

INTERNATIONAL  
PRINECT USER DAYS

6. *International Prinect User Days, November 18<sup>th</sup> and 19<sup>th</sup>, 2015*

## New Features for label production

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# Workshop 5

## Prinect label workflow

1. Different workflows for labels
2. Workflow for ganging for cut & stack
3. Automatic creation with csv file
  - Different ways of sheet creation for ganging
4. Digital label print with Gallus DCS-340
  - Overview of Digital Front End Label
  - Multicolor
5. Q&A, Tips & Tricks

# Different workflows for label production depending on finishing requirements

## → Cut labels:

- Guillotine
- rectangular labels (like pages)



## → Cut & stack labels

- Guillotine with die cutting
- First cut, then die cut one-up



## → Die cut labels

- Sheet die cutter
- Nested sheet layout with one or more shapes





# Differentiation by single or multiple articles per sheet or job

→ Single article (sorted):

→ **One** sheet with one article



oder



→ Gangform:

→ **One or more** print sheets with one or more shapes and several articles (e.g. label sets= front, back, neck label) for **one** job



oder



→ Gang Job:

→ **One or more** print sheets with one or more shapes and several articles from different jobs to reduce production costs

10000   
1000   
250   
300   
300   
10000 





# Gangform production for labels

- Job creation with
  - Business Manager
  - Webshop
  - Cockpit : automated via .csv
  - Cockpit : manual
- One-up preparation
  - Prepress Manager
  - PDF Toolbox
- Sheet preparation with
  - Signa Station with Sheet Optimizer
  - Signa Packaging Pro





## Demo 1a: Cut and cut&stack label gangform

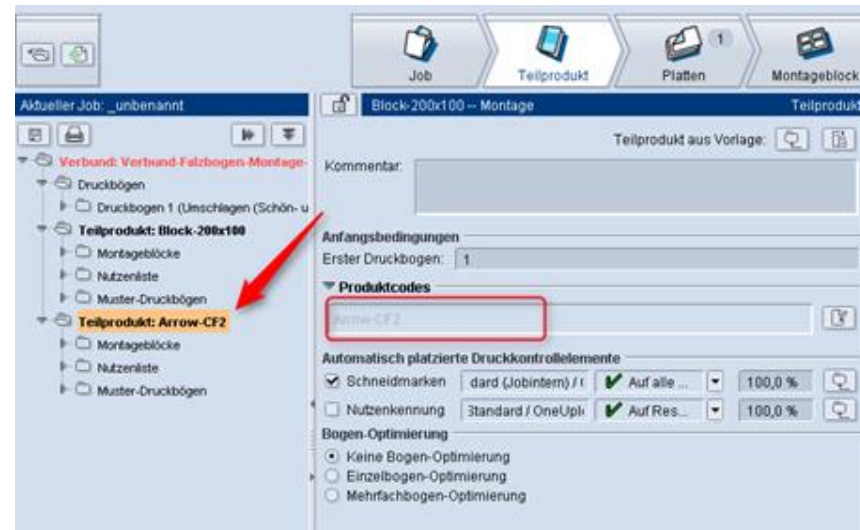
- Automated job creation with csv file:
  - Articles are created with all relating info and can be used in different gang jobs
  
- One-up preparation:
  - Creation of separation for embossing
  - PDF Compare
  
- Sheet preparation:
  - **without Layout**
  - Marks
  - Sheet optimizing



# New in Prinect 2016

## Gang jobs with CFF2 data

- Assembly blocks based on CFF2 for gang forms with cut&stack labels
- Mixing part products type “Impositioning” and “Assembly” with CFF2. This cluster can be used as layout template
- Easy filtering by paper quality
- Subsequent adaptation of delivery amount of each job
- Transfer of results to Business Manager





# Gang job calculation

- Automatic calculation based on geometry and cost parameters
- Comparison of different plate templates (formats)
- The most cost efficient result will be shown!
- Manual corrections can be done
  - Slider
  - Delete/add

Sheet Optimization Setup

<Standard / MSO> Sheet Optimization Setup: [icon]

Use Optimization Parameters from Plate Template

▼ Cost Data for Optimization

Print Preparation (global): 250.0 (per separation): 0.0

Printing Material (per 1000 sheets): 100.0

Less Plates [slider] Less Sheets

Advanced Settings...

