

ING 2015



Business model for an ink jet press

Why purchase an Ink Jet Press?

More profit on existing jobs

- Print existing products (sweet spot) more efficiently on the ink jet press.

More revenue

- Better able to compete with other offset printers for “sweet spot” runs.
 - If your bid is at offset competitors price level you will have a much higher profit margin.
 - You will have more latitude to get the job by being more price competitive

More revenue

- Open up printing time on existing offset press for larger runs.

More revenue

- Bring in new work and new products. Leverage existing marketing and data base knowledge with targeted print vehicles. **Requires sales effort.**

New markets and or products

- Personalization of products. Does not have to be newspapers.



Products produced

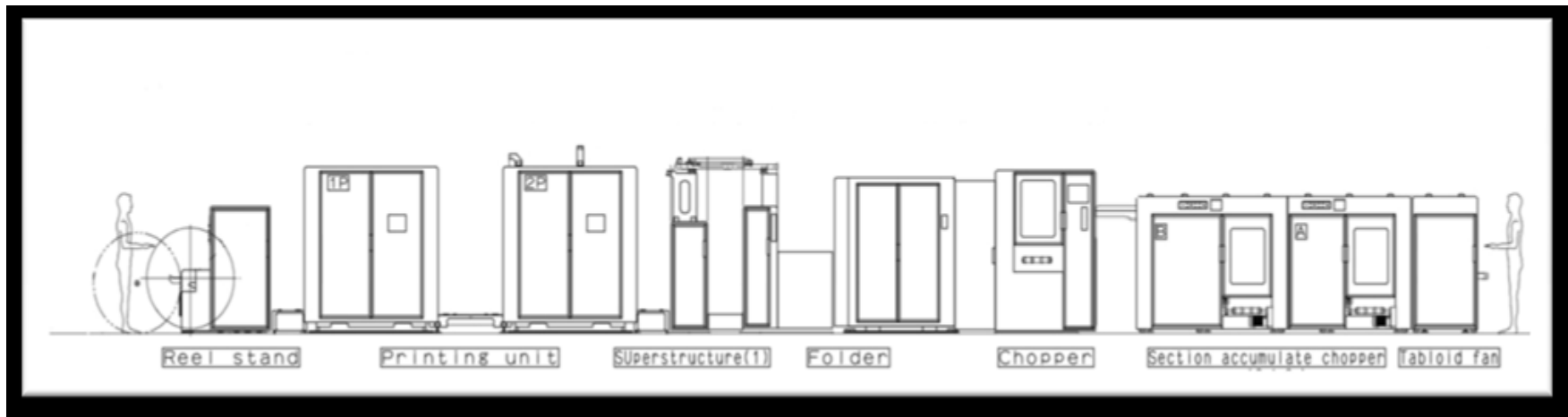
JETLEADER



- Broadsheet (standard)
 - From (1) to (5) sections in-line
 - 72 pages maximum product size.
- Tabloid (standard)
 - Can quarter fold for mailing in-line one or two sections
 - Up to 48 page section
 - Multiple sections

- Books (optional finishing)
- Direct Mail (optional finishing)
- Magazine (Optional finishing)
- Single sheet (optional sheeter)
- Roll to roll (optional rewinder)

