Test Targets Showcase: Using Synthetic Test Targets to Evaluate Output Devices

by Franz Sigg

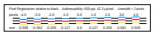
Introduction

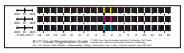
This test form contains targets for testing various aspects of output devices. Most of the EPS targets use handwritten PostScript code which has the advantage that the targets contain internal logic that allows them to automatically adapt themselves to the characteristics of the output device. For instance, they know device spot size and adjust to it. Some targets can be customized by the user by editing the header of the code of the file. More complete documentation is available at the location of the files. There are targets for the following parameters:

Registration

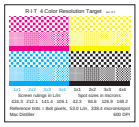

TR4V03U.EPS, Traffic Light Registration Scale. This target is more visually sensitive than a regular registration cross.

The following two targets should be place horizontally and vertically in a test layout.

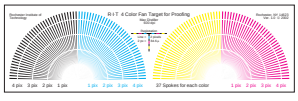

PregH01U.EPS, Pixel Registration relative to black. This target indicates misregister in units of addressability squares and also millimeters.


VREGH08inU.EPS, R•I•T Visual Registration Scale. This target uses moiré to magnify registration errors and give a visually readable numeric readout.

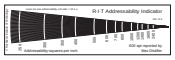
Resolution


4Res07U.EPS, R•I•T 4 Color Resolution Target. This target shows 1x1, 2x2, 3x3 and 4x4 checkerboard patterns for all colors. If they all image with an area of 50% then the highest possible resolution of this digital system has been reached.

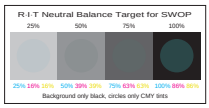

4REP07U.EPS, R•I•T 4 Color Resolution Patch. This target shows the same patterns as the 4Res07U.EPS target, but in a smaller format, to facilitate placement.


FanP10U.EPS, R•I•T 4 color Fan Target. This target shows aliasing and resolution, and whether the system can resolve down to one spot.

Addressability


ADIND04U.EPS, R•I•T Addressability Indicator. Sometimes output devices indicate a higher addressability than they mechanically produce. This target helps to determine true mechanical addressability.

Graybalance



SWGR03U.EPS, R•I•T Neutral Balance Target for SWOP. If an output device produces a gray balance as defined by SWOP, then the 4 fields appear to have a uniform gray color and do not show the circular center.

Smoothness of tonal reproduction


S6A.rev.tif, These vignettes have been published by ISO and indicate the smoothness of tonal rendering of a gradient, particularly at the highlight end of the scale.

Directional dot gain


DG4C11U.EPS, R•I•T Doubling Grid. Directional dot change is indicated when the horizontal and vertical lines are not reproduced at the same darkness. This is very useful for testing offset printing where doubling can be a major problem.


RA73T_U.EPS, These targets are sometimes used to indicate fill-in slur and/or doubling.

Production control

P4Bar01U.EPS

GCRBar02U.EPS

The color bars on this page were specially designed for these test forms from modular components. One shows inking, dot gain, directional dot gain and resolution, the other shows color balance and can be used to visually test for uniformity of color.