

CtP 2009



Nearly 20 years of CtP

Michael Mittelhaus

Prepress Consultant

My business

- ★ IT Background
- ★ Prepress business
- ★ Consultancy 1994
- ★ CtP and Prepress Workflow
- ★ JDF Integration
- ★ Consultancy, Seminars, Trade press

CtP 2009 Part I

- ★ Short history & markets today
- ★ CtP technologies
- ★ New developments: Inkjet CtP
- ★ New developments: UV CtP
- ★ New developments: Thermal CtP

CtP 2009 Part II

- ★ How to choose CtP

- ★ Quality control

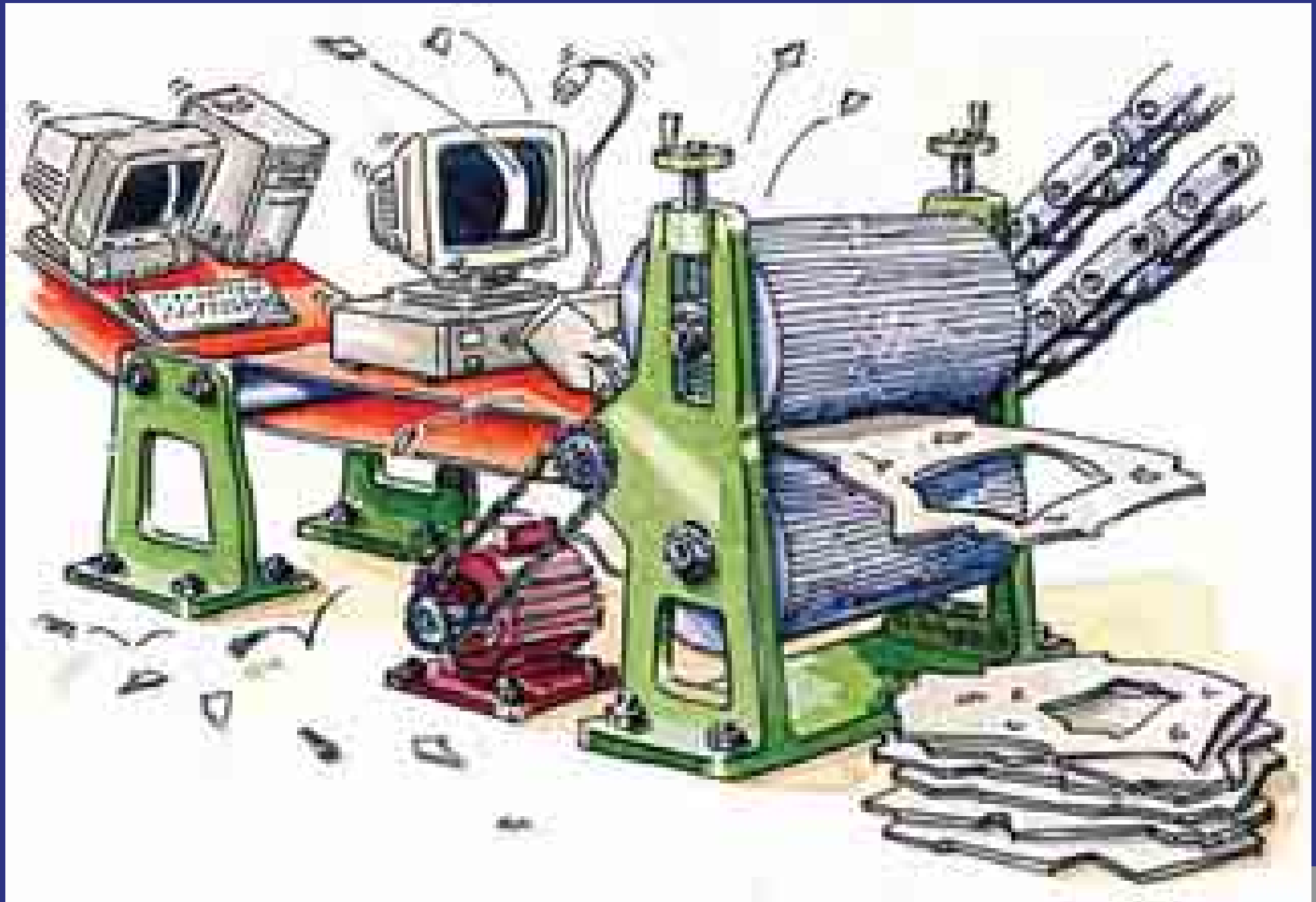
- ★ Problems today

- ★ „Low-chem“ CtP (aka process free)

CtP 2009 Part III

- ★ Latest developments
- ★ Check: CtP Interfaces !
- ★ Last automations
- ★ Look out: For China!

Computer to plate



CtP since 1990!

★ **Thermal**

★ **Violet**

★ **UV-CtP**

★ **Inkjet CtP**

CtP history

- ★ 1990: Höchst N90 at Drupa
- ★ 1990: Plate, but no imager
- ★ 1995: 40 exhibitors show CTP
- ★ New company called Creo: FD-YAG!
- ★ More vendors than users

Creo 1995



★ 1995 Creo 3244 Automat

★ Green FD-YAG Laser; press room sited

CtP history

- ★ CtP statistics 1996: 40 systems but only 30 users!
- ★ Change 1: Imprinta 1997 (last one)
- ★ Change 2: Thermal CtP
- ★ Kodak plates and Creo plate recorders

Creo Trendsetter



CtP history

- ★ CtP 1992: Arg-Ion (Blue laser), 532 nm
- ★ CtP 1995: FD-YAG (1064 nm), red laser
- ★ CtP 1997: Thermal, 830nm
- ★ CtP 2000: Violet, 410 nm
- ★ Ipex 2006: UV with violet diodes, 410 nm
- ★ Drupa 2008: Inkjet CtP, 7 systems

CtP history: Lost names

- ★ Once upon a times: Autologic, Barco
- ★ Cortron, Creo, Cymbolic Sciences
- ★ ICG, Gerber, Jos. Schneider, KPG
- ★ Misomex, Optronics, Optoxxx
- ★ Purup-Eskofot, Scangraphic, Strobbe
- ★ Scitex, Versitec, Western Litho

Lost names....



Learn from CTP history

- ★ Technologies are changing
- ★ Technologies & vendors can vanish
- ★ Not every idea is feasible
- ★ Markets are still in a change

CtP Concentration

- ★ 2005: Around 40 vendors, 50 systems
- ★ Today: Agfa, Fuji - OEM only!
- ★ Today: Dotline, Escher-Grad, Xanté
- ★ Cron/Highwater, IPA, LSH, Presstek;
- ★ FFEI (OEM for Fuji)
- ★ Punch Graphix (OEM for Agfa)

Concentration: 8 worldwide

- ★ Kodak, Krause, Lüscher
- ★ Heidelberg; ECRM (Koop Agfa in Latam)
- ★ Screen (OEM for Agfa, Fuji, formerly HD)
- ★ 2005: Around 40 vendors, 50 systems
- ★ 2009: Just 15/8 manufacturers
- ★ Drupa 2012: Less, but + Inkjet, + China !

