

ISO/IEC TS 29112:2012-08 (E)

Information technology - Office equipment - Test charts and methods for measuring monochrome printer resolution

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Print resolution characteristics - methods for measurement and analysis	5
4.1	Compliance requirements	5
4.1.1	Test chart compliance	6
4.1.2	Printing process compliance	6
4.1.3	Scanner characteristics compliance	6
4.1.4	Measurement method compliance	6
4.2	Native addressability	6
4.2.1	Method for measuring native addressability	7
4.3	Effective addressability	8
4.3.1	Method for measuring effective addressability	8
4.4	Edge blurriness and edge raggedness	9
4.4.1	Edge blurriness	10
4.4.2	Edge raggedness	11
4.4.3	Method for measuring edge blurriness and edge raggedness	11
4.5	Detail carrying capability	12
4.5.1	Printer MTF estimation from edge characteristics	12
4.5.2	Method for measuring printer MTF from edge characteristics	12
4.5.3	Printer MTF estimation from 1-D repeating patterns	13
4.5.4	Method for measuring printer MTF from 1-D repeating pattern characteristics	13
5	Test Set-up, Configurations, and Procedure	14
5.1	Printer set-up and configuration	14
5.2	Printer testing environment	14
5.3	Substrate	15
5.4	Test platform connection to the printer	15
5.5	Test charts	15
5.6	Sample size	15
5.7	Printing process	15
5.8	Set-up procedure	15
5.9	Testing procedure for visual evaluation	16
5.10	Testing procedure for scanner-based measurement	16
6	Presentation of results	16
6.1	General	16
6.2	Required test documentation	17
6.3	Reporting of measurement results	17
Annex A (normative) Test charts		19
A.1	Availability	19
A.2	Native Addressability test chart content	19

A.3	Effective Addressability test chart content	19
A.4	Edge Characteristics test chart content	20
A.5	Line Characteristics test chart content	20
Annex B (normative) Printing process		21
B.1	Application effects	21
B.2	Print driver effects	21
B.3	Test chart files for Postscript printers	21
B.4	Printing protocol	21
Annex C (normative) Scanner conformance		23
C.1	Required scanner characteristics	23
C.1.1	Scan characteristics	23
C.1.2	Scanner MTF characteristics	24
C.2	Method for evaluating the scanner OECF characteristic	24
C.3	Method for evaluating scanner dynamic range	24
C.4	Method for evaluating scanner usable addressability	24
C.5	Method for compensating for finite scanner MTF	24
C.6	Required scanner control application characteristics	25
Annex D (normative) Measurement method conformance		26
D.1	Effective addressability measurement method	26
D.2	Edge blurriness measurement method	27
D.3	Edge raggedness measurement method	27
D.4	Measurement method for slanted edge SFR	28
D.5	Measurement method for printer MTF evaluation from square wave elements	29
Annex E (informative) Representative reports of printer resolution assessment		30
E.1	Single configuration report	30
E.2	Multiple configuration report	31
E.3	Interpretation of results	32
Bibliography		33