At the Tiroler Tageszeitung: CTP production is a routine process with the N90A laser plate

A survey of the wide range of today's systems technology and the available plate material reveals that the imaging of offset plates from digital data stocks has now become widespread practice in the graphics industry. This applies equally to both commercial and newspaper printing, even though every operation has its own different priorities with regard to computer-to-plate (CTP). In newspaper production, for example, aspects such as the speed and operating safety of digital platemaking are especially important. In this respect, it is natural to discuss benchmarks and technical specifications when considering CTP technology. If a newspaper company wishes to implement a CTP application, it should take into account not only technical aspects, but also the entire organisational environment in its considerations. An especially appropriate example for such an approach is the realisation of the CTP-supported production at the Tiroler Tageszeitung ("TT") in Innsbruck, Austria. For this Austrian newspaper company, computer-to-plate represents just one link in the network process of all-digital newspaper production, beginning in the advertising and editorial area and extending up to and including the newspaper press. The Tiroler Tageszeitung has developed computer-to-plate with Agfa Ozasol N90(A) laser plates to a routine process ***(see also newspaper techniques, December 1995, Page 4).***

In the Austrian Federal State of Tirol, all seems well in the newspaper world – at least from the point of view of the Tiroler Tageszeitung. Its penetration of 63.9 percent of the Tirol market is evidence of the strong position of the newspaper and its publishing house. Since 1991, an Axel Springer holding company has held a 65 percent share in the Tiroler Tageszeitung. In the graphics sector, the printing and publishing company concentrates on the production of newspapers and related products. However, via participations in radio and cable TV companies as well as the provider company of the Tirol online service, it also pursues interests in the electronic media sector.

The flagship of the Innsbruck-based company is the Tiroler Tageszeitung, a daily newspaper published in five regional editions with a total circulation ranging from 90,000 (weekdays) to 115,000 copies (weekend). Other products include tabloid local newspapers, such as Haller Nachrichten (circulation: 10,000) and Außerferner Nachrichten (8000 copies) as well as a number of weekly and free titles (advertising freesheets) that, published in 16 editions with completely different contents, are produced in a total weekly print run of 360,000 copies. The range of print products is completed by various commercial jobs, including three weekly publications as well as a number of seasonal products.

Harmony in organisation and technology

In 1992, the Tiroler Tageszeitung commissioned newspaper designer Mario R. García to develop a completely revised layout and colour presentation; this was followed by a fine-tuning of the concept in 1995. Setting out from this platform and in the wake of an actively implemented marketing strategy, TT succeeded in increasing its regular readership by 12 percent within a year. The competitive situation on the Austrian newspaper and news market, though also the growing volume of colour advertising and the realisation of the new presentation, are given as the main reasons why TT, following the construction of a new

Colour plays an important role in the production of newspapers and related products in Innsbruck. Thanks to computer-to-plate, last-minute updates no longer represent any problem.

building accommodating the press hall and the mailroom, decided to invest in a KBA Express web offset press.

The commissioning of the newspaper press in July 1993 satisfied a precondition for the introduction of CTP technology, for up to then production had been done in Innsbruck on a letterpress rotary press partially converted to the DiLitho process (direct printing without blanket cylinder). The original configuration of the new web offset press consisted of three, six-unit towers (nine-cylinder satellite units plus colour decks) and four autopasters. In summer 1995, a four-high tower with autopaster was added to cater to the growing volume of the main product as well as newly acquired printing orders. Whereas all the other printing couples of the press are equipped with conventional inking systems, the four-high tower works with anilox short ink train systems. But this combination of two different inking techniques should not be interpreted as an indication of any special willingness to experiment on the part of the Innsbruck newspaper printers. Instead it is more a case of the short ink train systems in the four-high tower creating the freedom of movement for robot systems to carry out automatic plating, or plate changing respectively, on the cylinder.

At the Tiroler Tageszeitung, of which the printing and publishing building complex is situated in the centre of Innsbruck, the trend is towards digital production.

Digitisation concerns everyone

At the beginning of the digital era, around summer 1990, the policy decision was taken to introduce digital newspaper production, with all this entailed. This had major consequences, of both an organisational and technical nature, for all areas of prepress operation – editorial, advertising, reproduction and platemaking. Josef Propst, Director of the newspaper company, emphasises the universal approach: “From the start, we always considered CTP in the global context, i.e. as one component of a total production process. This concept must be supported by the management, as its realisation changes every individual workplace. There are no employees in the company who do not feel the consequences of the changes. The most important aspect is that all the work processes at the company must be reorganised and completely new areas of responsibility created.”

