Activity 5: Create a print curve to align a press to G7 gray balance

Background

You can create a print calibration curve to adjust tonality by simultaneously calibrating cyan, magenta, and yellow inks so that the neutral shades of gray are maintained, while black is calibrated separately for lightness and darkness.

Tasks

Goal

Create a print calibration curve for G7 gray balance using a P2P51 chart. (A simple Tint Ramp chart is not suitable, you must use a measurement chart that contains all G7-specified gray scale patches in order to be able to measure and compute G7 gray balance.)

Task 1: Create a print calibration curve for G7 gray balance

- 1. In ColorFlow, click the **Print Curves** tab.
- 2. In the **Calibration Curves** section at the top left, click the **Add** button +.

The **Devices** dialog box appears.

- Drag the device "XX Offset Press" that you created in a previous activity to the viewer window and close the Devices dialog box.
- 4. Click the **Properties** icon *i* in the bottom icon and define the device condition:
 - a. From the **Plate Setup** list, select **None**. You can also select a plate setup defined in the **Plate Curves** tab.
 - b. From the **Screening** list, select 20u Staccato or add the value to the list if it doesn't exist. Skip this step if you selected a plate setup above.
 - c. From the Substrate list, choose Type 1 or 2 (coated art) 170 g/m2.
 - d. Leave Process Inks as CMYK
 - e. Click **OK**.
- 5. Click the **Measurement** icon 🙆. (**Note**: The Measurement icon will appear as 🙆 if you have already created an offset press with the same properties in a previous exercise.)
- 6. In the **Charts** panel, use the **Measurable by** list control to select your measurement device.
- 7. In the **Charts** list, choose a **P2P51** chart suitable for your measuring device.
- 8. In a real-life situation, you would **Export** the P2P51 chart, o utput the chart from Prinergy and print it on press, and m

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easure the chart in ColorFlow. For the purpose of this training, you will import a sample P2P51 measurement data file:

- a. Click the **Measurements** tab at the top of the window.
- b. Click Import.
- c. In the Characterization Print Curve dialog, keep the default Linear (None) value and click OK.
- d. Select the sample P2P51_Sample_Data.cgt file and click Open.
- e. (If you already loaded a measurement file in a previous exercise, you will get a dialog saying "This action will update curves and profiles in color setups using the device condition, discarding adjustments. Continue?" Click **Yes**.)
- f. Click **Close** in the bottom right-hand corner of the dialog.
- **9.** Define the calibration target to G7 aims:
 - a. Click the **Calibration** icon *I* in the link area between the **Calibration Target** and the **Offset Press** panels.
 - **b.** Ensure **Show curves in Prinergy** check box is selected.
 - c. In the **Process Inks** tab, click the **G7** checkbox.
 - d. Curves Method: Gray Balance is selected automatically.
 - e. Click OK.

A **G7** logo will appear in the Calibration Target panel and a print calibration curve is generated to match the tonality and gray balance specified by G7.

10. In the Calibration Curves table list at top left, doubleclick the name of the curve you just created and enter xx new print calibration curve for G7 (where xx= your initials). Press Return or Enter to set the curve name.

Task 2: Output a page using the G7 print calibration curve in Prinergy

- In Prinergy, create a new job and name it as XX print Curve for G7 (where XX = your initials).
- 2. Refine GrayBalanceTestFile.pdf with 1stRef-Normz.
- 3. Output GrayBalanceTestFile using a Virtual Proof. LoosePage with the G7 print calibration curve you just created:
 - a. In the Virtual Proof.LoosePage Process Template dialog box, choose Virtual Proof from the Output To list,
 - **b.** Leave **ColorFlow Color Relationship Management** unchecked.
 - c. Expand the Calibration & Screening panel.
 - d. Click the ColorFlow Current State radio button.

- e. Expand the Print Curve drop down list and select XX Print calibration curve for G7 gray balance.
- **4.** Open the generated output in VPS and measure the 50% patch.

Confirm that the gray balance print calibration curve has been applied. 50% cyan should measure 51.1. 50% magenta should measure 54.6. 50% yellow should measure 55.7. 50% black should measure 44.1.

Outcome

You have created and applied a print calibration curve to match output to the G7 gray balance specification.