

## Printing

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## Printing

- I5/OS Printing architecture
- Printer file
- PDF support
- ASCII Printers (PCL, PostScript...)
- Host Print Transform
- AFP / IPDS
- PSF

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## Final document

- Fonts
- Overlay
- Page segments
- Lines
- BarCode
- Gray zone
- Logos
- Signatures

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## DDS

- Keywords
  - Basics... for SCS printer
    - SKIPA SKIPB SPACEA SPACEB
  - Basics... for matrix printer
    - CPI LPI CHRISZ
    - HIGHLIGHT UNDERLINE PRTQLTY
  - Advanced.. For matrix printers
    - DFNCHR COLOR
  - For special printers
    - TRNSPY

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## DDS

- Keywords
  - for AFP/IPDS printers
    - FONT FNTCHRSET CDEFNT
    - LINE BOX
    - BARCODE
    - DRAWER DUPLEX OUTBIN
  - Advanced
    - POSITION TXTRTT
    - OVERLAY PAGRTT PAGSEG

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## DDS

- For AFP documents
  - DOCIDXTAG
  - DASTMCMD (nop)
  - STRPAGGRP ENDPAGGRP
  - INVDTAMAP INVMMAP

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## PRTF

- Type (\*AFPDS) required for advanced functions
- Usefull values in V6R1 for PDF...
  - Stream file name to store the pdf...
    - (no LPP and no config required)...

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## Host Print Transform

- +/- like a printer driver
- The spooled file is stored in an output queue in an internal i5/OS format
- The spooled file is transformed into a data stream (language) depending on the printer
  - PCL, PostScript,... but also PDF, TIFF,...
- Use standard format or custmized through WSCT object.

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## PDF

- Print a pdf from AS/400
  - Create a pdf printer...
    - Using a wizard from iSeries Navigator
    - OR
      - CRTPSFCFG
        - » PSF CFG OBJ COMPSFxx
        - » Generate PDF ouput ... \*STMF
        - » Emulation \*IP40300
        - » Paper size \*A4
        - » PDF data queue COMMONxx/DQ
        - » PDF Directory /home/Commonxx
      - CRTDEVPRTPRT
        - » Device description COMPDFxx
        - » Device Class \*LAN
        - » Device type/model \*IPDS/0
        - » AFP \*YES
        - » Portnumber 50xx
        - » Font 011
        - » Remote location 127.0.0.1
        - » User defined object COMMONxx/COMPSFxx\*/PSFCFG

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## BarCodes

- A barcode is just a font... so a DDS keyword...
- Barcodes are standard in i5/OS
  - 1D barcodes (EAN, Code 39, Interleave 2of5, CODE 128, etc..)
  - 2D barcodes (PDF417..)

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## BARCODE keyword

- BARCODE(bar-code-ID [height] [[\*HRZ | \*VRT] [\*HRI | \*HRITOP | \*NOHRI] [\*AST | \*NOAST] [modifier] [unit-width] [wide/narrow-ratio]])
- Barcode-ID :
  - CODE128 CODE3OF9 EAN13 INTERL2OF5...

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## BARCODE Keyword

- Height
  - Either number of lines : 6 → 6lines
    - LPI(6) → 6 = 1 inch
  - OR x \*UOM
    - Refer to UOM keyword in PRTF : \*CM/\*INCH..
    - X can be any value between .1 and 10 inches or .25 and 25.40 cm
- Orientation
  - \*HRZ or \*VRT
- Include readable information
  - \*HRI / \*NOHRI
  - Where to include \*HRITOP
- Include the asterisks for Code3of9
  - \*AST / \*NOAST

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## BARCODE Keyword

- Width of the line/bar/space... (narrow)
  - \*WIDTH (from 0.007 to 0.208)
  - Ex (\*WIDTH &width)
- Ratio between narrow and wide bar
  - \*RATIO (from 2.00 to 3.00)
- Position in Line/Column is the upperleft position of the BarCode

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## BARCODE Keyword

- (\*PDF417 row-size number-rows security [escape-indicator] [\*MACRO(&data-field-name)])
  - Row size (between 1 & 30 characters)
  - Number-rows (between 3 & 90 OR \*MIN)
  - Security (between 1 & 8 ~= added checksum)
  - Escape \*ESCAPE or \*NOESCAPE \ is escape
  - \*MACRO = Control Block coding...