History - DI machines

★ The DI-Story

★ 1991: Heidelberg GTO DI (Print USA)

★ 1995: MAN Dicoweb, Komori Project D

★ 2006: Heidelberg withdraws,
Dicoweb gone, no Project D

History - DI machines

- ★ KBA, Presstek, Screen: Niche market
- ★ Digital presses rising
- ★ CtP and conventional presses make-ready faster
- ★ No interest in rewritable materials!

Lost names....



CtP markets today

- ★ Worldwide 27.000 units
- ★ 5-6000 sold per year
- ★ US&Europe: Saturated, mainly 4up smaller replacement market
- ★ Emerging markets: BRIC
Brazil, Russia, India,China

CTP in BRIC

- ★ BRIC countries: Low wages
- ★ Entry level systems, less automated
- ★ BRIC might influence ROW
- ★ Different vendors: FFEI, ECRM, TechNova, Cron, Inkjet CtP vendors
- ★ UV plates in BRIC countries, Inkjet CtP in BRIC ?

Colored CtP Welt

★ **Thermal**

★ **Violet**

★ **UV-CtP**

★ **Inkjet CtP**

Why Thermal ?

- ★ Historical: Daylight processing
- ★ Highest quality available / 10μ ??
- ★ Standard in commercial printing
- ★ Choice of platesetters and plates
- ★ First „Low-Chem“ plates
(„Low-chem“ = „processfree“)

Why Violet ?

- ★ Daylight processing as well (yellow)
- ★ Quality improved, satisfying for 90%
- ★ Faster, with less effort
- ★ 5-30-60-120-250-500-3000 mW
- ★ Laser / platesetters less expensive
- ★ „Low-Chem“ getting into the market
(„Low-chem“ = „processfree“)

Why UV CtP ?

- ★ Broadest plate choice
- ★ Plates most stable; longer run length
- ★ Faster setup, less waste
- ★ Plate prices 30-60% less expensive
- ★ Future ?

Inkjet CTP

- ★ Test and try for 15 years!
- ★ KPG, Scitex, and many others
- ★ Fascinating: Inkjet !
- ★ Inkjet has a fast and enormous development; e.g. standard proof!
- ★ Drupa 2008: Seven systems !

Why Inkjet CTP ?

- ★ Low cost CTP engines
- ★ 20.000 2up / 30.000 4up
- ★ Inkjet on the run
- ★ Broadening choice
- ★ Quality issue: process colors, 54 l/cm
Speed: 4-8 pl/hr !

InkJet CtP



Inkjet CtP

- ★ Low cost systems, but: 2 €/plate
plate&ink, processing
- ★ Many different technologies: raw
aluminium, coating reacting on ink,
coatings hit by ink&processed....
- ★ Mostly bound to system: Ink, CtP,
RIP, screen algorithm, plate, process

InkJet CtP



★ Mimaki JPP-60-12; Special ink on special plate („Sandwich“-Roll)

InkJet CtP



- ★ Kimoto Kimosetter 525
- ★ Special ink on special plate (poly)
- ★ No chemical process

Inkjet CTP

★ FM for small offset shops?

★ Running on your press?

★ Quality rank: Glunz&Jensen,
Mimaki, Kimoto.

★ Jetplate, Technova, VIM, Digital Mind

Inkjet = Entry level CtP

- ★ Inkjet yet as entry level
- ★ Low invest budget
- ★ Limitations in quality and choice
- ★ Nevertheless: Watch out !

Colored CtP Welt

★ **Thermal**

★ **Violet**

★ **UV-CtP**

★ **Inkjet CtP**

UV CTP



Why UV CtP I



Lüscher AG and Agfa Graphics N.V. announce Joint Marketing Agreement for New :Aluva plates

Lüscher AG has announced today that it has accredited Agfa Graphics' new plates range :Aluva to work on their line of UV platesetters. Both companies have entered the agreement jointly market Agfa Graphics' Aluva for Lüscher's XPosel UV.

Why UV CtP I

- ★ Agfa-Fuji-Kodak: Conventional plates are old, out of date, no further development, less quality
- ★ 2009-Agfa: New conventional plates
- ★ Optimized for UV CtP
- ★ Characteristics up to finest CtP plates

Why UV CtP II

★ Run length!

★ Agfa Aluva N: 400-500.000 without baking (practice GGP Media)

★ Aluva N: With UV inks 60.000 even more then 100.000

★ Run length tested at large shops

Why UV CtP III

- ★ Agfa Aluva P: 150.000 without baking
- ★ Aluva P: 400-500.000 with postbake
- ★ Stable plates and broad latitude
- ★ Developer: Broad bandwidth without changes in tonal values (Temp. regenerator)

Why UV CtP IV

- ★ **Stable: No temperature issues in handling and storing**
- ★ **Claim: Waste saving: 10-30% less startup waste! Tests at many shops**
- ★ **Long runs (Negative up to 4-500.000 Positive 150.000)**
- ★ **Resistant surface: UV inks/chemistry**

Why UV CtP V

★ High Quality:

★ Aluva P: 20 μ FM, 1-99% @ 200 lpi

★ Aluva P: Even 10 μ FM successfully tested

★ Aluva N: 2-98% @ 200 lpi, FM 25 μ

UV CtP Pricing

- ★ Germany: Violet/Thermal:
7-9 € /sqm, large accounts less.
- ★ UV-Plates: 4-6 € /sqm,
large accounts less
- ★ Price difference: Not really changed
for last five years

Thermal developments

- ★ Kodak FOGRA 2009
- ★ Recently Electra XD, up to 400.000 without baking
- ★ NPN: No Preheat Negative Plate
300.000 without baking (200 k/UV)
- ★ NPN: With Preheat: 400-500.000
up to 60% less chemistry

Thermal developments

- ★ Kodak Thermal Newspaper plate
- ★ Thermal News Gold==> Thermal News 3G
- ★ Reduce: No Prewash!
- ★ Reduce: No Preheat!
- ★ Run length: 100.000;
With Preheat: 200.000

Colored CtP Welt

★ **Thermal**

★ **Violet**

★ **UV-CtP**

★ **Inkjet CtP**

CtP 2009 Part II

★ How to choose CtP

★ Quality control

★ Problems today

★ „Low-chem“ CtP (aka process free)

Which choice ?

- ★ Each technology has pro's & Con's
- ★ Thermal: Expensive laser, end of development
- ★ Violet: Not highest quality, no 10μ
- ★ UV: „Old plates“, niche market, future developments?

