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New Technology For The Small Newspaper

By

Prem Gupta
I am to speak to you on new technology for the small newspaper. As we have always said—the small inter can also be big. He need not feel a sense of inferiority being all. As the saying goes—SMALL IS BEAUTIFUL.

So let me, at the very start, emphasise and maintain that the aspect of new technology for the small newspaper is great, full of optimism and certain to bring big rewards.

This is not just a promotional line, not a quick-sell, not primrose path. It is sustained by history and facts.

But first let me get to some basics.

I shall begin with politeness. I am thankful for the opportunity address you on a very important, indeed vital aspect, in the search countries are making in bringing their people toward a better life.

In this, the word has been the liberating tool and the spread the word, through every device—spoken, sung, gestured, written and importantly—printed has been vital in the progress of man and his fulfilment.

I need not go into the history of printing, though I am tempted then one contemplates how it has evolved and grown. I think you know every detail of it—the first rudimentary efforts to cut ten words on papyrus, parchment, cloth or paper, first by pen calligraphy, then by dies, and finally by movable types by Gere, six hundred years ago. Nearly three hundred and fifty years had to pass before a steam press machine could print 1,100 sheets an hour. Forty years later, the Hoe machine, coming into the market print 20,000 impressions an hour.

We in India have sought participation, collaboration and know-how level and pace which lead us to self-sufficiency and self-dependence.
New technology, indeed any technology is something no one can escape. Like water which seeps through any crack and inlet, around obstacles, stones and boulders, it comes and you can rarely resist it.

No one dreamed the last ten years, - - the printing industry in India would make such a truly fantastic change - an enormous leap, actually. I hesitate to use that cliche, quantum jump, but it is truthfully so.

Who would have believed in 1978 that daily - I stress, DAILY - newspapers would be coming out with four-colour ads beautifully printed - and then colour Sunday supplements, followed by weekend Saturday reading extras - in colour. Not just ads but lavishly laid out illustrated articles.

What a fantastic explosion! from about 16,000 journals in India, in 1978 to roughly 30,000 in 1988. Many of these offset, others are in line ready and waiting, and several already are using colour or anxious to do so.

The printing world has a phenomenal transformation, a catastrophic change - catastrophic for those who could not adjust themselves to the new situation. History is littered with such tragedies in every field. Changes and transformation are linked in the case of our fortunes. One leads to the other.
The invention of offset printing as we know it today, of course, is the outcome of the basic limitation of letterpress technology, namely middle quality and high recurring costs. The new invention, offset seriously, offers superior quality but at much lesser costs.

We can have offset printing in two ways - one is by a sheet-fed machine, useful for general purpose printing because of its flexibility terms of different sheet sizes. But the web offset is specially great advantage in printing newspapers, magazines, books and so on, with high quality.

Let me briefly list them.

One is speed: Most sheet-fed offset machines have a maximum speed around 10,000 impressions per hour, out of which, on average production, you can get to around 5,000 to 7,000 impressions an hour. Offsets have a minimum speed of at least around 10,000 impressions per hour and in some models speed can go up to 50,000 to 60,000 impressions, as you can see, even with the slowest speed the web can give more than double the production compared with a sheet-fed machine.

Secondly, in a web press paper is fed in reels which is usually in form in which standard newsprint is available. This means a lot of wastage of paper, as well as reducing the time and effort in cutting sheets from reels for the sheet-fed machines.

Thirdly, in-line folding and cutting, done in the folder of web gets you complete, printed, inserted, (in case there are more than 4 pages) and folded newspaper direct from reels and delivered to the machine. In the sheet-fed machine the output is in the form printed sheets which require the additional labour of inserting them, (whenever required), and folding them into a newspaper.
And finally, a single-colour sheet-fed offset machine (23"X36") can print up to 2-page broadsheet newspaper at a time requiring, say, runs to print an 8-page newspaper (without folding or inserting), on a web with 2 back-to-back printing units and a folder (incidentally, with a cost less than that of the single-colour sheet-fed machine), you can get all 8 pages printed, inserted and folded at a speed more than double that of the sheet-fed. This means more than 8 times the production level compared with the sheet-fed machine. This does not take into account the extra time for inserting and folding the pages, as well as the make-ready time which you require whenever the plates are changed on the sheet-fed machine.

Friends, what it all boils down to is that the web offset printing machine has gradually been accepted by newspapers all over the world as a relatively inexpensive method of achieving a high level of production and quality. This is a must for newspapers today, because the less time you spend in printing, the easier and faster you can get in the latest news. At the same time you also get a level of quality that is much more acceptable to readers.

One spin-off this advance is, of course, increased readership and circulation, advertising tariffs and advertising revenue.

We asked ourselves some basic questions. They were:

1) Is web-offset cheaper than sheet-fed?
2) What is the time from plate to finish products?
3) What do we do with idle time on the machine and how can this be used to generate profits?
4) Does it take more space than a sheet-fed operation?
5) What about colour?

