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Information technology — Office equipment — Method for measuring first print out time for digital printing devices

Technologies de l'information — Équipements de bureau — Méthode de mesure de la première page hors délai d'un dispositif d'impression numérique

Reference number
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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 28, *Office equipment*.

This second edition cancels and replaces the first edition (ISO/IEC 17629:2014), which has been technically revised.

The main changes are as follows:

— added optional FPOT from sleep 15 min test;

— terms and definitions clause has been modified to remove items already defined in Normative References documents;

— updated FPOT definition to accurately describe all applicable tests;

— harmonized subclause 5.2 with other productivity standards;

— harmonized Clause 7 with other productivity standards.

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 and www.iec.ch/national-committees.

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Introduction

Many digital printing devices produce the first printed page at a different rate from subsequent pages. Due to this behaviour, nominal print speeds specified in pages per minute do not generally reflect the time to produce the first page. The degree to which a change in productivity is experienced depends significantly on many parameters of the job stream. The most dominant of the parameters of the job stream are: image quality modes selected, job content, B&W and colour reproduction, host computer, and connection type.

This document provides a general method for measuring first print out time (FPOT) when the above mentioned job stream parameters of digital printing devices are taken into consideration. It allows manufacturers and buyers of digital printing devices to describe the FPOT of various digital printing devices with respect to representative office usage.

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Information technology — Office equipment — Method for measuring first print out time for digital printing devices

1 Scope

This document specifies a method for measuring first print out time (FPOT) of digital printing devices. The document is applicable to digital printing devices and multifunctional devices, including black and white (B&W) and colour devices of any underlying marking technology. The document includes instructions for test charts, test setup procedure, test procedure and the reporting requirements for the digital printing measurements.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 24734:2021, *Information technology — Office equipment — Method for measuring digital printing productivity*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 24734 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
FPOT
first print out time
number of seconds between the initiation of the job until the complete exit of the first sheet

Note 1 to entry: Other equivalent terms are “first page out time”, “first print out”, “time to first print”, and “time to first page”. Other similar terms have been used in industry as well.

Note 2 to entry: “Initiation of the job” is dependent on the test measurement procedure.

3.2
full report
presentation of measured test results in detail

3.3
off state
state from which a device is not capable of receiving and printing a print job without user intervention on the device

Note 1 to entry: A device could enter off state due to a user turning the device off, or a device could enter off state automatically after a delay.

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3.4
power management delay time
time that a device waits between the last print job and going into a lower power state such as *sleep state* (3.6) or *off state* (3.3)

Note 1 to entry: The power management delay time corresponding to the setting as shipped is referred to as "default power management delay time" or "default delay time".

3.5
recovery time
time required by a device to recover from *sleep state* (3.6) given by the difference in *first print out time (FPOT)* (3.1) between sleep state and ready state

Note 1 to entry: Other related terms are "resume time" and "return time". Other similar terms have been used in industry as well.

3.6
sleep state
low power state from which a device is capable of receiving and printing a print job without user intervention on the device

Note 1 to entry: Some devices may have multiple low power states.

Note 2 to entry: Other equivalent terms are "power save", "low power mode", and "energy save". Other similar terms have been used in industry as well.

3.7
test page
first page or first two pages from a test file defined in ISO/IEC 24734:2021

Note 1 to entry: Duplex testing requires using the first two pages from a test file to print on both sides of the first sheet. Simplex testing only requires using the first page from a test file to print on one side of the first sheet.

3.8
warm-up time
time required by a device to recover from *off state* (3.3) given by the difference between *first print out time (FPOT)* (3.1) from off and FPOT from ready

Note 1 to entry: Other similar terms, such as "wait time", have been used in industry as well.

4 Test parameters and conditions

4.1 Test platform

Due to the rapid change of computer technology, a common test platform (hardware and software) that can be used for FPOT (3.1) testing over time is considered to be impractical. Instead, when a test platform is used, the test platform system parameters that may affect digital printing productivity measurements (see Annex A) shall be recorded.

4.2 Test platform test setup procedures

4.2.1 Initial platform setup

The test platform hardware should be installed as per the manufacturer's instructions. The test platform hardware information shall be recorded as listed in Annex A. The test platform operating system and applications should be installed as per the manufacturer's instructions. The test platform operating system and application information shall be recorded as per Annex A. All settings or selections made during installation that differ from the application's default settings or operating system's default settings shall be recorded.

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