One indication of the changed organisation is the distribution of the total of 430 employees among the different areas of the company: 120 persons work in the newspaper publishing sector, 20 in administration, 75 at the newsdesks, 80 in the technical division, 120 in the freesheet and weekly newspaper sector, and 15 in other services. Today, all prepress production is integrated into the publishing house, or newsroom respectively, so that the aforementioned technical personnel are confined to the press and mailroom areas.

Besides the smooth integration of the digital process, the management of the Tiroler Tageszeitung expected computer-to-plate to have direct positive effects. In addition to saving film, a major objective was to speed up production compared to what could be achieved with conventional positive and negative platemaking. The time savings result from the elimination of assembly, retouching, and masking tasks, and this in the final instance should also benefit topicality.

As the core component of the new digital technology, from the beginning of 1991 a SII new editorial, advertising, and production system was put into operation in two stages. The system is configured around fault-tolerant tandem host computers by means of which the PC workstations in the newsdesks and advertising department are networked. A Digital Collections system linked with the production department manages and archives editorial texts and images. Digital images are received from the wire agencies; the newspaper’s own photo-reporters cover local and regional events, taking photos either on 35 mm negative film (six-minute processing in a Minilab and digitisation on a high-speed film scanner) or directly with digital cameras. Both Windows PCs and Apple Macintoshes are used in the advertising sector. After recording and possibly designing of the ads, make-up is carried out directly in the advertising department, therefore avoiding deviations and potential transmission errors.

Digital production: batch processing or online

With regard to the organisation of digital production, a distinction is made at the Tiroler Tageszeitung, between

In the platemaking department, Agfa Ozasol N90A plates are imaged on two CTP flatbed imagers and subsequently processed in the Agfa Ozasol VSM65 units.

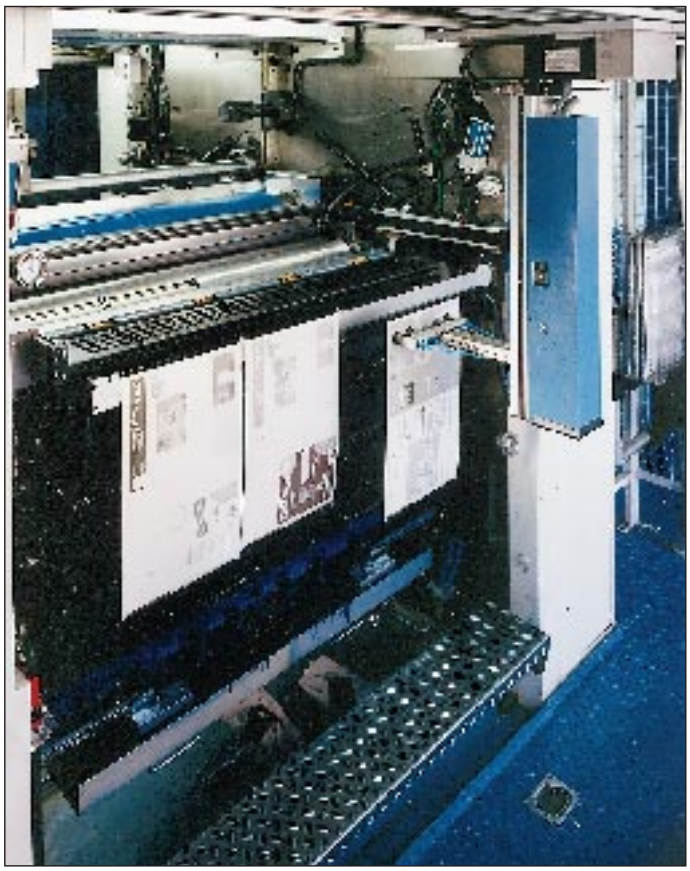
batch processing and online production. ***Batch processing*** means that the newsroom and advertising department send the pages that they have produced under their own responsibility to a spooler and that the pages enter a queue as PostScript files. As required, an operator activates the batch output of the plates. As opposed to this, with the ***online variation***, the newsroom or advertising personnel release the pages directly for exposure; they are then immediately RIPped and burned-out. This latter process permits reaction at short notice for late-breaking updates.

TT largely tailored the production system to suit its individual conditions. This was realised, for example, by an in-house software team developing a uniform user interface for all PC workplaces. Priority was given here to fast and simple operation. Similarly, the TT-Place program for electronic page make-up is an in-house development; likewise the Unix-based Sun UltraSparc OPI server system for images and logos, or artwork respectively.