CtP: No definite winner

- ★ Thermal: Not in newspaper, expensive for small systems; past it's zenith?
- ★ Violet: Not a standard in commercial, less choice of plates, less quality
- ★ UV-CtP: Expensive systems, fine plates
- ★ Within 3 years: No overall winner !

CtP Choice

Kriterien Laser/Plattentechniken			
	Thermal	Violet	UV
Daylight processing	Yes	Yellow safelight	Yellow safelight
Run length (without postbake)	110.000-200.000	80.000-450.000	up to 500.000
Bakeable	Mostly	Yes (except silver)	Mostly
Run length (with postbake)	1 Mio	1 Mio (Polymer)	1 Mio (nur positiv)
Chemfree plates	Yes (5)	Yes (2)	No
UV ink resistant	partially/Bake	partially/Bake	Ja
Sensitivity	Low	Very High	Low
Conventional chemistry possible	Some	No	Yes
Cost of Laser	Medium til high	Low	High
Lifetime Laser	5-30.000 hrs.	5-10.000 hrs	5-10.000 hrs
Commercial print quality up to 60 l/cm	Yes	Yes	Yes
Commercial print quality up to 80 l/cm	Yes	Yes	Yes
High Screen (100 l/cm and better)	Yes	Few	Test
FM Raster 20µ	Yes	Yes	Yes
Choice of plates	6-12	4-8	20 and more
Cost of plates	High	High	Normal
Choice of imagesetter vendors	6	8	3
Switching plates	Mostly easy	Polymer: Yes	Easy
Maintenance and Surveyance of process	Low	Medium	low

Individual choice

- ★ Find out, what counts for you!
- ★ Which quality is really needed
- ★ What „speed“ is necessary
- ★ Check the real costs
- ★ Check choice and service capabilities

Platesetter choice

- ★ Plate sizes/width, resolution, screen width
- ★ FM? 10μ , 20μ or 25μ ? FM at all?
- ★ Throughput: plates/hr - what do you really need?
- ★ Check you current figures/ future?
How long can you wait for a plate ?
- ★ Dependent from plate sensitivity

Choice 2

- ★ Automation / Punch / no of cassettes, size of cassettes
- ★ Variable cassettes/all sizes automatic
- ★ Manual load with automation
- ★ Cost of laser replacement
- ★ Lifetime of laser

Laser lifetime

★ Laser head: Most expensive part

Laser lifetime	
	Lifetime hours
System A	5000
System B	4000

Laser lifetime

Laser lifetime			
	Lifetime hours	Imaging time	plates/hr
		min/plate	
System A	5000	5	12
System B	4000	3	20

Laser lifetime

	Lifetime hours	plates/hr	Plates in lifetime	
System A	5000	12	60.000	plates
System B	4000	20	80.000	plates

★ Less than 10.000 plates per year?

Ignore laser lifetime!

★ But calculate diode exchange (thermal)

Choice 3

- ★ Environment: Check dimensions
- ★ Temperature and humidity conditions
- ★ Check compressed air supply
- ★ Room requirements: Clean&Climatization
- ★ Power requirements / 100 MBit LAN

Service issues

- ★ Can you adapt a new plate yourself?
- ★ Remote Service: A must to have!
Diagnostics *and* Service
- ★ Partial or complete ?
- ★ Service costs: Broad variety
- ★ From 95 € up to 195 € /hr
- ★ Service: Operating hours

Service issue 2

- ★ Service contracts: Safety vs. costs
- ★ Yearly costs: 7% -13% of investment per year!
- ★ High productive systems - Alternative?
- ★ Check service costs thoroughly!
- ★ Warranty: 12-36 months/ prolongation

User issues

- ★ Manuals in your language ?
- ★ User interface: Language?
- ★ Service engineers: Language?
- ★ Technical Website ?
- ★ Neutral inspection & quality check!

Buying contract

- ★ Write down CTP engine specs
What is a „must“
- ★ Throughput (@ which plate), xx μ -dot
tonal range (1-99% @ 200 lpi)
- ★ Run length (specified conditions)
- ★ Any other „must“ from your list
If not: Penalty fee !

Traps when buying

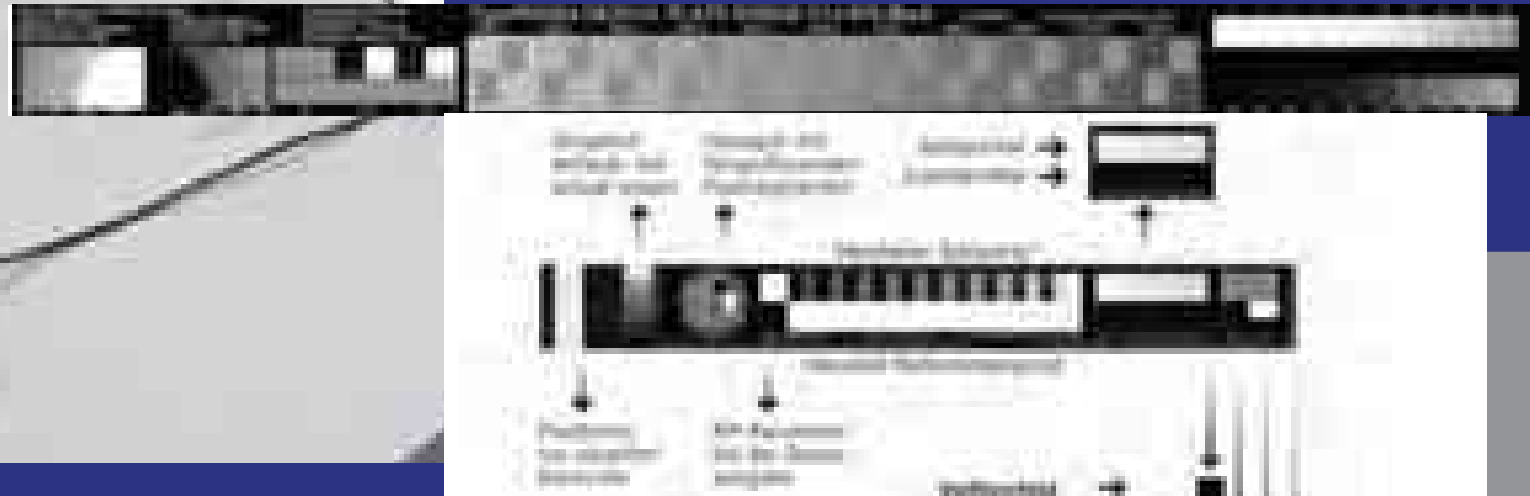
- ★ Delivery date (contract, fee!)
Payment terms: 33% - 33% - 33%
- ★ Vendor: Bring system into site
complete Installation
- ★ Warranty: 12-36 months - negotiate!
- ★ Service access, reaction time ?
Restitution time! Real remote service

Quality check: Measure!



★ State of the art instruments and software

★ Techkon DMS 8/910 Spectroplate



Measure / Control / Educate!



