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

Background

Contents

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.

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.