

One more three letter acronym...
the buzzword of today...

CTP

it can mean many things

Computer To Print
– digital printing

Computer To Plate
– direct exposure of offsetplates

Computer To Page-imposed(films)
– integrated production of imposed films

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to the pre-press they all mean the same...

CTP

Computerization of The Pre-press

In order to utilize CTP we must fully integrate our pre-press operations.

Every operation has to be performed digitally.

Computerization of The Pre-press

Fully integrated pre-press consists of:

- Workstations
- Network
- Server
- Scanning or solution for datatransfer
- Film scanning
- Digital Proofing
- Digital imposition
- Trapping
- Digital blueprint
- RIP solution
- Archive and back-up
- Solution for last-minute changes

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Computerization of The Pre-press

Workstations

Macintosh or PC

- memory and power according to use
- serious imaging needs >200 MB of RAM

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Computerization of The Pre-press

Network solution

A3 page in fourcolor = 50 MB (x 8 = 400 Mbits)

AppleTalk is 256 kBd

7350 - 15625 seconds (4,3 hours!)

nominal speed is 1562 seconds

Ethernet 10 Mb/s

250 - 450 seconds (7,5 min.)

nominal speed is 42 seconds

Variable data on Computer To Print needs > 111 Mb/s

(1000 A3's/hour = 1000 x 50MB = 50000 MB x 8 =
400000 Mbits

400000 Mbits/3600 seconds = 111 Mb/s.)

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Computerization of The Pre-press

Server

- OPI-imagehandling
- managing of output queues and print spooling
- archiving and back-up

UNIX, Windows NT, Macintosh or Novell

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Computerization of The Pre-press

Scanning or solution for datatransfer

own scanner or using trade-shops

solution for datatransfer

- magnetic tapes (DAT, Exabyte)
- CD-ROM
- removable disk drives (SyQuest, ZIP etc.)
- on-line data transfer (FirstClass, 4Sight, FTP)

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Computerization of The Pre-press

Film scanning

digitizing old film separations

- dot by dot
- as continuous tone and ASCII

very expensive scanners!

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Computerization of The Pre-press

Digital Proofing

no “contract proofs”

quality of digital proofs not as good as
photomechanical proofing

Ink-jet

- Iris (Scitex Realist)
- DuPont Digital Cromalin

Dye sublimation

- 3M Rainbow
- DuPont 4Cast

Electrophotography

- Canon color copier
- Color laser printers

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Computerization of The Pre-press

Digital imposition

PressWise

- good with PageMaker, not so good with Quark

Impostrip

- good with Quark, not so good with PageMaker?

Farrukh

- good with PC files

Signastation by Linotype-Hell

- NextStep Display PostScript

Computerization of The Pre-press

Trapping

- TrapWise by Luminous
- IslandTrapper by Island Graphics
- Autoframes by Scitex
- TrapIt by Rampage Systems
- Autotrap by Crosfield
- RipLink Trap by Ultimate

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Computerization of The Pre-press

Digital blueprint

Ink-jet plotters

eg. by Hewlett-Packard

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Computerization of The Pre-press

RIP solution

only the fastest is fast enough!

hardware or software-RIP?

the same RIP for

- filmexposure
- digital blueprint
- direct plate exposure

RIP's by

Adobe, Harlequin or Scitex work differently!

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Computerization of The Pre-press

Archive and back-up

back-up needs organization,

eg. DAT-drive that is programmed to start every night.

archiving needs also organisation

but also a database-program if you want to find the images after a few years

Computerization of The Pre-press

Solution for last-minute changes

pre-flight programs

editing the already RIPped bitmap

OneVision

– NextStep & Display PostScript

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Computer To Plate

Choosing the type of offsetplate

UV-laser not yet available
– you cannot use conventional plates

plates containing silver	laserpower 1
very fast photopolymer plates	laserpower 10
thermal plates	laserpower 100
plates using masks	

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Computer To Plate

Plates containing silver

Lihtostar by Agfa

Silverlith by DuPont-Howson

- nonstandard water/ink-balance
- additions to the fountain solution
- very good sensitivity – suitable for internal drums
- short print runs

newspapers

books

small size offset

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Computer To Plate

Very fast photopolymer plates

Agfa (Hoechst) N90

- mediocre sensitivity – needs high powered lasers
- medium sized printruns

newspapers

books

suitable for color

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Computer To Plate

Plates using masks

plates imaged with ink-jet

plates with double lightsensitive emulsions

CTX by Polychrome

- very sensitive
- good handling properties – like a normal plate
- medium to long printruns
- high quality color
- slightly more expensive
- needs special processing

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Computer To Plate

Thermal plates

New technique – still in its infancy

Heidelberg DI – Presstek

Kodak

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Computer To Plate

Choosing a platererecorder

- flatbed
- internal drum
- external drum

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Computer To Plate

Flatbed

- best solution for automatic plate transportation
- exposure by rotating polygonal mirror
- deviations have to be corrected with lenses
- each mirror has its individual error
- uneven illumination – laser power has to be modified
- only up to size 55 x 70 cm
- good for production of many small plates

newspapers
forms printing

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Computer To Plate

Internal drum

- best for very sensitive plates
- very compact solution
- platesizes up to 140 x 170 cm

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Computer To Plate

External drum

- plate rotates with drum
- rotation speeds only about 300 rpm
- needs many exposureheads

CREO uses 480 YAG-laserbeams

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Computer To Page-imposed(films)

4-up or 8-up imposed film

- a good solution while training for full Computer To Plate
- filmrecorder good back-up for platerrecorder
- gives most of the benefits
- bigger size = problems²

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Computer To Print

Electrophotography

Indigo

- wet toners, one color at a time, sheetfed

Xeikon (Agfa, Barco, IBM)

- dry toners, 4+4 colors, web

In-line offset

Heidelberg



Computer To Print

do we need a printer?

who is he/she?

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