- ★ Educate and train users !!!!!
- 5% of system price: Training !!!!!

Quality check!

- ★ Control wedge (Ugra/Fogra/Brunner)
- ★ Measure instrument
- ★ Indepth check at setup, chemistry change, plate change, laser change
- ★ Daily controls

Buying contract

- ★ Write down CTP engine specs
What is a „must“
- ★ Throughput (@ which plate), xx μ -dot
tonal range (1-99% @ 200 lpi)
- ★ Run length (specified conditions)
- ★ Any other „must“ from your list
If not: Penalty fee !

Traps when buying

★ Delivery date (contract, fee!)

Payment terms: 33% - 33% - 33%

★ Vendor: Bring system into site
complete Installation

★ Warranty: 12-36 months - negotiate!

★ Service access, reaction time ?

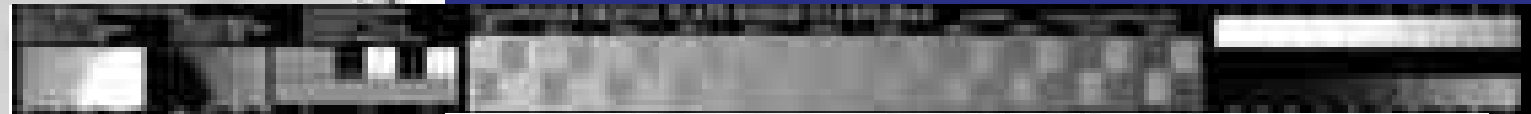
Restitution time! Real remote service

Quality check: Measure!



★ State of the art instruments and software

★ Techkon DMS 8/910 Spectroplate



Measure / Control / Educate!



- ★ Educate and train users !!!!!
5% of system price: Training !!!!!

Quality check!

- ★ Control wedge (Ugra/Fogra/Brunner)
- ★ Measure instrument
- ★ Indepth check at setup, chemistry change, plate change, laser change
- ★ Daily controls

Closed loop control



The screenshot shows a web browser window with the title "CLOSED LOOP" and the "AGFA" logo in the top right corner. The main content area is divided into three vertical panels, each featuring a 3D model of a tray at the top and a data table below. The data tables contain various numerical values and labels, though they are somewhat blurry. The interface appears to be a real-time monitoring and control system for a manufacturing process.



IFRA 2000/2001



Agfa Afirma

Quality control

- ★ PQCSnet
- ★ Special control wedge
- ★ Upto 3 CD-Camera /24 fields per cam
- ★ Some Interfaces to imager (Lüscher), processor, punch bender; Continue?
- ★ Data base /remote control (Web browser)

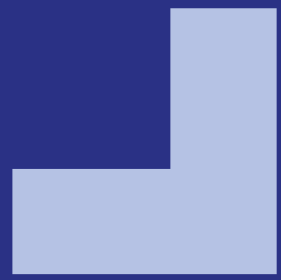
PQCS.net

★ Control wedge

★ Tonal values, resolution, sharpness, density

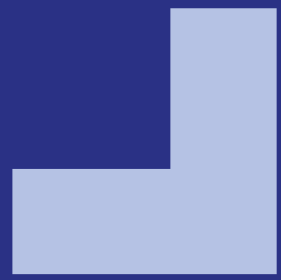
★ Measure, compare, show, alarm

★ Price: 22.000 Euros
www.pqcs.net



CCD Cams





CCD Cams



CtP Problems today

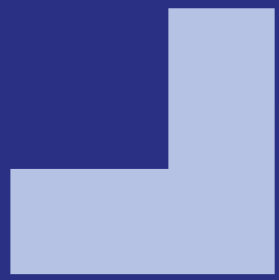
- ★ Plate problems /Interleave paper
- ★ Imaging/processing problems
- ★ Printing problems
- ★ Pressroom chemical problems

