Print sharpness

A versatile tool used to quantify the raggedness and blurriness of printed edges
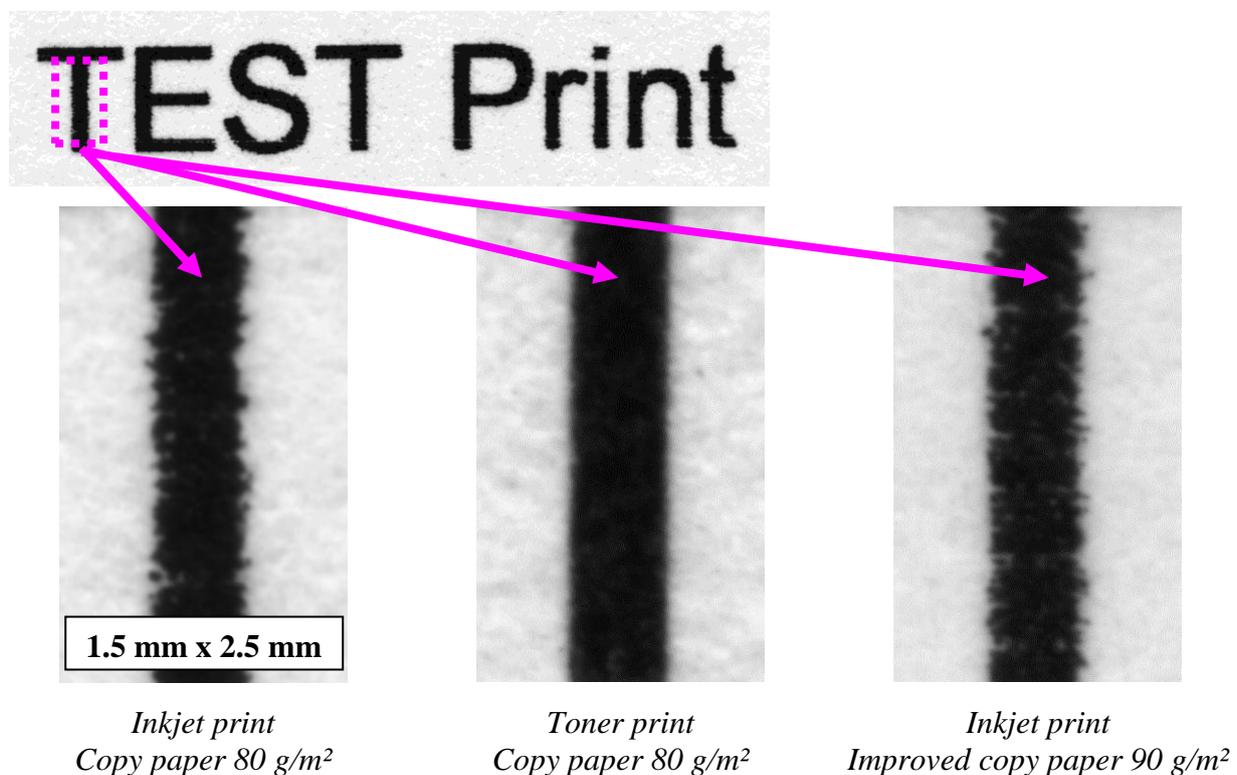
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Print sharpness is a factor of immediate importance in inkjet printing due to the inherent risk of lateral spread of the low viscosity inks used. High print sharpness is a basic characteristic of high print quality.
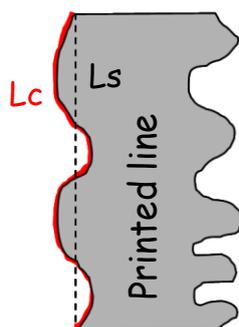
- Quantify the print sharpness using high resolution images from a scanner, camera or microscope.

- The measurements are not restricted to a certain print form, instead any printed line or edge can be used for the analysis, for example part of a letter.

Example

Test prints of a text in font Arial 12p scanned in 4800 dpi (gives a resolution of 5.3 µm). Both raggedness and blurriness can be observed but the raggedness is more pronounced in the prints where inkjet was used.

1.5 mm x 2.5 mm

Inkjet print
Copy paper 80 g/m²

Toner print
Copy paper 80 g/m²
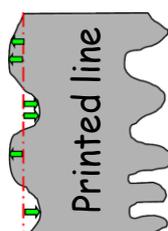
Inkjet print
Improved copy paper 90 g/m²

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Definitions of the calculated parameters
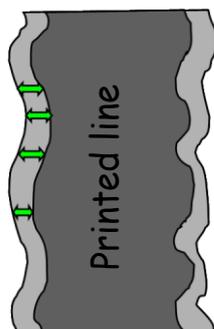

Definition of **Raggedness-1** :
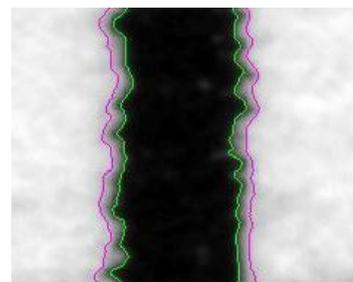Relative excess contour length in relation to a straight line (= Lc/Ls).
A perfect contour -> 1.
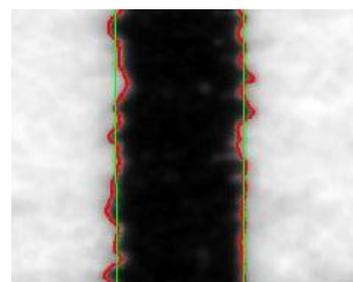
Detected Raggedness

Definition of **Raggedness-2** :
Standard deviation of contour from mean line (μm).
i.e. an amplitude measure.

Definition of **Blurriness** :
Average width of 25-75% transition zone (μm).
Note: Other limits are possible to use.

Detected Blurriness

What you get

Plots of the calculated raggedness and blurriness (like the example plots above) and a result file importable to a spreadsheet program like Excel ™. For lines, both sides are analyzed.

Sample	Raggedness-1, left	Raggedness-1, right	Raggedness-2, left	Raggedness-2, right	Blurriness, left	Blurriness, right
Inkjet, copy paper 80 g/m²	1,47	1,42	18,50	13,20	62,75	59,09
Toner print, copy paper 80 g/m²	1,10	1,11	3,49	3,71	56,76	52,58
Inkjet, Imp. copy paper 90 g/m²	1,48	1,34	13,06	12,09	61,72	53,58

The print sharpness evaluation software is available for purchase. Contact us to find out about system requirements.

Contact

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