The automatic plate sorting system (left), a development by the newspaper house, puts the press-ready plates into the transport cassettes of the conveying system in accordance with their positions on the cylinder.

For J. Propst, it is essential for a company to apply its own skills and know-how when implementing all-digital production techniques in order to manage the entire integration process: "It is just not possible to commission someone who is able to provide you with a functioning total system. The fact is that you are confronted with a wide range of different system components from different manufacturers, all of which have their own special requirements and sometimes also quirks. The result is that we, as a user operation, had to develop the capability to combine components to a functional whole. This is, in fact, the main problem in installing digital production processes. To accomplish this task, you need personnel who will do the right thing at the right time – which is very important especially during the introductory phase of new technologies because problems can occur that may not have been foreseeable."

The CTP application was put into operation in Innsbruck in February 1994. Initially, the Agfa Ozasol N90 high-speed laser plate was used on a first laser flatbed imager (Autologic Platemaster based on Gerber LE55). This aluminium-based photopolymer plate, developed by the former Hoechst Printing Division that belongs today to the Agfa-Gevaert Graphic Systems Division, was the first of its kind suitable for exposure with low-priced, low-energy lasers. Like its current successor, Agfa Ozasol N90A, the N90 could be images also by all types of lasers in regular use in CTP imagers, including the argon-ion laser system installed at the Tiroler Tageszeitung.



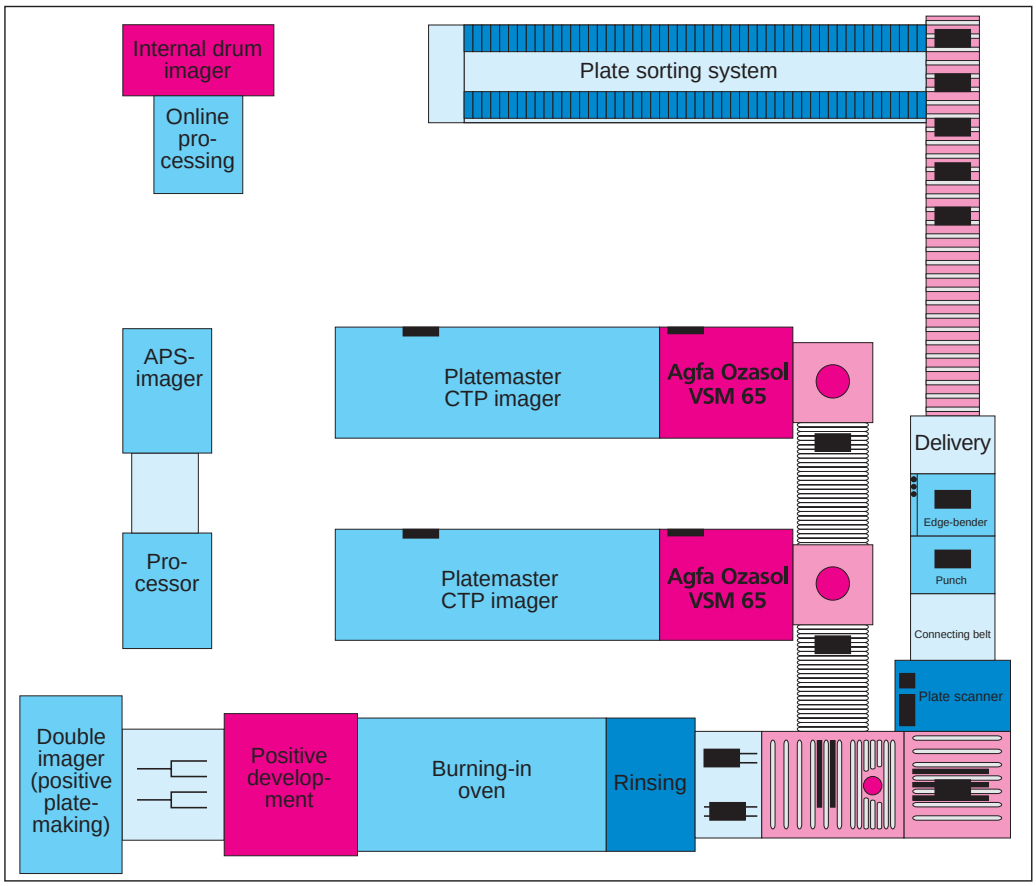
At the four-high tower of the KBA Express newspaper rotary press, robots carry out the mounting, or changing respectively, of the plates.