Optimization Result

Total Real Costs: [input] Total Sheet Count: [input]

Efficiency Factor (per Item): [input] Number of Varying Press Sheets: [input]

Optimize Report

Advanced Sheet Optimization Setup

Sheet Optimization

Max. No. Articles: 0

Quantity as Multiple of: 100 Overproduction: 0.0 %

Allow 1up on Different Press Sheets

Press Sheet Allowance (Base): 0 (percentage): 0

1up Allowance (Base): 0 (percentage): 0

Cost Data for Optimization

Press (hourly rate): 0 Sheets per Hour: 0

OK Cancel





# Display of optimization results

→ For all working modes

→ Detailed results under “Results”\*

→ Summary of most important results under “Optimization”

**Results**

Optimization Result

|                        |         |                                 |       |
|------------------------|---------|---------------------------------|-------|
| Total Real Costs:      | 1230.34 | Total Sheet Count:              | 10900 |
| Efficiency Factor:     | 72.83 % | Number of Varying Press Sheets: | 2     |
| Different Objects:     | 18      | Splits:                         | 0     |
| Total Target Quantity: | 125200  | Total Allowance:                | 0     |
| Total Waste Quantity:  | 0       | Total Paid Overproduction:      | 6260  |
| Blank Waste (Sheets):  | 1806    | Printed Waste (Sheets):         | 1156  |
| Printed Waste (Items): | 25140   |                                 |       |

Press Sheet

Plate Template: Standard (Job internal) / SM 74      Paper Size: 700.0 mm x 500.0 mm

| Sheets | Quantity | Allowance | Area Utilized |
|--------|----------|-----------|---------------|
| 1      | 10500    | 0         | 83.55 %       |
| 2      | 400      | 0         | 80.43 %       |

1up

| Job | Object                 | Delivery Quantity | Overproduction |
|-----|------------------------|-------------------|----------------|
|     | 01EZS0002#10000        | 10000             | 500            |
|     | 01EZS0025#8500         | 8500              | 425            |
|     | 01EZS0025#8500         | 8500              | 425            |
|     | 01EZS0047#9000         | 9000              | 450            |
|     | 01EZS0047#9000         | 9000              | 450            |
|     | 01EZS0045#9000         | 9000              | 450            |
|     | 01EZS0045#9000         | 9000              | 450            |
|     | 01EZS0013#9000         | 9000              | 450            |
|     | 01EZS0013#9000         | 9000              | 450            |
|     | 01EZS0013#9000         | 9000              | 450            |
|     | 01EZS0018#10000        | 10000             | 500            |
|     | 01EZS0018#10000        | 10000             | 500            |
|     | 01EZS0018#10000        | 10000             | 500            |
|     | Square05D_EPS0004#5000 | 5000              | 250            |
|     | Square05D_EPS0007#6000 | 6000              | 300            |
|     | Square05D_EPS0007#6000 | 6000              | 300            |
|     | Square05D_EPS0011#2000 | 2000              | 100            |
|     | Square05D_EPS0011#2000 | 2000              | 100            |
|     | Square05D_EPS0003#1600 | 1600              | 80             |

Show Placed Folding Sheets/Assembly Blocks

Optimize      Report

Job Number: \_unnamed 11/13/15 11:36 AM

Total Values:

|                                 |                                 |
|---------------------------------|---------------------------------|
| Total Real Costs:               | 1230.34                         |
| Total Sheet Count:              | 10900                           |
| Efficiency Factor:              | 72.83 %                         |
| Number of Varying Press Sheets: | 2                               |
| Different Objects:              | 18                              |
| Splits:                         | 0                               |
| Total Target Quantity:          | 125200                          |
| Total Paid Overproduction:      | 6260                            |
| Blank Waste (Sheets):           | 1806                            |
| Printed Waste (Sheets):         | 1156                            |
| Printed Waste (Items):          | 25140                           |
| Plate Template:                 | Standard (Job internal) / SM 74 |
| Paper Size:                     | 700.0 mm x 500.0 mm             |

