Activity 3: Use a transfer curve to control Flexographic print response

Background

The flexographic printing technology uses a flexible relief plate to transfer inks from a cylinder to a substrate. The flexographic print response is controlled by the highlight gain and minimum printable dot. The minimum printable dot is accomplished by using *Mindot bump and cutoff curves*. This activity is to control the response of a flexographic plate by using Mindot bump curves.

Tasks

Goal

Create a print transfer curve to control the response of a Kodak Flexcel NX plate.

Task 1: Created a print transfer curve for Kodak Flexcel NX plate

- 1. In ColorFlow, click the **Print Curves** tab.
- 2. In the **Transfer Curves** section, click the **Add** button +.
- 3. In the **Name** box, enter XX Flexcel transfer curve (where xx= your initials).
- 4. In the **Device Conditions** section, choose **Flexographic Press** for the **Device Type** and leave all the other settings as default and click **OK**.
- 5. In the viewer window on the right, click the **Transfer Curves** icon
- 6. In the **Transfer Curve definition** dialog box, select the **Show in Prinergy** check box.
- 7. In the **Curve Origin** section, click **Flexcel NX Preset**.
- 8. In the Midtone Tone Value Increase box, enter 0.
- 9. In the Mindot Bump/Cutoff > Process Inks (CMYK) section, enter the following:
 - In the **Tint In** box, enter 0.39 (minimum system value)
 - In the **Tint Out** box, enter 2 (minimum printable dots on this type of Flexcel plate)
- 10. Leave the **Highlight Contrast** as the default value (70%). This value can be adjusted to give the desired adjustment slope.
- 11. Click **OK**.

A print transfer curve for Kodak Flexcel NX plate is generated.

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

- 1. In Prinergy, create a new job, and name it as XX Flexcel NX plate (where XX = your initials).
- **2.** Refine Chart_TintRamp_CMYK.pdf with 1stRef-Normz.
- **3.** Output the PDF file using Virtual Proof.LoosePage with the print transfer curve you just created:
 - a. In your Virtual Proof.LoosePage Process template dialog box, from the Output To list, choose Virtual Proof.
 - b. Leave ColorFlow Color Relationship Management unchecked.
 - c. Expand the Calibration & Screening panel.
 - d. Select the ColorFlow Current State radio button.
 - e. Expand the **Print Curve** drop down list and choose curve **XX Flexcel transfer curve**.
- **4.** Open the generated page in VPS and measure the 1%, 2% and 5% cyan patches.

Confirm that the print transfer curve has been applied. 1% measures 2, 2% measures 3.16, and 5% measures 5.5.

Outcome

You have created a print transfer curve with a minimum printable dot to control the highlight response of a Kodak Flexcel NX plate.