Newspaper configuration

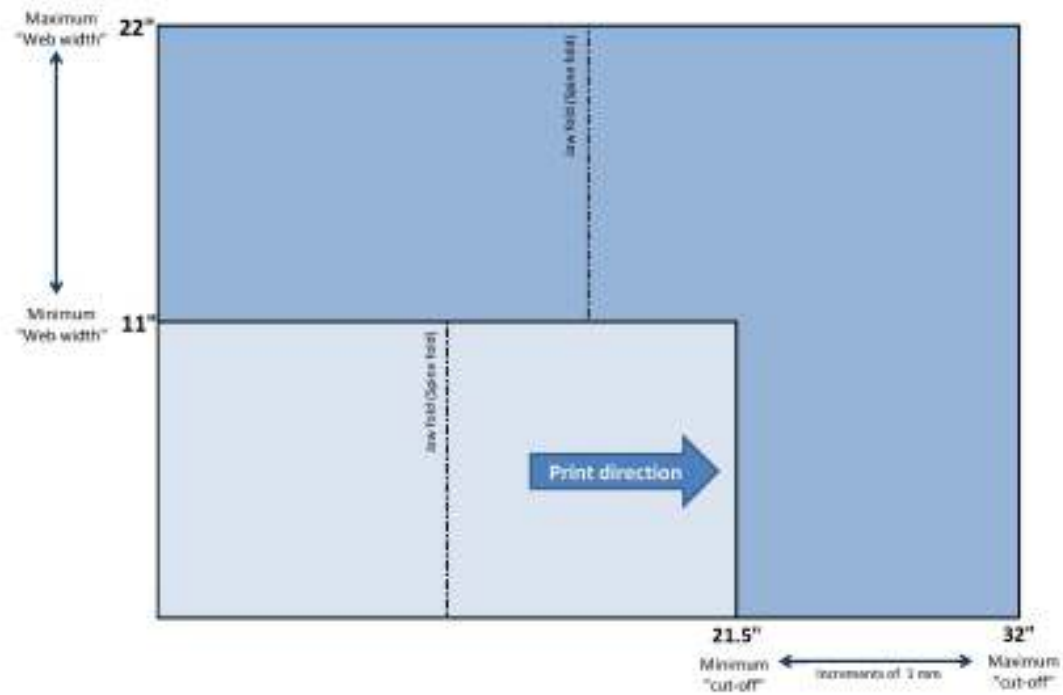


Sweet Spot (example)