Sheets Quantity Allowance Area Utilized

| Sheets | Quantity | Allowance | Area Utilized |
|--------|----------|-----------|---------------|
| 1      | 10500    | 0         | 83.55 %       |
| 2      | 400      | 0         | 80.43 %       |

| No. | Name | Object                 | Delivery Quantity | Allowance | Overproduction | Waste (pieces) | 1 | 2 |
|-----|------|------------------------|-------------------|-----------|----------------|----------------|---|---|
| 1   |      | 01EZS0002#10000        | 10000             | 0         | 500            | 0              | 1 |   |
| 2   |      | 01EZS0013#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 3   |      | 01EZS0013#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 4   |      | 01EZS0018#10000        | 10000             | 0         | 500            | 0              | 1 |   |
| 5   |      | 01EZS0018#10000        | 10000             | 0         | 500            | 0              | 1 |   |
| 6   |      | 01EZS0025#8500         | 8500              | 0         | 425            | 1575           | 1 |   |
| 7   |      | 01EZS0025#8500         | 8500              | 0         | 425            | 1575           | 1 |   |
| 8   |      | 01EZS0045#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 9   |      | 01EZS0045#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 10  |      | 01EZS0047#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 11  |      | 01EZS0047#9000         | 9000              | 0         | 450            | 1050           | 1 |   |
| 12  |      | Square05D_EPS0003#1600 | 1600              | 0         | 80             | 320            | 5 |   |
| 13  |      | Square05D_EPS0003#1600 | 1600              | 0         | 80             | 320            | 5 |   |
| 14  |      | Square05D_EPS0004#5000 | 5000              | 0         | 250            | 5250           | 1 |   |
| 15  |      | Square05D_EPS0007#6000 | 6000              | 0         | 300            | 4200           | 1 |   |
| 16  |      | Square05D_EPS0007#6000 | 6000              | 0         | 300            | 4200           | 1 |   |
| 17  |      | Square05D_EPS0011#2000 | 2000              | 0         | 100            | 700            | 7 |   |
| 18  |      | Square05D_EPS0011#2000 | 2000              | 0         | 100            | 700            | 7 |   |



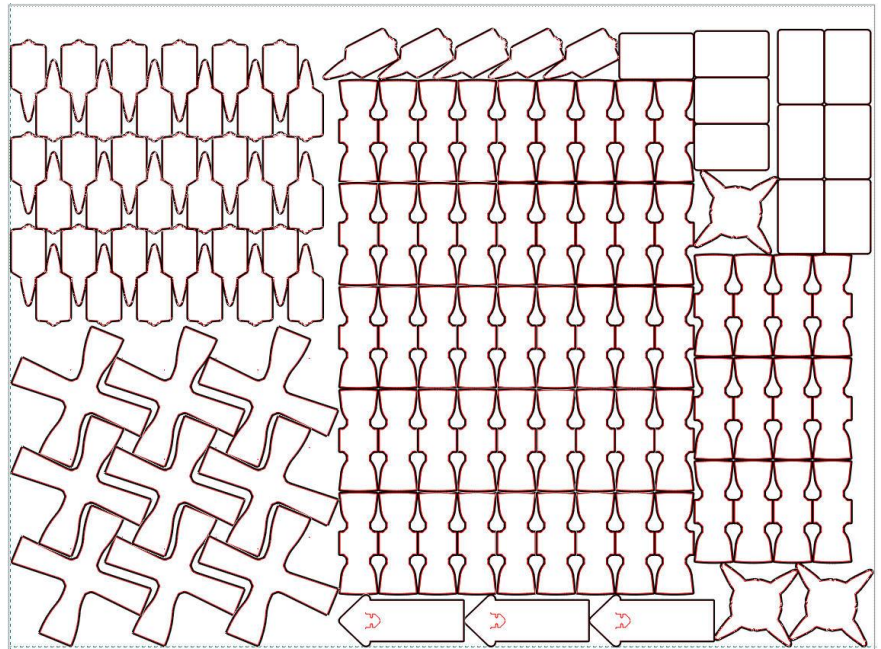
# Demo 1b:

## Cut and cut & stack label gang form

- Automated job creation with csv file:
  - Articles are created with all relating info and can be used in different gang jobs
  
- One-up preparation:
  - Creation of separation for embossing
  - PDF Compare
  
- Sheet preparation:
  - **with Layout**
  - Marks
  - Sheet optimizing

# Gang form based on die cutting layout

- Import of any CAD formats
  - Automatic sheet optimizing
  - Sorting by articles
  - Changes
- 
- Fast creation of cost efficient print sheets!





## Demo 2: Die cut label gang form

- Automated job creation with csv file:
  - Articles are created with all relating info and can be used in different gang jobs
- Sheet optimizing on die layout
  - Shape assignment based on csv info
- 3D simulation of labels



# Digital label printing

## Gallus DCS 340 with Prinect Digital Front End Label



### Prinect DFE-Label

- Data preparation
- Job management
  - Preflight
  - Impositioning
  - Color management
  - Rendering/sreening



### HMI

- Machine Control
- Machine settings
  - Job queue control
  - Control print heads
  - Machine feedback



# Advantages of Prinect DFE-L

- High efficiency for all processes
- Higher automation level
- Better transparency & cost control
- Top quality – repeatable at any time





# Data Import

→ PDF Standard data format from any application

→ One-up



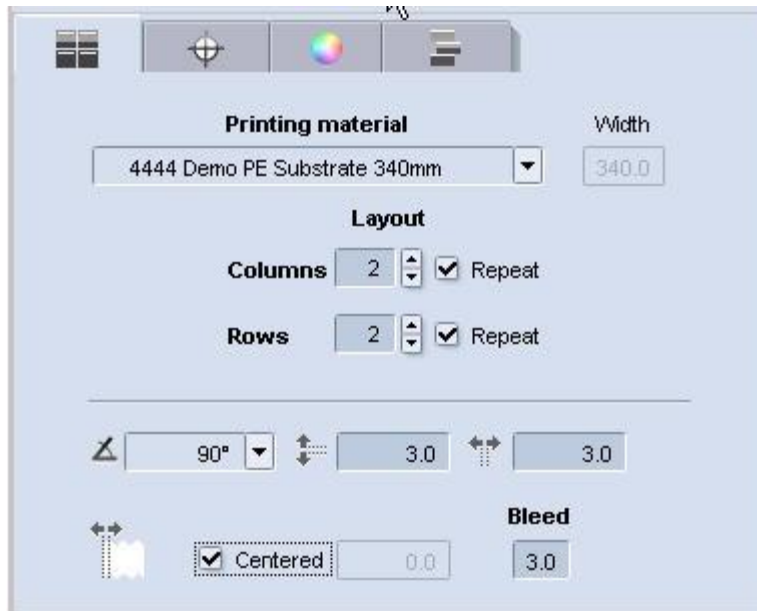
or

→ Segments





# Imposition in DFE-L



- For one-ups
  - Substrate
  - Amount horizontal & vertical
  - Rotation
  - Distances
  - Position