CTP: a link in an automatic process

Today, two CTP imagers are in use in the platemaking department of the newspaper house, each linked directly to an Agfa Ozasol VSM65 processor, side-by-side with a conventional positive plateline (double exposure unit, processing and burning-in station). The CTP equipment is integrated into a total system with the positive platemaking line where, further downstream, the exposed and finished plates – no matter whether digitally imaged N90A or conventionally produced Agfa Ozasol P51 plates – are automatically scanned by a flowline plate scanner and subsequently punched, bent, before being put, sorted according to the printing unit for which they are destined, into transport cassettes of the Telelift system by an automatic plate-sorting system. This sorting system, called Sorti 2000, was developed by TT.

The arriving plates are identified by means of bar codes which they bear, and are sorted automatically in accordance with their positions on the plate cylinder. At the other end of the automatic plate transport system, in the press hall, robots carry out plate change at the four-high tower. Although it has not been realised in Innsbruck, due to cost reasons, it would be technically possible to guide the plate cassettes directly to the individual printing couples and robot systems. If this were the case, the N90A would no longer be touched by human hands from the time of exposure until after automatic removal from the plate cylinder at the end of the print run. But even with the manual forwarding of the cassettes from the central Telelift final stations to the printing couples, the use of robots has rationalisation effects: the complete plate change for the 64 positions of the printing tower takes twelve minutes, with a printer controlling this process from the press console.

In this configuration, what purpose does the positive platemaking technique fulfil? On one hand, it is intended to take due account of the fact that a great deal of film material must be processed, especially for commercial printing jobs as well as for the freesheet and weekly newspapers. Expressed in figures, this means that, at present, a total of 4500 laser-imaged N90A plates and about 5500 Agfa Ozasol P51 positive plates must be handled monthly. The re-digitisation of original copy, i.e. re-scanning, is done only with smaller ad formats; larger formats, up to two-page spreads, are copied conventionally.



The organisation of the plate-making operation at the Tiroler Tageszeitung in Innsbruck.

On the other hand, this positive plateline acts as a back-up for the CTP systems. Should one of the systems fail, there is the possibility to output on film the newspaper pages on an additional internal drum-type imager with register punching, and to finish them by the conventional method. The fact that the Tiroler Tageszeitung backs-up its CTP application with positive platemaking is due to the lesser difference of this method, compared with negative platemaking, to the reproduction characteristics of the direct, digitally-imaged plates. At this point it is possible to follow an argument that is of fundamental importance for J. Propst: "From our point of view, it is essential to have a digital production process offering a maximum degree of safety. It is a matter of deciding which level of safety to select. When doing so, it must be borne in mind that safety costs both time and money." For this reason, it is worth-while to take a brief look at which stations the digital page data passes through on its way to the N90A, as the newspaper house has implemented its own ideas here also. The pages released by the newsroom and advertising department respectively are sent via the network to an OPI and PrintServer based on a Sun UltraSparc computer with a 79 GB RAID system. After the automatic coarse/fine image data exchange, a specially developed software controls the distribution of the PostScript files to five RIPs, each of which can drive each CTP imager. These are PostScript Level 2 software RIPs running under Windows NT on DEC Alpha computers that temporarily store the generated exposure bitmaps on their 5 GB hard disks. The average RIPping time per TT page and colour is 25 seconds; the total computing time about 50 seconds.

Digital plate imaging under control with Agfa

The Agfa Ozasol N90A plates are exposed on the CTP systems with a constant resolution of 1446 dots/in. In continuous operation, there is a cycle time per plate of 105 seconds. This produces an output of 34 plates per hour and Autologic Platemaster CTP imager, a value that is availed of fully during the daily peak time between 5 p.m. and 7 p.m. (press start-up for the Tiroler Tageszeitung).

During the day, the platemaking department is occupied until early afternoon with inserts and preprints, followed at about 4 p.m. by the output of the day's advertising pages. Production of the editorial section comes next, lasting until about midnight. Three persons per shift work in the platemaking department: one looks after the five RIPs and the two plate imagers, the other two are responsible for positive platemaking as well as the remaining components of the plateline.

J. Propst reacts calmly to the question that is often put in relation to computer-to-plate and is considered to be quite critical, i.e. what happens in cases where a plate, for whatever reason, must be re-made? He replies that it takes a total of about five minutes to re-make a plate. In order to avoid periods of waiting in such a case, all plate processors, used both in analog and digital production, are kept in operation until printing finishes. Very stable results are reported to be obtained in continuous operation in Innsbruck with the machine processing of CTP plates via the two VSM65 processing systems.

