

ISO 22028-1:2016-03 (E)

Photography and graphic technology - Extended colour encodings for digital image storage, manipulation and interchange - Part 1: Architecture and requirements

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Image-state-based digital imaging architecture	8
4.1	General	8
4.2	Scene-referred colour encodings	9
4.3	Picture-referred colour encodings	10
4.3.1	General	10
4.3.2	Original-referred colour encodings	10
4.3.3	Output-referred colour encodings	10
4.4	Colour-rendering transforms	11
4.5	Colour re-rendering transforms	11
4.6	Film rendering and unrendering transforms	12
5	Requirements for specifying a colour encoding	12
5.1	Colour encoding hierarchy	12
5.2	Information needed to define a colour space	13
5.2.1	General	13
5.2.2	Colourimetric colour spaces	13
5.2.3	Colour appearance colour spaces	15
5.2.4	Device-dependent colour spaces	16
5.3	Information needed to define a colour space encoding	17
5.3.1	General	17
5.3.2	Colour space	17
5.3.3	Digital encoding method	18
5.3.4	Set of valid colour values	19
5.4	Information needed to define a colour image encoding	19
5.4.1	General	19
5.4.2	Colour space encoding	20
5.4.3	Image state	20
5.4.4	Reference image viewing environment	21
5.4.5	Set of valid colour values	22
5.4.6	Reference imaging medium	23
Annex A (informative)	Examples system workflows	24
Annex B (informative)	Characteristics of existing colour encodings	34
Annex C (informative)	Criteria for selection of colour encoding	46
Bibliography		52