- For segments only
  - Substrate
  - Position

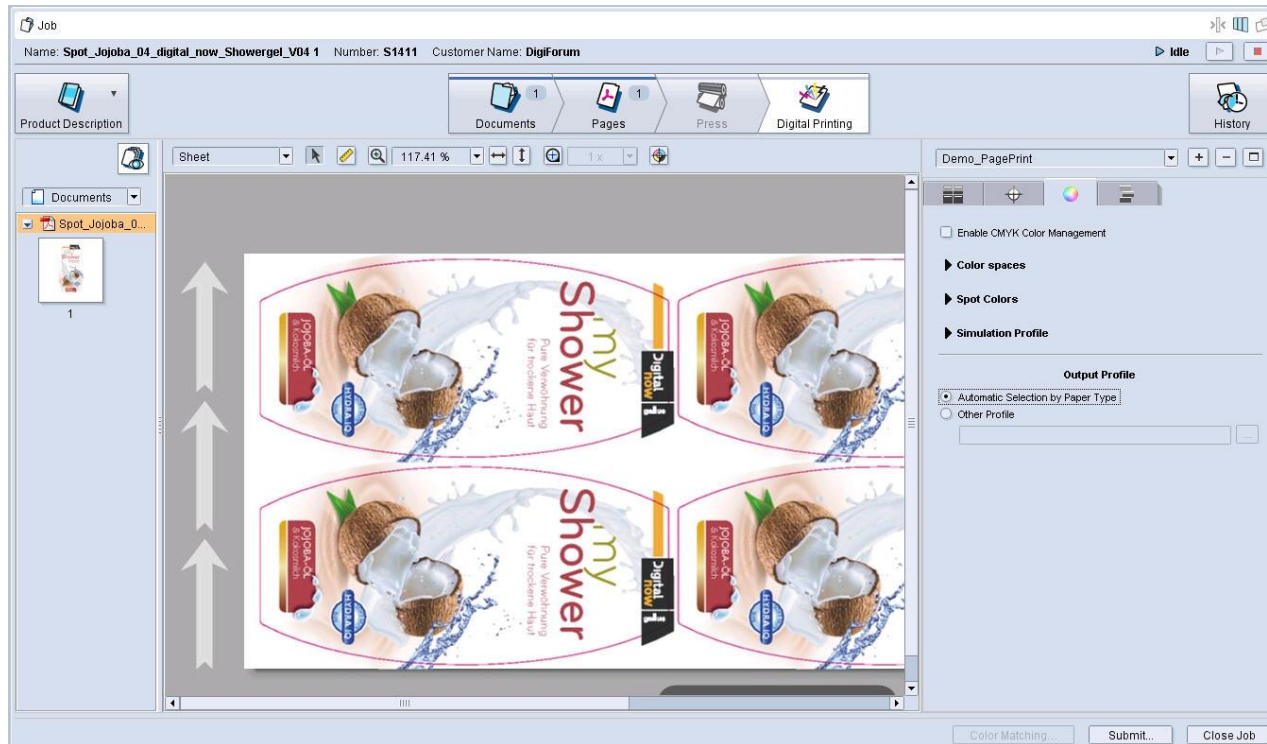




# Color Management

→ Adaptation to available inks

→ ICC-profiles for different substrates and printing conditions





# Spot color simulation

- Spot color from color tables
  - Pantone, HKS, individual tables
- OR
- Measuring a sample



Assignment of job colors to mark colors

Automatically per surface  
 User-defined:  Global  in layout

Allow spot colors for BCMY

"Process" target: CMYK... else L\*a\*b\*  
"Output" target: CMYK... else L\*a\*b\*

Submit print order to press  
 Output empty separations

Take color definitions for new colors from color tables  
 Autoresolve naming conflicts for new colors

Color List: All Colors

| Color             | Name              | Source      | Target | Marks     | Type   | Usage         | C   | M   | Y   | K   | L* | a* | b*  | ND   | Screen |
|-------------------|-------------------|-------------|--------|-----------|--------|---------------|-----|-----|-----|-----|----|----|-----|------|--------|
| Black             | Black             | Job         | Output | Automatic | Normal | Printing Unit | 0   | 0   | 0   | 100 |    |    |     | 1.70 |        |
| Cyan              | Cyan              | Job         | Output | Automatic | Normal | Printing Unit | 100 | 0   | 0   | 0   |    |    |     | 0.61 |        |
| Magenta           | Magenta           | Job         | Output | Automatic | Normal | Printing Unit | 0   | 100 | 0   | 0   |    |    |     | 0.76 |        |
| Yellow            | Yellow            | Job         | Output | Automatic | Normal | Printing Unit | 0   | 0   | 100 | 0   |    |    |     | 0.16 |        |
| Jojoba            | Jojoba            | Job         | Output | Automatic | Normal | Printing Unit |     |     |     |     | 48 | 70 | -33 | 0.56 |        |
| Orange_DigitalNow | Orange_DigitalNow | Color ta... | Output | Automatic | Normal | Printing Unit | 0   | 62  | 100 | 0   |    |    |     | 0.54 |        |
| Stanzkontur       | Stanzkontur       | Job         | Output | Automatic | Normal | Tool          | 0   | 100 | 0   | 0   |    |    |     | 0.78 |        |