From the quality point of view, the Tiroler Tageszeitung states its full satisfaction with the N90A. In its experience and under the conditions that exist at the operation, the standard screen ruling of 40 lines/cm can be used to obtain a screen percentage range from five to 85 percent up to the printed product. In principle, with the N90A, that has a finer reproduction than its predecessor, it is possible in a 48 screen to reproduce a tonal value range from two to 98 percent. In the press, the laser-imaged plate behaves like a conventional positive plate. The N90A has also achieved impressive results as regards length-of-run capacity at the Tiroler Tageszeitung: the 100,000 impression of the main product can be printed without having to change plates due to wearing-out effects.

Asked to sum up the consequences of the introduction of computer-to-plate at his operation, J. Propst emphasises improved topicality and greater flexibility in planning newspaper changeovers: it is now possible to change page contents up to about five minutes before press start-up. Today, it is no longer any problem to change a four-colour page, neither from the cost nor the time point of view. As such, digital plate imaging is in line with the newspaper's marketing concept and its competitive position – computer-to-plate as a functioning component within digital newspaper production.

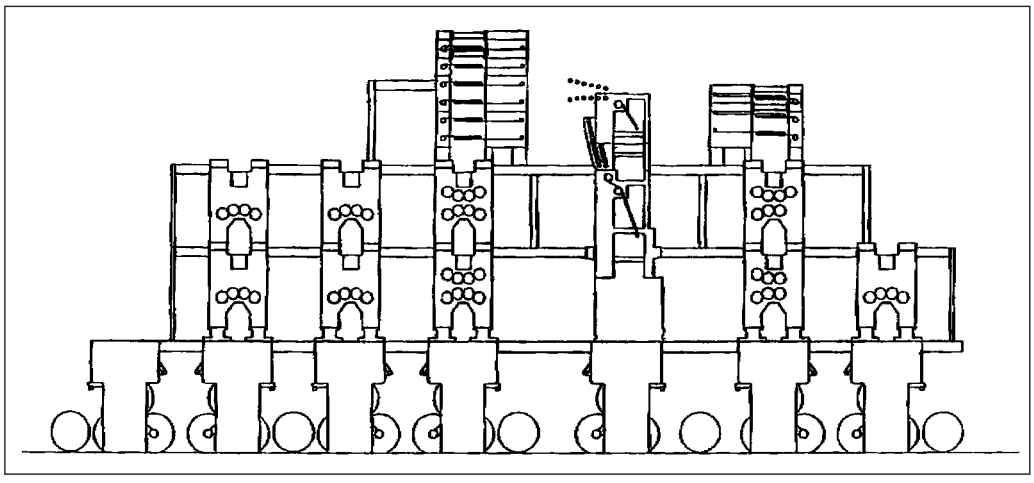
Diario Popular, Brazil, installs two Goss Newsliner presses

Empresa Jornalistica Diario Popular, publisher of Diario Popular, Sao Paulo, Brazil, recently installed two new Goss Newsliner presses from Goss Graphic Systems at its new production facility.

Each Newsliner press is a five-footprint, seven-web arrangement with a total of 23 printing couples. Each press will comprise: two four-high towers with four couples each, capable of printing two-over-two colour or two webs one-over-one; one four-high tower with five printing couples, capable of printing four-over-one colour; one four-high tower with eight printing couples, capable of printing four-over-fouir colour; a single level unit with two printing couples capable of printing one-over-one; and seven CT-50P reel-tension-pasters (RTPs); and a single delivery 2:3:3 jaw folder. The press will be capable of printing 56 broadsheet pages running straight or 112 pages collect with up to 12 pages in process colour and 16 pages of spot colour.

Included with the Newsliner will be the Meridian PC-based press control system with Auto Imposition, two press consoles and a supervisory workstation with file server. The Auto Imposition system rapidly generates multiple plate-up and web configurations for a given press and product.

Some of the claimed features of the Newsliner include delivering colour placement, paging and print quality capabilities newspapers require, and a choice of ColorFlow keyless, digital injector or open fountain inking systems. It features a stackable modular design; vertical web lead with blanket-to-blanket printing; compact, pressman-friendly units; 50- to 66-inch web widths; and a full range of service and support systems.



Press configuration of the Goss Newsliner press at Diario Popular in San Paulo, Brazil.