CtP Problems today

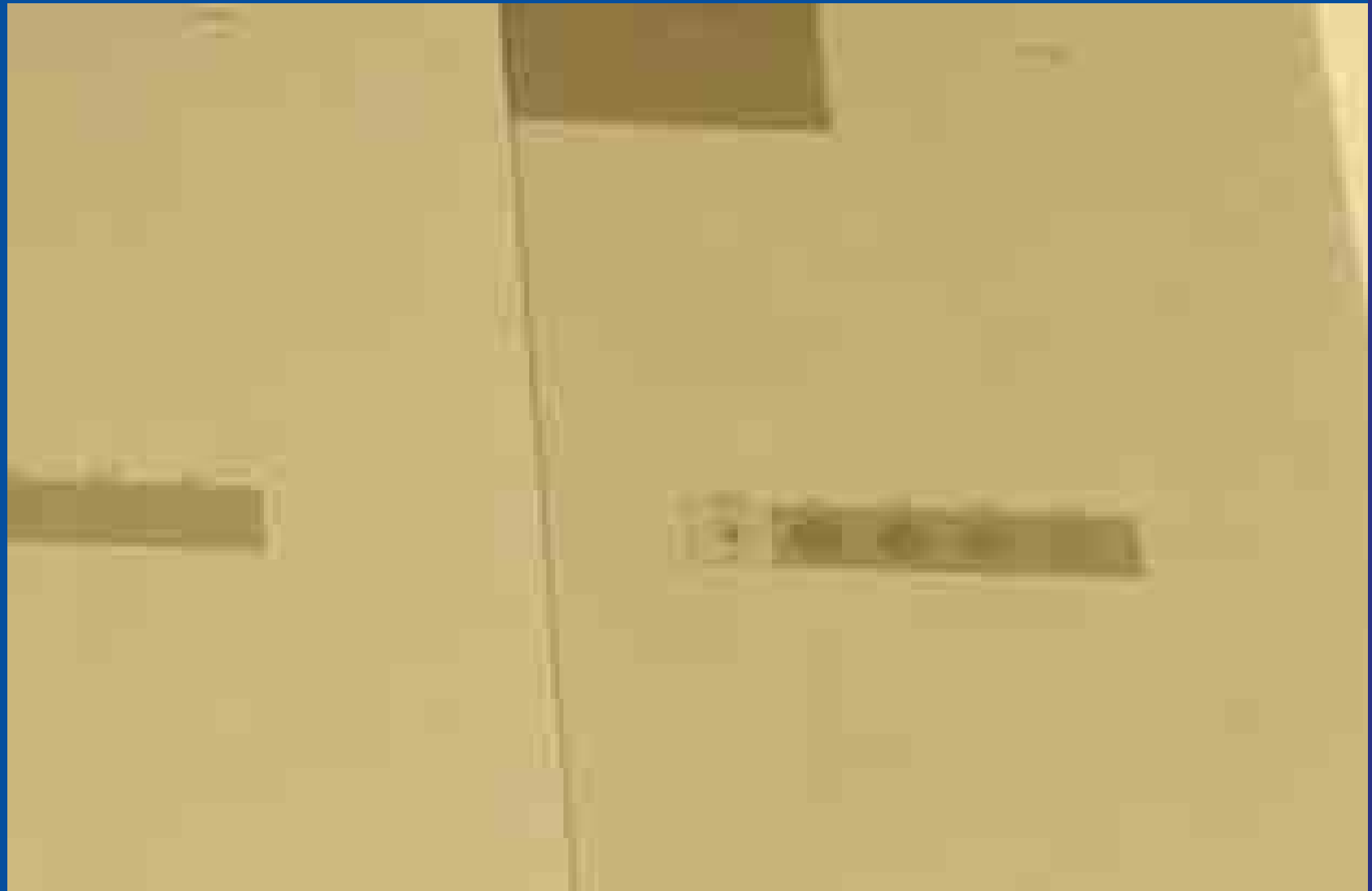


Plate problems

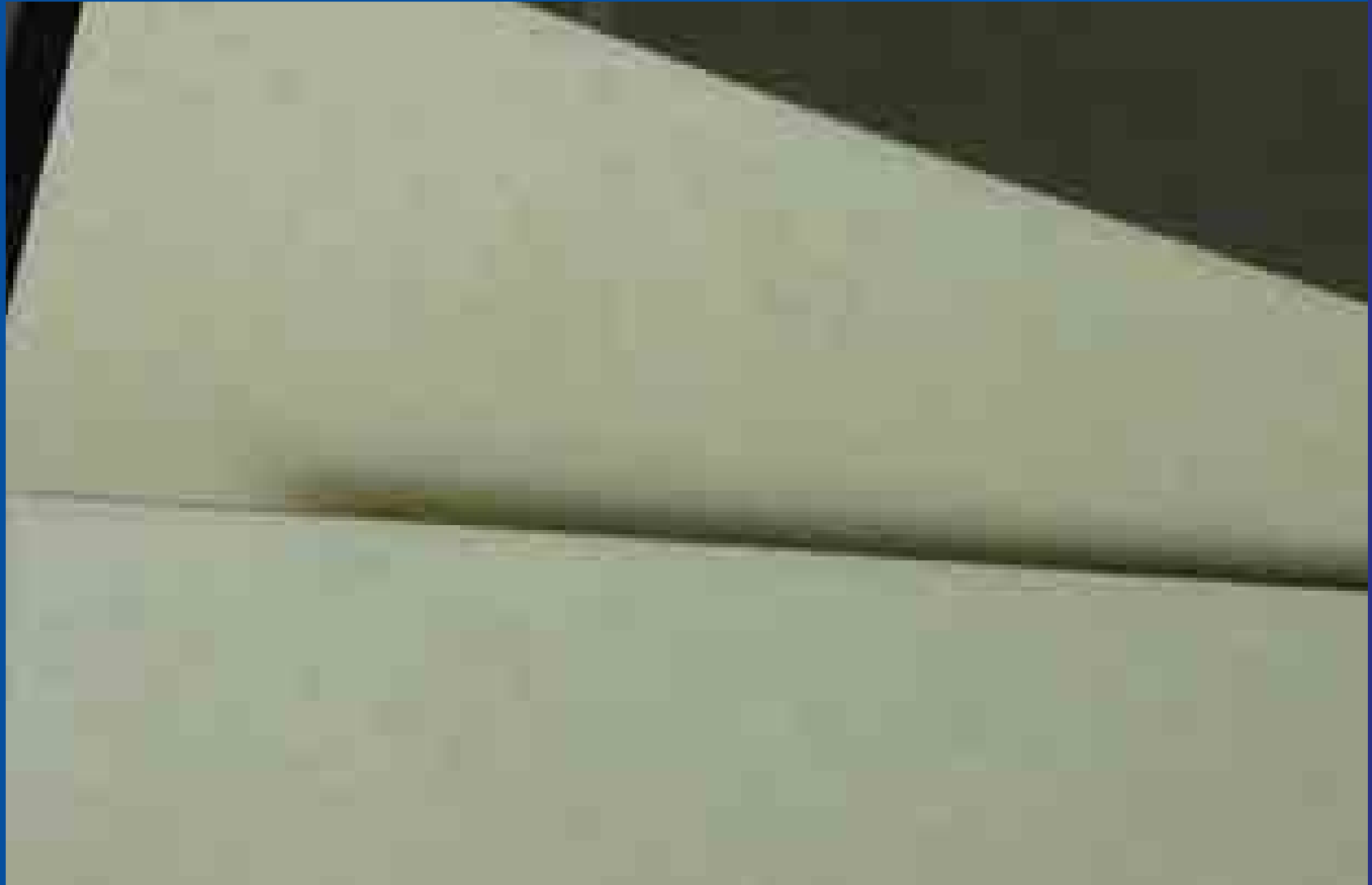
- ★ Scratches on plates, Agfa-Fuji-Kodak
- ★ Before imaging: Supply chain
- ★ After imaging: Plate transport CtP, processor, stacker, transport to press
- ★ Thermal plates are more sensible reuse interleave paper (automate!)

