For the text of the request of ISO TC159/SC4/WG2, the text of the decisions of CIE Division 1, the result,

http://web.archive.org/web/20160304130704/http://files.cie.co.at/526.pdf

SN380-3N

Resolution Busan 18/2009 of ISO/IEC JTC1/SC28 "Office Equipment" SC28 Review of the AWG recommendation on in 28n1280 (DIN 33872-1 to 6)

The German proposal included the concept of a human visual RGB. SC28 recognizes the importance of correct understanding of the human visual system and the potential importance and application of this understanding to office equipment and office systems. SC28 welcomes the German plan to continue development of the human visual RGB within CIE Division 1 and Division 8.

In addition SC28 welcomes a new proposal from Germany in the future based on this CIE human visual RGB work, potentially in relation to AWG/PWG5 NWI-9 (Office colour space). Two CIE Reportership Reports appeared since 2009: R1-57:2012 (public) and R8-09:2015 (CIE internal)

CIE R1-57:2012, Border between blackish and luminous colours, see http://web.archive.org/web/20150413002133/http://files.cie.co.at/716 CIE%20R1-57%20Report%20Jul-13%20v.2.pdf CIE R8-09:2015 (CIE internal), Output linearization methods for displays and printers,

with the same technical content of Richter (2016), see http://farbe.li.tu-berlin.de/OUTLIN16_01.PDF

At the CIE meeting in South Africa, June 2011, CIE Division 1 decided to establish the Reportership

CIE R1-57 Border between Luminous and Blackish Colours by Thorstein Seim (Norway) in response to the resolution 18/2009 of ISO/IEC JTC1/SC28.

In addition CIE Division 8 decided to establish the Reportership CIE R8-09 Output Linearization Methods for Displays and Printers by Klaus Richter (Germany)

in response to the same resolution 18/2009 of ISO/IEC JTC1/SC28.

Both reports CIE R1-57:2012 ([1] public) and CIE R8-09:2015 ([2] CIE internal) have relations.

[1] http://web.archive.org/web/20150413002133/http://files.cie.co.at/716 CIE%20R1-57%20Report%20Jul-13%20v.2.pdf

[2] with the same technical content from Richter (2016), see http://farbe.li.tu-berlin.de/OUTLIN16 01.PDF

Possible Result: Definition of a device-independent visual RGB*_e system as response to the request of SC28.

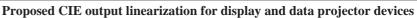
All surface colours define a hue circle of maximum chroma located within the CIE (x,y) chromaticity diagram.

CIELAB chroma C^*_{ab} and lightness L^* of this circle as function of hue h_{ab} serves as reference points of a device-independent visual RGB_e^* system (compare the reference C_{ab}^* , L^* hue circle of the NCS system).

> TUB-test chart SN38; ISO resolutions and CIE reports methods for output linearization of colour devices

Proposed CIE output linearization for printers and offset machines Printer or offset company Linearization company: < Measures 1080 user colours and produces PS linarization code realized output options: for user device and paper Company preference (Y/N)? DIN 33872 (CIE?) linearized (Y/N)? Only one option not specified (Y/N)? User printer or offset device For test charts of DIN 33872-1 to -6 see without or with device specific http://farbe.li.tu-berlin.de/A/33872E.html PS linearization code in print output software. Advantages of Output Linearization: - Linear relation between rgb and CIELAB data. User visual test - No loss of visual information for 16 step with output of DIN 33872-X test charts. colour series on different colour devices. Agrees the output with the user wishes (Y/N)? - Grey is printed by black only and not by CMY (complete under colour removal), low cost. If No (N) agreement to the user wishes then:

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Display or data projector company: Linearization company: < Measure 1080 colours of display output realized output options: with no room light reflection and produces One Company preference (Y/N)? 8 PS linarization codes One ISO 9241-306 linearized (Y/N)?

for eight room light reflections.

For test charts of ISO 9241–306 see (1,7 and 20MB)

http://standards.iso.org/iso/9241/306/ed-2/AE09/AE09F0PX.PDF

Advantages of Output Linearization:

colour series on different devices.

for solutions see ISO 9241-306.

- No loss of visual information for 16 step

work depending on room light reflections,

- Linear relation between rgb and CIELAB data.

- Linearized output of whole display for ergonomic

Eigth ISO 9241-306 linearized (Y/N)? Only one option not specified (Y/N)?

Output of reference test chart with 1080 colours.

If Yes, then linearization possible and decision:

Continues colour change in output (Y/N)?

Mail the output to a linearization company.

User display or data projector without or with device specific up to 8 PS linearization codes in display output software.

http://standards.iso.org/iso/9241/306/ed-2/AE27/AE27F0PX.PDF User visual test for up to 8 room light reflections

with output of ISO 9241-306 test charts.

Agrees the output with the user wishes (Y/N)? If No (N) agreement to the user wishes then:

Output of reference test chart with 1080 colours.

Continues colour change in output (Y/N)?

If Yes, then linearization possible and decision: Ask display or linearization company for help.

input: w/rgb/cmvk -> w/rgb/cmvk_ output: no change compared

TUB material: code=rha4ta

TUB registration: 20210401-SN38/SN38L0NA.TXT /.PS

application for measurement of display output