# Color adaptation

- Measured color can vary
- Print samples
- Customer selects result

Spot Color Matching

Color Name: Jojoba

Original Color

| C | M | Y | K | L*    | a*    | b*     |
|---|---|---|---|-------|-------|--------|
| - | - | - | - | 48.42 | 70.40 | -32.52 |

Selected Color

| C  | M  | Y | K | L*    | a*    | b*     |
|----|----|---|---|-------|-------|--------|
| 38 | 93 | 0 | 0 | 48.42 | 70.40 | -32.52 |

Reset

Settings

Step width: 3

Correction:  Lightness / Chroma  Color Cast

Paper Grade: glossy coated

Output device: Linoprint L

DeltaE: 7.2346

Print Test Page

Close

Tagged patches cannot be output correctly on paper.



# HMI print queue management

- Meta data and rendered data are available
- Printer can add information, change priorities, ...
- Additional information at the beginning or end

Content



1-ups with marks  
for production

Job Header



Job-Information for the print  
shop (entire roll)  
e.g.: customer, JobID, due  
date

Segment  
Header



Article information (single  
lane)  
e.g. product ID, customer  
order ID, delivery amount

DyeCut  
Header



DyeCut contour for  
setup of DyeCutter  
(inline or offline)

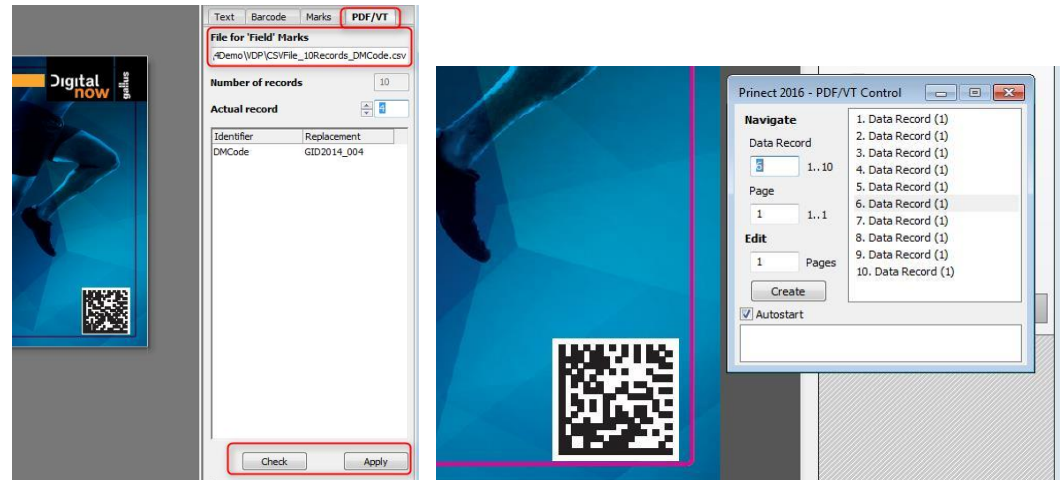


# Prinect Digital Front End Label Variable Data

- Fast creation of variable data in PDF Toolbox
- E.g. Datamatrix Code with individual number on each one-up



- Output as PDF-VT
- Check with PDF-VT Control



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For further information please contact [sabine.roob@heidelberg.com](mailto:sabine.roob@heidelberg.com)

Thank you for your attention!

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