

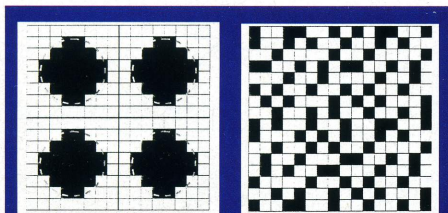
marketing hype. But it took two years Pira's Kelvin Tritton examines this reveal how good they think it is

BENEFITS OF FM SCREENING

Most of the benefits that are gained from using FM screening relate to the appearance of a printed reproduction and occur as a direct consequence of the attributes referred to earlier. Other benefits are somewhat contrary to expectations. It is helpful to consider the benefits in relation to the appropriate attribute as indicated below.

The micro dots or spots are not arranged geometrically as in conventional screening, consequently:

- There are no screen angles associated with screened image.
- There is a reduced risk of interference patterns occurring with the detail in the scanned image, referred to as object moiré (a particular problem with fabrics and other materials having



CONVENTIONAL **STOCHASTIC**
FIGURE 1 Both illustrations represent 37% tone value. For conventional halftone (left) the spots form a symmetrical dot within the 8x8 cell matrix. The stochastic spots (right) are constrained only by the imagesetter matrix, and form an apparently random pattern.

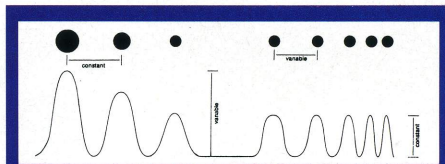
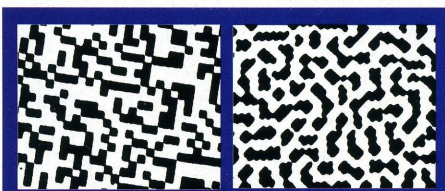


FIGURE 2 Representation of the modulation of dots in conventional halftone AM screening (left) and FM screening.



AGFA CRISTALRASTER **PURUP HARLEQUIN DISPERSED**
FIGURE 3 The illustrations are reproduced at the same enlargement (65x) and the tone values are all approximately 40% on the film.

TABLE 1 Suggested FM screening spot size for different types of work when printing by offset lithography

FM spot size	Work or substrate type
14µm	High quality reproduction on coated paper
21µm	Commercial quality colour printing
>28µm	Newsprint reproduction

USERS' VIEWS

CLIFF CROSSFIELD
Business manager
Forme Graphics
Louth

Is using a new development of Linotype-Hell's Diamond Screening for the flexo and screen printing markets.

'We thought there was the potential to apply stochastic screening to corrugated board about a year ago. But the perception was that you needed very thin plates and high specification, very expensive anilox rollers – all of which would act as a barrier to the use of stochastic in flexo.'

'We spoke to Linotype-Hell about the possibility of applying stochastic to standard flexo machines and to silk screen too.'

Conventionally the machines we use can produce screens of 20-33lpi. With stochastic we've produced jobs which have the look of 85-100lpi.

During the trials we treated stochastic as a normal production job, and didn't give it any special treatment. When I first started looking at stochastic I was told 'forget it', but we've found that the perceived barriers are not valid.

'We've produced single-colour halftones and have four-colour work in hand. I suppose we're the opposite of all the 'high end' users.'