24" broadsheet size with 4 color on all pages, 30# news

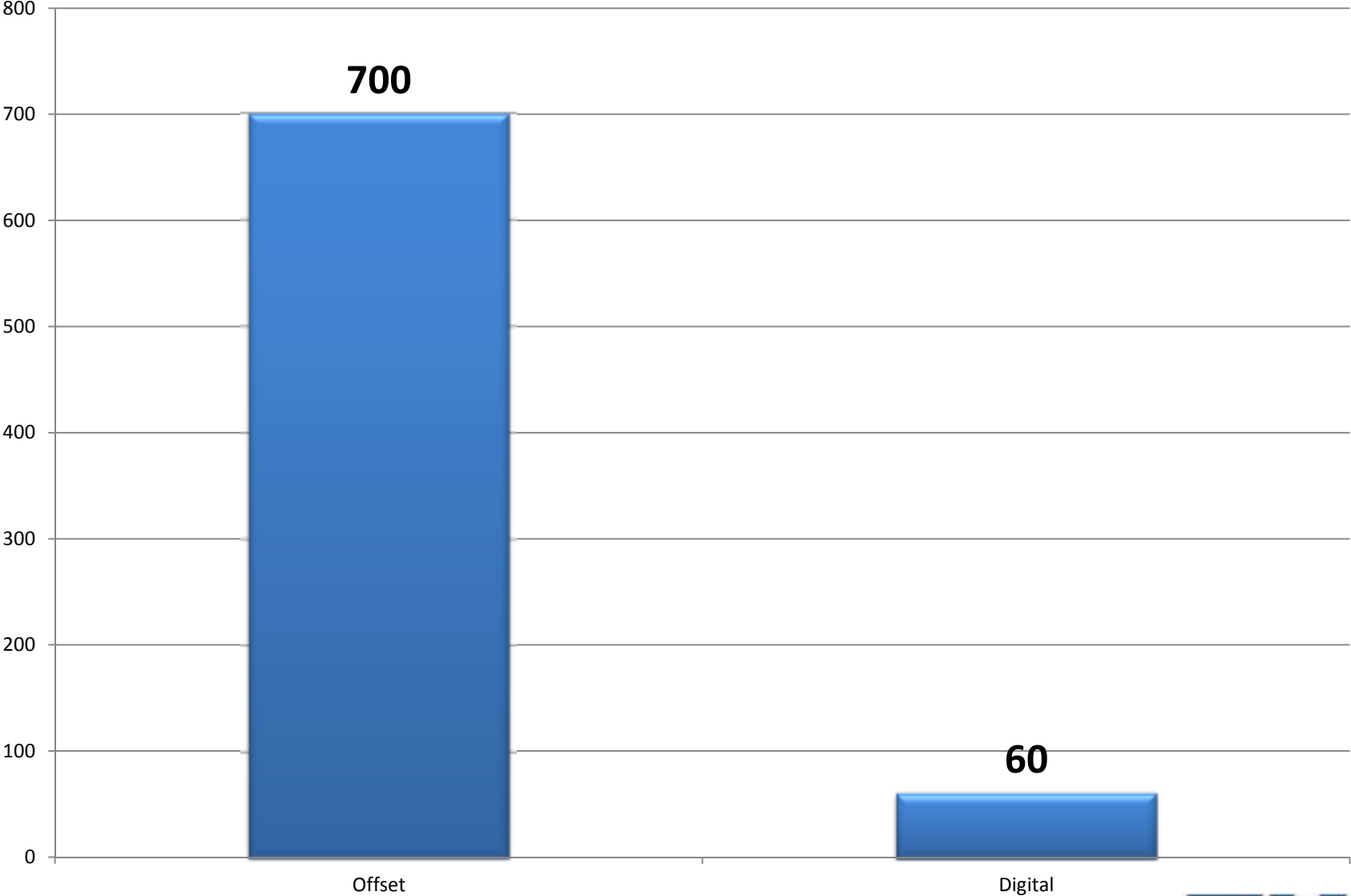
# Pages		1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	
4	Digital	Red										
4	Offset	White										
8	Digital	Red								White		
8	Offset	White		Blue						White		
12	Digital	Red						White		White		
12	Offset	White		Blue				White		White		
16	Digital	Red				White		White		White		
16	Offset	White		Blue		White		White		White		
20	Digital	Red			White		White		White		White	
20	Offset	White		Blue		White		White		White		
24	Digital	Red			White		White		White		White	
24	Offset	White		Blue		White		White		White		
28	Digital	Red		White		White		White		White		
28	Offset	White		Blue		White		White		White		
32	Digital	Red		White		White		White		White		
32	Offset	White		Blue		White		White		White		

Flexibility



Why More Profit (for jobs in sweet spot)?

Paper waste (run of 3,000 copies)



Setup time

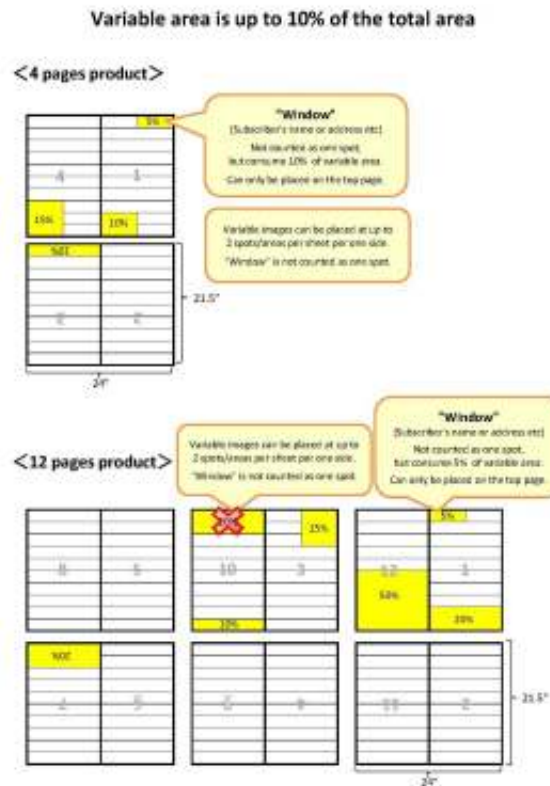
JETLEADER

- No plates
- No blankets
- Not have to add or remove web(s) based on paging
- If using the same web width, just a few minutes for ripping new job, then start new run, including paging increase or decrease.

