Colour Pipeline for CGI/VFX

Outline of a 1-day seminar presented by Charles Poynton
In collaboration with HFF München

CGI/VFX rendering is performed in scene-linear light colourspace. However, it is common to deliver in Cineon printing density (CPD), where certain compromises in colour coding are made. The ACES colour system was recently released at version 1.0, and it introduces new methods of handling colour. Achieving accurate and repeatable colour in CGI/VFX requires an understanding of the colour transforms among these spaces and a few others such as DCI P3.

Some sources for VFX are created in sRGB space (for example digital matte paintings). In addition, "web reference" imagery (eg, for texture reference) needs to be transformed to scene-referred form.

An increasing number of productions will be required to deliver HDR/WCG, in addition to the diverse deliverables that are required today (including dailies, or "Quicktimes").

There are challenges in calibration of the variety of display devices typically used in CGI/VFX. Deoending upon display and viewing conditions, the correct "gamma" may not be exactly the 2.2 of sRGB or the 2.4 of BT.1886.

In CHI, rendering in RGB components - or any three components - produces only an approximation of correct colour when esoteric materials are to be depicted (eg, gold, emeralds, rubies). Physically correct rendering requires more than three components.

In this 1-day seminar, Charles Poynton will explore these issues.