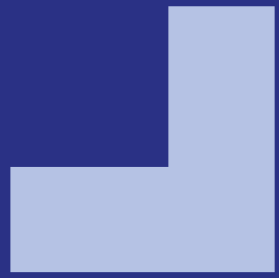


Problems



Problems





Problems



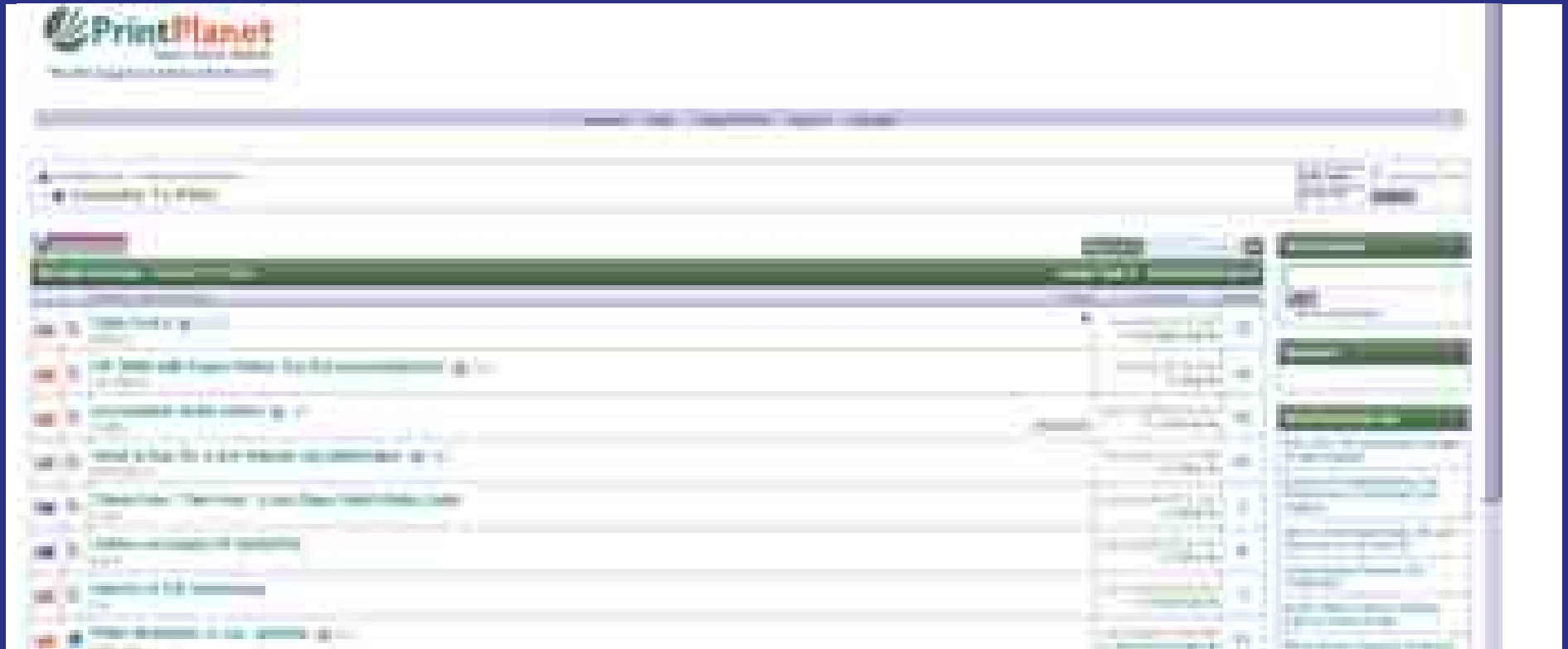
Imaging/Processing

- ★ **Banding problems: Difficult finetuning between thermal head and processor**
- ★ **Laser problems (seldom), optics, dust (clean)**
- ★ **Run length / blinding /toning / spots / ink build up**
- ★ **Changed formulas plate /chemistry**

Printing/press room

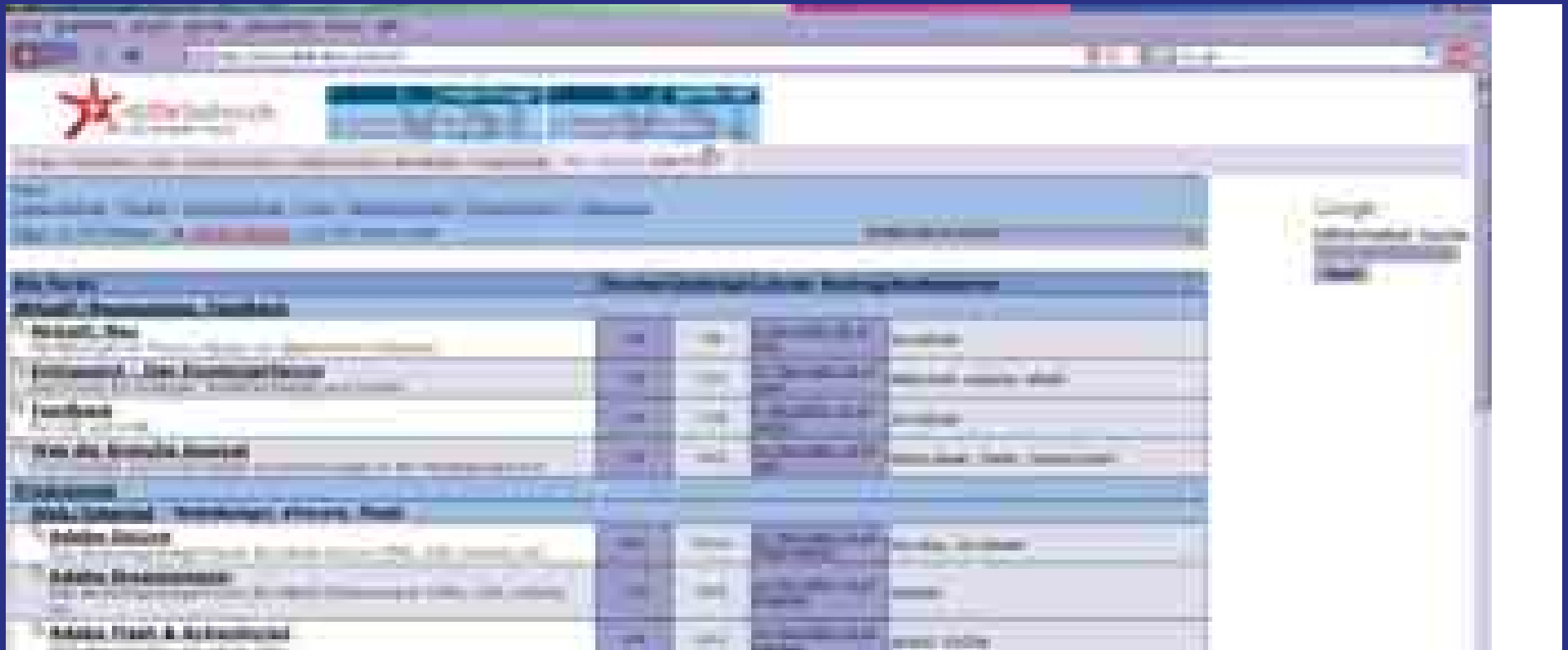
- ★ Imager? Chemistry? Plate? Process?
- ★ Dampening add-on? Cleaning chems?
Ink reaction?
- ★ Many, many more...
- ★ Knowledgeable plate support !!!!!!!!!!!!!
- ★ Should thermal/Violet plates be more
stable (than conventional ones?!)

CtP Problems today



★ What people tell/Web forums
<http://printplanet.com>

Web forum



★ Swiss forum
<http://www.hilfdirselbst.ch>

Magical: Processless?

- ★ Promise: Imprinta 1997
- ★ Long history of trial and error
- ★ 17 announced / never made it!
- ★ Highlight of Drupa 2004 / IPEX 2006
- ★ Realized since 5 years
- ★ Agfa, FUJI, Kodak, Presstek + Chinese!

Processfree plates ?

