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Total computerized production management in the printing company

Integration of different production worlds in the printing house

Most of the printing houses (worldwide) are still working in the production flow of the printing house more or less manually according to the example of Johann Gutenberg.

For the future and in order to secure the competitiveness of the printing companies, new conceptions are in demand, which meet the increasing requirements of productivity and flexibility of the printing plant.

Today, many printing houses are already large concerns or they are about to develop themselves into large concerns with highly complex manufacturing islands. What is missing in many companies, is the conception and the conversion of a total integration of all manufacturing islands into an industrial production plant.

Chart: Islands
Beginning in the early nineties, we were working on a conception for the total integration, including many colleagues of the technical management out of printing plants with its practical experience.

Our structured conception called 'OPEN PRESS SYSTEM' is ready since for one year now. I would like to present it in a short form.

Chart: OPS Logo
The OPEN PRESS SYSTEM is structured in three main levels.

The first level presents the classical production level of the manufacturing sections:

**PrePress** with the physical or non physical page transportation from publishing house to the printing house and corresponding equipment such as RASTER IMAGE PROCESSORS, exposure unit and, recently, COMPUTER-TO-PLATE or COMPUTER-TO-FILM for the plate production (printing form)

**Printing Press** the printing press with the control, the drive which has recently also been discussed as shaftless drive, and the control system for the operation at the control console

**Mail Room** the mail room with bundling, ev. inserting and loading resp. distribution among the trucks for the transport to the customer

Chart: OPS 1
It is important that the productive level in all three departments will be equipped in such a way that it is possible to connect to the next higher level of automation.

With regard to the printing press, this is usually easy to realize. In the prepress area there are still some problems which, in the past, also existed in the mail room but meanwhile have been solved for the solutions of the most important vendors.

That means, the operating has to be suitable for an integration which has to be specially checked from technical side.

Chart: OPS level 2
The second level of the OPEN PRESS SYSTEM is the level of the so-called section or department management systems. These systems are used for the planning and preparation of the production and as well as for preset and supervision resp. control in the running production.

For the printing press area this is an old subject that has been finished. The prepress area is quite different, it is not a long time that the industry is able to offer corresponding systems.

Also for both the mailroom and distribution no standard department systems have been available for a long time. But also in these areas the first systems are actually installed and put into operation in various parts of the world.

Besides the constantly existing communication with the controls in the production, it is very important today to ensure the cross communication between the section systems.

For example, the PlanMail system is able to control the target edition of the printing press depending on the used quantity of newspapers at the ramp and considering the arising waste.

Similar examples could also be found between prepress and printing press.
The last step of the OPEN PRESS SYSTEM conception represents
the PLANT PRODUCTION MANAGEMENT SYSTEM

Chart: OPS level 3

The PLANT PRODUCTION MANAGEMENT SYSTEM integrated
into the total data household of the department systems now
offers unlike the local systems the possibility of central
information concerning for example the production status in
all sections on production and product level.

The main tasks of the PLANT PRODUCTION MANAGEMENT
SYSTEM therefore are

- the installation of a central production data base

- central production tracking

- production analysis and statistic short and long
term

- reporting

and, finally, the PLANT PRODUCTION MANAGEMENT SYSTEM
can be a bridge to further systems both in the printing and
publishing house, for example for material administration and
controlling and purchasing systems.
As usual, even the world of the printing house is not so easy as shown on the preceding charts.

Further systems which are independent, but absolutely necessary to be integrated in the data interconnection are to be considered.

Chart: OPS3 with extensions

such as

- maintenance systems for the complete printing house

- material flow systems for paper reels or preprints in the mailroom

and last but not least the bridge to the publishing house, because it is just state-of-the-art to take over data which are available in the publishing house in distribution and ELECTRONIC DATA PROCESSING systems feeding them to the department systems.
Even in the publishing house a similar conception on three levels is possible.

There will hopefully be time enough to have a quick look on our chart for the printing and publishing house.

But because of the short time slot for me I will not comment that.

Chart: OPS 123 / 123
Finally I would like to emphasize as follows:

- Every medium-sized and large printing or publishing house has to work out today a planning for a total integration according to the presented OPEN PRESS SYSTEM conception as a strategy goal.

Only in this way it is possible to meet the demands with regard to flexibility and competitiveness for the future.

- Kindly check precisely whether an integration of subsystems with open interfaces is really possible. Unfortunately we have to notice too often, that this has been promised, but cannot be realized or can only be realized with extremely high costs.

Check or let check from serious production specialists for example if there are complete data models and if these are correct.

Chart: Data Modell
Keep always in mind the entire conception and do not hesitate to invest a bit more money in the lower area (level 1 and 2) for the integrating possibility.

You will save this money repeatedly later-on by realizing the integration.

Standards are required which have to be worked out with priority and in fact not on the internal level.

In this case organisations such as IFRA and AMIC are in demand.

First steps have been done, such as the standard of the production tracking worked out by the IFRA in cooperation with many manufacturers.

This is important, but by far not sufficient.

If you follow all these recommendations, you will come to a total computerized production facility as shown in the end on this nice chart.

Chart: World/Globe

Thank you very much for your attention.