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## LINE Keyword

- LINE(position-down | &position-down-field position-across | &position-across-field line-length | &line-length-field line-direction line-width | &line-width-field [line-pad] [color value])

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## LINE Keyword

- Position (down& across), length, direction and width are required.
- Can be constant or variable.
- Program to System fields
  - Type S
  - Usage P
  - Len 5 dec 3
- Value between .001 and 22,75 inches or .001 and 57,79 CM.
- Special values:
  - \*NARROW = 12/1440 in.
  - \*MEDIUM = 24/1440 in.
  - \*WIDE = 36/1440 in.

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## LINE Keyword

- Line Direction : \*HRZ / \*VRT
- Line Pad : \*BOT/\*TOP or \*RIGHT/\*LEFT
  - Default to \*BOT/\*RIGHT
- COLOR can be
  - (\*COLOR BLU/BLK/BRN/GRN/PNK/RED/TRK/YLW)
  - (\*COLOR \*RGB Rval Gval Bval)
  - (\*COLOR \*CYMK Cval Yval Mval Kval)
- IF LINE is used → all fiels in the RCDFMT must have the POSITION keyword.

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## BOX Keyword

- BOX(first-corner-down | &first-corner-down-field  
first-corner-across | &first-corner-across-field  
diagonal-corner-down | &diagonal-corner-down-field  
diagonal-corner-across | &diagonal-corner-across-field  
line-width | &line-width-field  
[color value]  
[shading])

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## BOX Keyword

- Indicate coordinates in X/Y..
- Line width
- Color
- Shade in % or KWD and color
  - \*XLIGHT/\*LIGHT/\*MEDIUM/\*DARK/\*XDARK)
  - (\*SHADE \*MEDIUM (\*COLOR BLU))

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## OVERLAY

- Create an overlay...
  - Easy when you know..
  - Just use the CRTOVL command
- Install the printer driver on your PC
- Use any windows application to design your overlay.. (word, paint, publisher...)
- Print it using the print driver
- Transfer the file to the system i
- Create overlay ...

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## OVERLAY

- Step by step
- Install the AFP printer driver
  - From iSeries access for windows...
- Print to file using the AFP driver
  - Specify output as overlay
- Create a PF on the i
  - **CRTPF FILE(COMMONxx/AFPRES)**  
**RCDLEN(32766) MAXMBRS(\*NOMAX)**  
**LVLCHK(\*NO)**

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## OVERLAY

- CRTOVL OVL(COMMON/COMMONC)  
FILE(COMMON/AFPRES) MBR(COMMONC)  
DATATYPE(\*AFPDS)  
TEXT('Common Luxembourg Overlay Col')
- CHGPRTF FILE(SMPOVL)  
DEVTYPE(\*AFPDS)  
PAGESIZE(72 120 \*ROWCOL)  
CPI(15)  
FRONTOVL(COMMON/COMMONC \*SAME \*SAME)  
OUTQ(\*LIBL/COMMON00)

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## Page Segment

- Is just an image (logo signature...)
- PAGSEG(library-name | &library-name-field/  
page-segment-name | &page-segment-name-field  
position-down | &position-down-field  
position-across | &position-across-field  
[( \*SIZE height | height-field width | &width-field)]  
[( \*ROTATION rotation | &rotation)]

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## Fonts

- Use WRKFNTRSC command
- Naming... is a \*FNTRSC object but
  - An IBM font starts with C0
  - An IBM character set starts with T1
  - An IBM coded font name starts with X0

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## LAB

- Try it by yourself...

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