Variable data

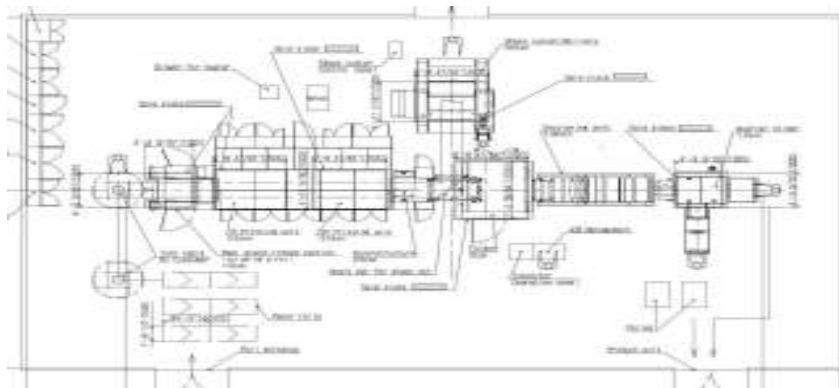
Variable data printing (basic)

- Addressing in line
- Personalize content
- Micro zoning
- Better utilize web to print models
- Give customers the ability to customize their product through your web site



Building

Building



- Less of an over all press footprint. About 5,000 square feet for everything including equipment, inventory, office, and computers.
- JETLEADER on one level
- No foundation modifications for JETLEADER
- Less power utilized
- JETLEADER is 66 feet long

Building

Previous administrative offices at Topweb



Other Products/Markets

Other products

Books – Variable Page Count – Variable Size



Saddle Stitched

Collated - Inline / Near Line – Single / Multiple Webs
Direct to New or Existing Saddle Stitcher or Staged



Perfect Bound

Stacked Signatures – Inline / Near Line – Single / Multiple
Webs – Direct to New or Existing Perfect Binder or Staged



Other products

Magazines – Variable Page Count – Variable Size



Saddle Stitched

Collated - Inline / Near Line – Single / Multiple Webs
Direct to New or Existing Saddle Stitcher or Staged



Perfect Bound

Stacked Signatures – Inline / Near Line – Single / Multiple
Webs – Direct to New or Existing Perfect Binder or Staged





Other products

Direct Mail – Inserts



Variable Data Post Cards
Business Reply Cards
Flat Sheets
Door Hangers





COMPONENTS

Web Handling



Unwind
Register Splicer
Constant Tension Infeed
Web Guide
Tension Monitoring
Angle Bars
Sheer Slitters



COMPONENTS



Folding



Former Folding
Plow Folding
Goemetric Former Folding
Belt Folding

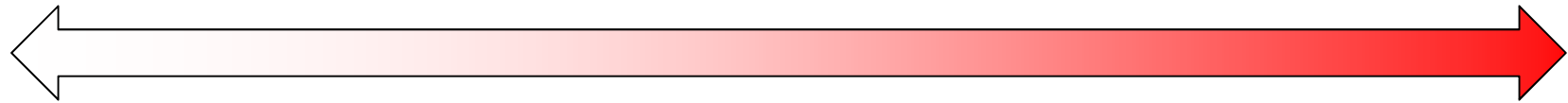


INK

Ink Jet versus Offset ink

Inkjet Ink Outlook

Viscosity



1mPa s	<u>5~10mPa s</u>	30~300mPa s	5~20Pa s	50~100Pa s
Water	Inkjet	Flexo	Offset newspaper	Offset sheetfed