- ★ No plates without a process
- ★ No plates without chemistry
- ★ Stefan Esenwein, Agfa, 2006
Wieland Schwarz, Fuji, 2009
- ★ All plates have processes
- ★ Elimination of wet development process

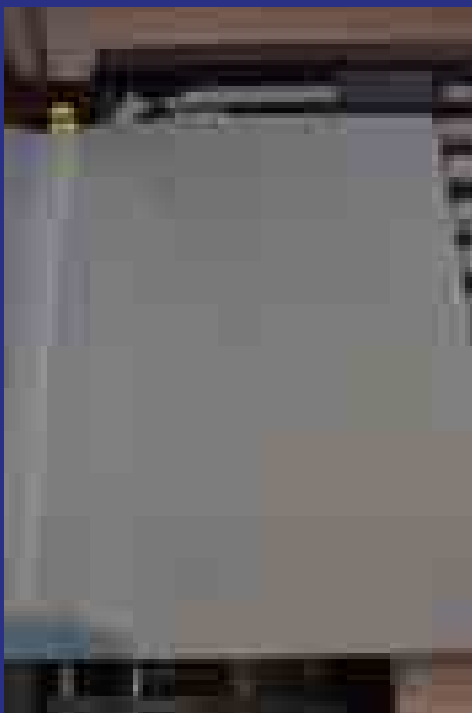
Chemistry reduced process

- ★ Imaging; Process: Removing of unwanted parts by cleaning afterwards (washing)
- ★ Thermal: Agfa Azura (gum), Amigo (+ chemicals)
- ★ Presstek (ablative): Anthem, Aurora (thin coating), Freedom (Vector)
- ★ Violet: Agfa Azura V, Brillia Pro-V;
Process: PreHeat, Cleaning, gum

Chemistry reduced 2

- ★ DOP: Develop on press
- ★ Fuji Brillia Pro-T, Kodak TNPP
- ★ Unwanted parts removed by dampening unit/waste paper
- ★ Switchable Polymer (Creo)
- ★ Claim: Xingraphics Fit Eco (plus China 2)

DOP: The „invisible“ plates



FUJI Brillia Pro-T

Brillia HD PRO-T

Brillia HD PRO-T	
Technology	Polymerisation
Development	On press
Type	Negative working
Image contrast	Acceptable
Resolution	1-99%, 200lpi
FM capable	Yes
Sensitivity	120mJ/cm ²
Run length (unbaked)	Up to 100,000
Bakeable	No
Laser	IR LD 830nm

- ★ On Press imaging
- ★ Fast as standard
- ★ Low contrast
- ★ No visual judgement
- ★ Best instruments
Plate Scope
„Spectroplate
All Vision“ (IR)

Agfa Azura/Amigo

- ★ › 2400+500 installations worldwide
- ★ Agfa: 80% of all chemfree installs
- ★ Today: All 4up CTP sales with Azura
80% of 8up CTP sales with Amigo
- ★ Limitations: Speed, Azura: run length
vs. resolution; UV inks

Agfa Azura/Amigo

- ★ Dependency: run length/screen width (FM problem)
- ★ Azura TS: 200mJ / 10-20% less thrpt.
- ★ Amigo: 200-260mJ, 5-30%less throughput
new version 30% faster
- ★ Water/ink balance different
- ★ Price and footprint washing unit

No process?

★ Agfa Azura: Clean out unit



★ Half footprint / half price

Agfa Amigo

- ★ Thermolite principle
- ★ High run length - different surface
up to 150.000 (web), -450.000 (baked)
- ★ Intensive washing, add chemistry
- ★ Water / cleaning chemistry
- ★ 220-240mJ, -30% less throughput
New version announced: 170-200mJ

Presstek Plates

- ★ Ablation/Dusting/Cleaning
slow: 300mJ-run length < 100.000
- ★ Anthem: Water/ink balance
Much water, slow printing
- ★ Useable with UV inks
- ★ Anthem Pro:
Improved water/ink balance

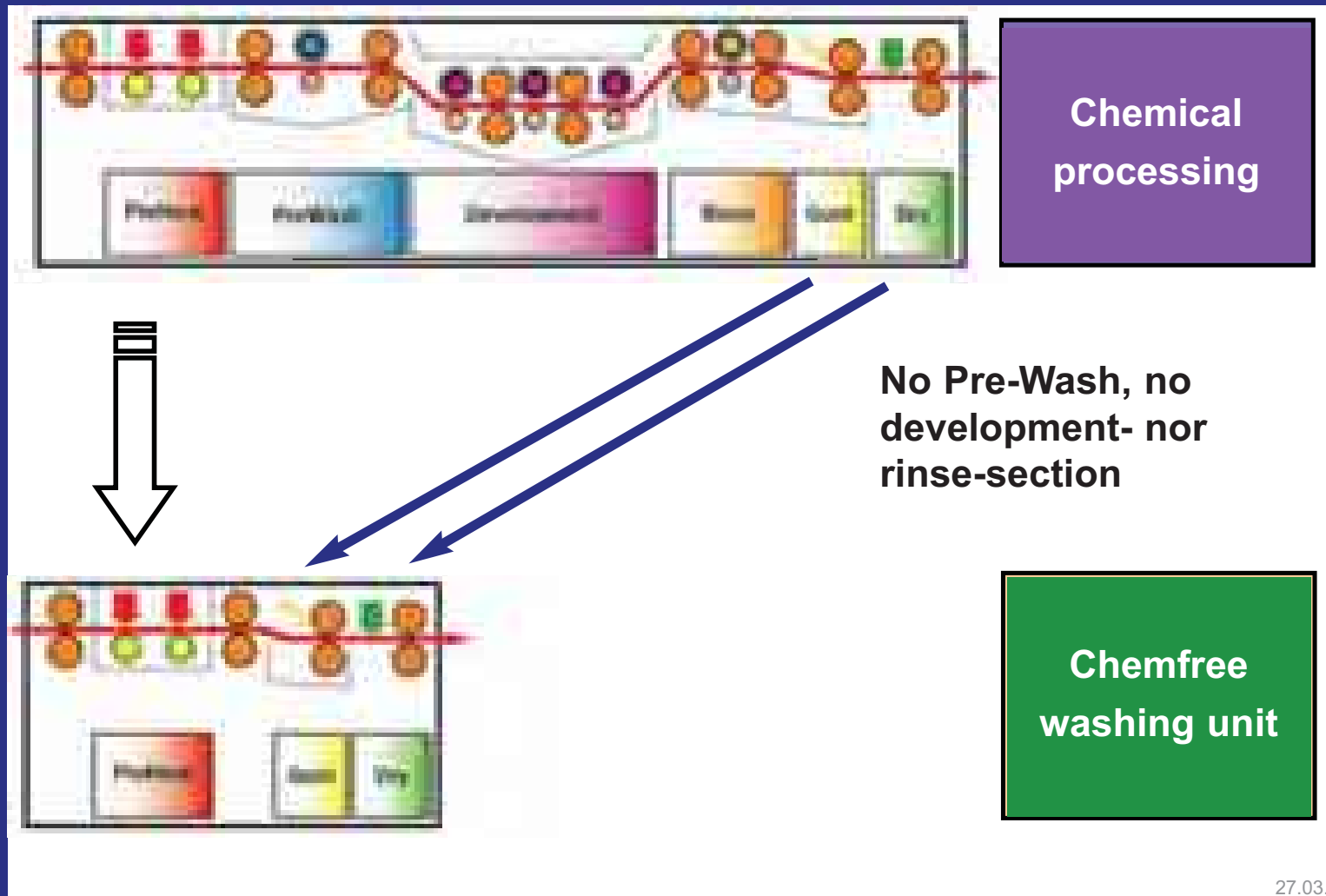
Kodak Thermal Direct

- ★ On press development
- ★ Up to 75.000, no postbake
- ★ 1-98% with 200lpi, 20 μ
- ★ Daylight sensible - problem!
- ★ 30-40% slower (28 to 17 pl/hr)
new version: 15-20% slower
- ★ Very low contrast (slightly improved)

