International Conference of

Media Component of Digital Economy

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Keywords

- New Business Models

- Competition

- Industrie 4.0

- 5G wireless network technologies

- Distributed production
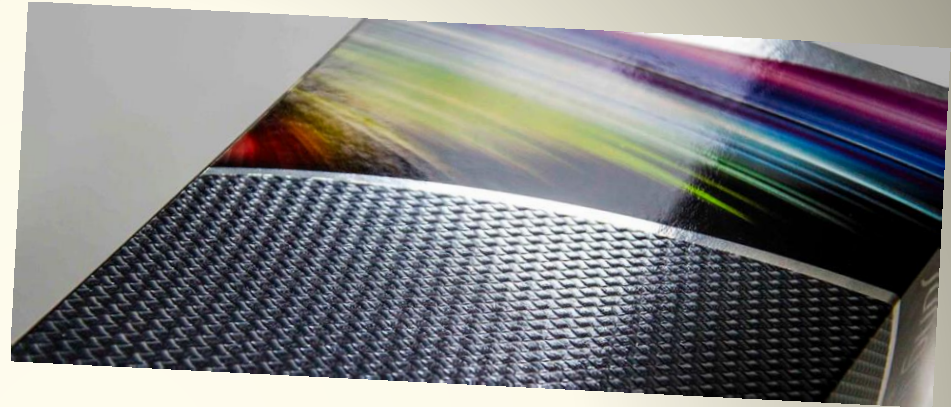
- (Vocational training and education) i

Founded: 2002
Turnover: 350 m€
Number of employees: 2300

New Business Fields

- **Print refinement**

- **Label production**

- **Packaging and the like**

High levels of specialization allow providing a much wider range of print products at reasonable prices.

- **Print refinement** with full-surface gloss varnish or the combination of partially applied matt and gloss varnishes to generate spatial effects.

- **Label production** especially of single-layer and multi-layer wet glue labels including logistics and installation of the labeling system at the customer's site.

- **Packaging and the like**
  - in special format on cardboard or metal-coated paper,
  - Displays including embossing
  - Blister cards, Skin- or push blister cards including finishing options such as protective varnish, sealing wax, UV varnish up to cellophane wrapping.

Tough Competition

All options of rationisation must be

taken

Particularly those given by digitation

"Industrie 4.0"

- intelligent and digitally networked self-organized system,

- where people, machines, plants, logistics and products communicate and cooperate directly with each other

- over all production steps in the value chain,

It encompass all phases of the product's lifecycle - from the idea of a product through development, manufacturing, use and maintenance to recycling.
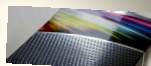
- https://de.wikipedia.org/wiki/Industrie_4.0

The numeral 4 stands for "fourth generation" - after the invention and introduction of

- steam engine,

- assembly line,

- electronics and information technology

as the preceding ones.

Point 0: a gadgets: Drawing of iattention to Digitization

**RGISCHE
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„Fourth Industrial Revolution"

•   Generic term of Industrie 4.0
    coined by Klaus Schwab, the managing director of the
    World Economic Forum,
    Topic of the Forum's meeting in Davos in 2016.

•   People and machines are connected with each other in real time for
    –   communication and
    –   system control

    i.e. it also encompasses the service sector - private and public –
    including the entire transport system - public and individual,

Keywords:

•   Internet of things
•   fully autonomous vehicle driving.

5G – fifth generation wireless network

- Designed to replace 4G LTE technology

- Allows communicaton in real time

- Inbternet of Things

5G - Features

- Data rates up to 20 Gbit / s,

- Use of higher frequency ranges

- Increased frequency capacity and data throughput

- Real-time transmission, capable of addressing 100 billion mobile devices worldwide simultaneously

- Latency times of less than 1 ms

- Compatibility of machines and devices

Print industry in an 5G environment

Distributed Production

Temporary outsourcing resulting in increased

- Quantitative capacity

- Qualitative capacity

Cost reduction through

- Specialization

- Less Capital Expenditure

- Even capacity utilization

Further Applications of Network

- Acquisition of customer orders, including costing

- Continuous checking of the material stock

- automatic delivery of new material

- Payment for ordered and delivered goods

- continuous monitoring of work progress with the possibility of intervention on the order. "last minute„-change

- Delivery and shipping

Special Service: Internet Solutíons

- Creation of websites,

- Downloads

- up-loads

- SEO (search engine optimization

- PPC (Pay per click-Advertising)

- etc

- Mastery of digital application techniques

requires an increasingly high level of professional skill that
cannot be achieved by way of "learning by doing" or ad-hoc trainings at weekends.

Consequently, companies need skilled workers who have taken a completely new path in vocational training and education.

Conclusion

Print media are no longer the primary platform for transmitting
- breaking news.

However they are still appreciated for

- local news,

- entertainment,

- advertising

Conclusion (cont.)

The demand of high value sophisticated unique print products will increase.

The printing industry will turn more and more a service providing industry including the creation of online presentations.

The printing industry will penetrate more and more the market of packaging products, i.e. the boundaries between printing and packaging technologies are becoming fluid.

Engineering education in general and for the media industry in particular must be more focused at information and computer technology

- Thank you for your attention

Compulsory Section II
Fundamentals

- Mathematics A and B   18 cp

- Computer science

  - Fundamentals   11 cp

  - Application oriented programming   6 cp

- Electro technical science I and II   <u>14 cp   49 cp</u>

Compulsory Section II
Application oriented subjects

- Computer architecture   6 cp

- Network   6 cp

- Introduction into Data base technology   6 cp

- Software technology   6 cp

- Signals and systems   7 cp

- Analog and digital circuits   6 cp

- Complementary sciences   6 cp   43 cp

Obligatory Internship
8 weeks outside the university   10 cp 10 cp

Compulsory Electives

Mediatechnology
- Colorimetry and media pre-stage technology 12cp
- Introduction to electronic publishing   6 cp
- Structural documents and XML   6 cp
- Digital output technologies 2D and 3D   9 cp
- offset technologies   6 cp
- Internet technologies   6 cp   45 cp

Transfer area Print and Mediatechnology
- Introduction print media   6 cp
- Postpress   6 cp
- Web Information Retrieval   6 cp
- Applied Machine Learning   6 cp   24 cp

Bachelor Thesis   12 cp   12cp

Conclusions

- Printed advertisements will continue be highly appreciated particular with local suppliers

- The demand of high value sophisticated print product with a touch of uniqueness will increase

- The printing industry will turn more and more a service providing industry including the creation of online presentations.

- The printing industry will penetrate more and more the market of packaging products, i.e. the boundaries between printing and packaging technologies are becoming fluid.

- Engineering education in general and for the media industry in particular must be more focused at information and computer technology