Our answers to all these pointed strongly in the direction of web-offset: The cost of then imported 2 units web-offset press...
was about the same as that of a comparable size sheet-fed press. This position is still true as a web press capable of producing an 8 page newspaper is roughly priced at around Rs. 8 lakhs, while the sheet-fed is perhaps slightly more.

i) The time from plate to complete printed newspaper is no more than 5 to 8 minutes and the newspapers are delivered for despatch at anywhere from 15,000 + copies per hour. While on a sheet-fed, even with three printed pages you still have the function of folding, collating, and counting, which can take anywhere up to half an hour before you can start delivering copies. We found that the skills required for running a web-offset were not too difficult and thus allowed us to dispense with a whole binding section and thus reduced manpower requirement.

ii) A small newspaper is always looking for other sources of revenue to support its activity of newspaper. We found that we could use the idle time for printing other people's magazines, news sheets as well as books. This could generate profits which not only helped the press but also supported the newspaper. Over the years this activity has become very widespread and we find more than 50% of presses manufactured by us are being configured with optional equipment capable of providing magazine and book folds.

iii) The space requirement are about the same as the sheet-fed operation with binding section and in fact the only additional space which you required would be going down space for storing paper because of very high productivity of web-offset press.

iv) In a single coloured sheet-fed press you would have to pass the sheet twice through the press to get colour, while in a web press there are options available to get spot colour. In fact there are presses capable of printing the complete newspaper with colour in one go.
These factors led us to look for web presses. At that time there were no Indian manufacturers (though there are now two Indian manufacturers of international repute) so we looked at the 4 major presses namely, the Goss, Harris, King Press and the Linotype pacer. While the first three are of U.S. manufacture, the last one was made by the Linotype Machinery of U.K. The press manufactured were also U.S. origin but we felt, more suited the Indian conditions as it was a simple basic mechanical press. Tej bought this press. And we have been running this in our plant for the last 19 years. Our experience in looking for other areas of diversification, our conviction grew that this was it. It was felt that simply importing these machines, at enormous cost in foreign exchange, not to mention other factors like insurance, freight, duties and so on, would not help Indian printers. The challenge was to get into the manufacture of web offset presses in India itself.

The optimism of manufacturing such presses proved to be more than well justified. An associate company, Bandhu Machinery private limited, was incorporated.

Initial thinking was that a simple compact, versatile, reasonably fast, and economical web offset press should be manufactured. The Linotype Pacer 36 seemed the best model on which to base a machine to suit the requirement of small and medium size newspapers in India. The machine had already been in operation in the Tej plant and had yielded very good results.

A technical collaboration agreement with the British makers of the Pacer 36 was entered into. The press is now built in conformity with international precision engineering standards. This successful machine is now called BANDHU 20K.

This is still the only web machine built in India where a transfer of technology has taken place. All others at present

contain an indigenous copy of designs.
The targeted production turned out to be well below actual requirement. One hundred and sixty units were produced in the first five years, way beyond even the most optimistic aim. This machine proved to be so popular that it has also been exported to countries around India in Asia, the Gulf countries and West Africa. It is now making its entry into further regions like Latin America.

Encouraged by the overwhelming response from the Indian newspaper market, Bandhu went in for new products made possible by its own R&D cell. The result was the development a fast press with 35,000 impressions an hour conceived and designed by our design engineers. The parallel developments were the four colour satellite unit and the WIZARD.

Later another product was developed specially to meet the requirement of smaller newspapers, it is called the WIZARD.

The special feature of the fast machines manufactured by Bandhu is their ability to stack printing units vertically so that valuable floor space can be saved. The addition of units increase the ability to produce more number of pages in colour. Unitised design and full accessibility during press runs make operations and servicing easy. Rapid plate changing and synchronised folder reduce wastage in time and materials to the barest minimum.

A four-colour satellite unit...
SANDUSKY can also print three colours on one side and one colour
by direct litho on the reverse side.

The spot colour unit gives added colours with marginal extra cost.

It is an attachment to be put on top of the printing unit, and
fitting it into the basic machine needs no change in design etc.

The deck saves the customer from buying a full unit.

With the deck a broadsheet newspaper can have colour on the front and back page; a tabloid colour on
front, back and centre;

The WIZARD is a compact press with flexibility of producing
1 pages broadsheet/2 pages tabloid on 'straight run' at 20,000
copies per hour or 3 pages broadsheet/16 pages tabloid on 'collect run'
at 10,000 cph. A quarter fold attachment is available as an option.
The roll stand is designed as a removable trolley which allows easy
loading of rolls. The compact design saves set up time and minimum
cost of space. It has perhaps the smallest collect folders in the
world.

Fast and easy make-ready, simple lock up and rapid folder
change-over are some of the features that make WIZARD an economically
productive machine, in addition to producing consistent print quality.

While our technology was being developed the newspaper industry
also began to be faced with the problem of higher newsprint costs which forced them to reduce column widths and non-print areas. 

Bandhu took the initiative in offering different cut-off sizes. From the standard cut-off of 573 mm, Bandhu introduced the 553 mm cut-off and the 516 mm cut-off. Bandhu now produces the largest range of cut-off sizes from 139 mm to 630 mm.

We then introduced a new press, La-3unarleure, first web offset machine in India with complete pneumatic controls, automatic lubrication, motorised dampening and RTF, running at a speed of 35,000 impressions an hour. Bandhu web offset presses were also provided with different fold configurations such as 4th fold, 1/2th fold, double parallel and delta.

Primarily our whole objective was to serve the industry with a press made in the country reaching international standards of speed and quality. Much to our surprise - a very pleasant surprise - the first press led to others, and what is more are now accepted not only in Asia, Gulf, Latin America, Africa but also in Western Europe and the United States.

Naturally they are available to all our near and close neighbours. Sure is, perhaps, not an isolated case but a good case history.

The sum and substance of my story in that we, in our region, have nothing to fear from technological revolutions. We can meet the situation, accept the challenge, grasp the potential, exploit them to our advantage, in many cases even mould them to our special needs. Given the determination and self-confidence we can march forward. The future is bright.

Thank you.