IEC 30193:2013), of which it constitutes a minor revision. It also incorporates the Technical Corrigendum ISO/IEC 30193:2013/Cor 1:2015.

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Introduction

In March of 2002, nine companies known as the Blu-ray Disc Founders, or BDF, came together to create optical-disk formats with large capacity and high-speed transfer rates that would be needed for recording and reproducing high-definition video content. This joint effort turned out to be fruitful and the first version of its Blu-ray Disc™ Rewritable Format Part1 Version 1.0 in June of 2002.

Then, in October of 2004, more than a hundred companies joined and BDF became an open forum called the Blu-ray Disc Association (BDA). The BDA issued Version 2.1 of the Blu-ray Disc™ Rewritable Format Part1 in October 2005 and Version 3.0 in June of 2010. By the end of 2010, over a hundred million Blu-ray Disc™ have been shipped and Blu-ray™ devices such as players, recorders, game consoles and PC drives were in use all over the world.

The BDA also conducts verification activities for both disks and devices and has established more than 10 Testing Centers in Asia, Europe and the USA.

The BDA gave consumer applications the highest priority in the first few years. But it was known, of course, that International Standarization would be required before many government entities and their contractors would be allowed to use Blu-ray Disc™. In February and January of 2011, the chairs of ISO/IEC JTC 1/SC 23 and JIIMA (Japan Image and Information Management Association) formally requested the BDA to consider International Standardization. The reason for this was to enable the inclusion of writable BDs along with DVDs and CDs in an International Standard specifying the test methods for the estimation of lifetime of optical storage media for long-term data storage. In October 2011, the President of the BDA responded that his organization decided to pursue International Standard of the basic physical formats for the Recordable and Rewritable Blu-ray™ Formats.

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In December of 2011, BDA sent project proposals for the International Standardization of four formats to ISO/IEC JTC 1/SC 23 via the Japan national body. They are 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Recordable disks, 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Rewritable disks, 120 mm Triple Layer (100,0 Gbytes per disk) and Quadruple Layer (128,0 Gbytes per disk) BD Recordable disks and 120 mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk.

This International Standard specifies the mechanical, physical and optical characteristics of a 120 mm rewritable optical disk with a capacity of 100,0 Gbytes.

Some technical errors were found during the editorial work for JIS X 6233, which is the Japanese Industrial Standarad identical with ISO/IEC 30193:2013. In December of 2014, a Defective Report was submitted by the Japan national body of ISO/IEC JTC 1/SC 23. The project editor porposed a Draft Technical Corrigendum for ISO/IEC 30193:2013 and it was approved by ISO/IEC JTC 1/SC 23 in May of 2015. This Internatinal Standard is the updated first edition of ISO/IEC 30193:2013, including the Techinical Corrigendum and additional corrections for some editorial errors.

A few additional specifications are required in order to write and read video-recording applications, such as BDAV Format which had been specified by the BDA for use on BD Rewritable disks. These specifications, which are related to the Application, the file system or the Content-protection system, are required for the

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disk, the generating system and the receiving system. For more information about the Application, the Content-protection system and the additional requirements for the Blu-ray™ Format specifications, see http://www.blu-raydisc.info.

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Information technology — Digitally recorded media for information interchange and storage — 120mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk

1 Scope

This International Standard specifies the mechanical, physical and optical characteristics of a 120 mm rewritable optical disk with a capacity of 100,0 Gbytes. It specifies the quality of the recorded and unrecorded signals, the format of the data and the recording method, thereby allowing for information interchange by means of such disks. User data can be written, read and overwritten many times using a reversible method. This disk is identified as a BD Rewritable disk.

This International Standard specifies the following:

— the one disk Type;

— the conditions for conformance;

— the environments in which the disk is to be operated and stored;

— the mechanical and physical characteristics of the disk, so as to provide mechanical interchange between data processing systems;

— the format of the information on the disk, including the physical disposition of the Tracks and Sectors;

— the error-correcting codes and the coding method used;

— the characteristics of the signals recorded on the disk, enabling data processing systems to read data from the disk.

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This International Standard provides for interchange of disks between disk drives. Together with a standard for volume and file structure, it provides for full data interchange between data processing systems.

2 Conformance

2.1 Optical Disk

A claim of conformance with this International Standard shall specify the Type implemented. An optical disk shall be in conformance with this International Standard if it meets all mandatory requirements specified for its Type.

2.2 Generating system

A generating system shall be in conformance with this International Standard if the optical disk it generates is in accordance with 2.1.

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