Particle size

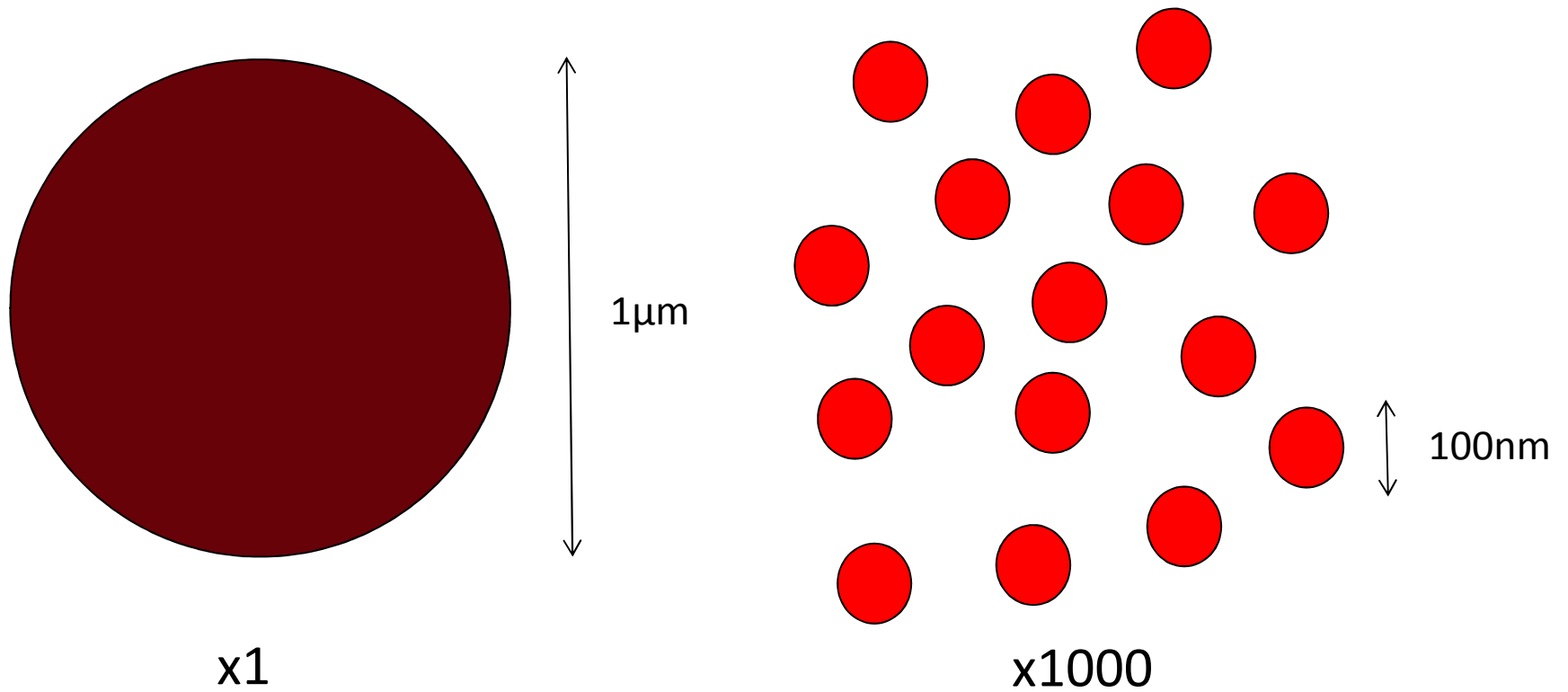


1A	1~20nm	<u>50~200nm</u>	1~2μm	1~5μm
Inkjet (Dye)	Color filter (TV)	Inkjet (Pigment)	Offset	Flexo

Because inkjet ink must be jetted from nozzle of inkjet head, it requires

- Very low viscosity (1/10,000 of offset ink)
- Very small particle size (1/1,000 of offset ink)
- Very stable of the dispersion

Pigment Dispersion



More difficult to keep it stable

Future developments

- Speed
- Coated paper

- Print demonstration at Topweb Tuesday morning at 8:00am.
- mshafer@tkspress.com
- TKS booth is #1467