Violet & „Low chem“

- ★ First shown 2006
- ★ Agfa Azura V and N92-VCF
- ★ Fuji Brillia Pro-V and Pro-VN
Pro-VN in testing
- ★ Into the market 2009
- ★ Slowly but steady

Azura V / N92-VCF



Azura V / N92-VCF

- ★ Preheat/Washing/Gumming
- ★ Azura V: 2-98% 178 lpi = 68 l/cm
- ★ N92-VCF: 2-98% 110 lpi = 43 l/cm
- ★ AV:Up to 100.000/N92-VCF up to 200.000
- ★ No UV inks, no baking
- ★ Slightly slower than N92 (50 μ J,depends)

Azura V/N92-VCF: Fine contrast!



Fuji Pro-V: Fine contrast



Violet „Low-Chem“: FUJI

Brillia HD PRO-V plates

Brillia HD PRO-V*	
Technology	Polymerisation
Development	Gumming
Type	Negative working
Image contrast	Good
Resolution	1-99%, 200lpi
FM capable	Yes
Sensitivity	50-75 μ J, (same as LP-NV)
Run length (unbaked)	Up to 200,000
Bakeable	Yes
Laser	Violet LD 405 – 410nm

★ Preheat

★ Wash&gum

★ 50-75 μ J

★ 150-200.000

★ Commercial
+Newspaper

★ UV inks !

Pro „low-chem“ plates

- ★ No chemical development,
less chemistry (none?)
- ★ No processor
- ★ No Process variations
- ★ Possible error source eliminated
- ★ Less maintenance

Pro „Low-Chem“ plates II

- ★ Simplified logistics
- ★ Less waste of energy, chemistry, water
Vito study:80% total savings incl.
production of plates
- ★ Less room requirements (footprint)
- ★ Made the plate process simpler!

„Low-Chem“: Disadvantages

- ★ (Much) more imaging energy required
110-140mJ vs. 200-500 mJ
- ★ 10%-50% less throughput
- ★ ==> Higher priced CtP systems
- ★ Unit cleaning (Presstek)
- ★ Less run length, evt. less resolution

„Low-Chem“: Disadvantages

- ★ Daylight sensitive (DOP Plates FUJI+Kodak)
- ★ Low contrast (DOP Plates FUJI+Kodak)
- ★ No visual judgement, no measurement



„Lo-Chem“: Does it pay?

- ★ Pricing plus: 0,5-2,5 €/qm
- ★ Savings: 0,50 €/qm chemistry
- ★ Extra costs @1.000qm = 0-1900 €
- ★ Processor savings = up to 15.000 € Euro
- ★ Break Even = 6000 qm (Agfa);
(1,25 € price plus; 15.000 processor)

„Lo-Chem“: Does it make sense?

- ★ Yes, for low plate volumes
- ★ Yes, for simplified production
- ★ Yes, for some printers
- ★ No: For the majority of printers (today)
- ★ Check chemfree for your production

CtP 2009 Part III

- ★ Latest developments
- ★ Check: CtP Interfaces !
- ★ Last automations
- ★ Look out: For China!

Some late developments

- ★ Interfacing CtP - into the workflow
- ★ Last automations
- ★ China ahead!

CtP Interface

★ Bidirectional Interface

★ Feedback from system to workflow:

Which plate/separation running

Used time/ System status, laser status

Amount of plates in cassettes

hours of operation, service info

★ XML or JDF Feedback (MIS input)

XML/JDF Interface



The screenshot displays a web interface for 'medienHaus PLUMP'. At the top, the company name is shown in a stylized font. Below it is a photograph of a large industrial printer with a control panel featuring a screen and buttons. The number '850' is visible on the printer's side. The interface includes a navigation bar with buttons for 'Gesamtwachst', 'Auftragsverwaltung', and 'Einstellungen'. Below this is a table titled 'Belichbare Druckplatten' (Exposable Printing Plates) with columns for 'Auftragsnr.', 'Belichtungsdatum', 'Dateiname', 'Blattmaterial', 'Menge', and 'Dauer'.

Auftragsnr.	Belichtungsdatum	Dateiname	Blattmaterial	Menge	Dauer
09-0248	29.01.2009 12:13:00	FO0100160-044401_Cyan_MF	120-400	1	00 sec
09-0248	29.01.2009 12:13:37	FO0100160-044401_Magenta_MF	120-400	1	00 sec
09-0248	29.01.2009 12:14:04	FO0100160-044401_Schwarz_MF	120-400	1	00 sec
09-0248	29.01.2009 12:15:18	FO0100160-044401_Cyan_MF	120-400	1	02 sec
09-0248	29.01.2009 12:17:09	FO0100160-044401_Magenta_MF	120-400	1	00 sec
09-0248	29.01.2009 12:18:24	FO0100160-044401_Schwarz_MF	120-400	1	02 sec

XML/JDF Interface

Belegungsplan Formherstellung

Production planning

Werkst.	Termin	Form	Titel	Stk	Plan	Plan
000001	01.01.2009	510-400	Kopierblätter - Monochrome und hochauflösende Drucke	1000	1000	1000
000002	01.01.2009	745-605	Blätter - Druckaufträge für den Druck	1000	1000	1000
000003	01.01.2009	510-400	Kopierblätter - Monochrome und hochauflösende Drucke	1000	1000	1000
000004	01.01.2009	745-605	Blätter - Druckaufträge für den Druck	1000	1000	1000
000005	01.01.2009	510-400	Kopierblätter - Monochrome und hochauflösende Drucke	1000	1000	1000
000006	01.01.2009	745-605	Blätter - Druckaufträge für den Druck	1000	1000	1000

MIS

Materialnormale Posten

Kst-Kurz	Artikelbezeichnung	Datum	P-Nr	Artikelnummer	Menge
KOPIE	Seite 510-400	23.01.2009	1000	311	1
KOPIE	Seite 745-605	23.01.2009	1000	312	36

Formherstellung

PAPIER	Büchdruck glänzend	23.01.2009		2008	80 Bg
PAPIER	OKTAV 47	23.01.2009		81860	5.600 Bg

CtP: Last automations

★ What happens after imaging ?

★ Punching, bending, sorting !

★ Newspaper: Robot systems
APL; APL logistics

★ Beil group: www.beil-group.com

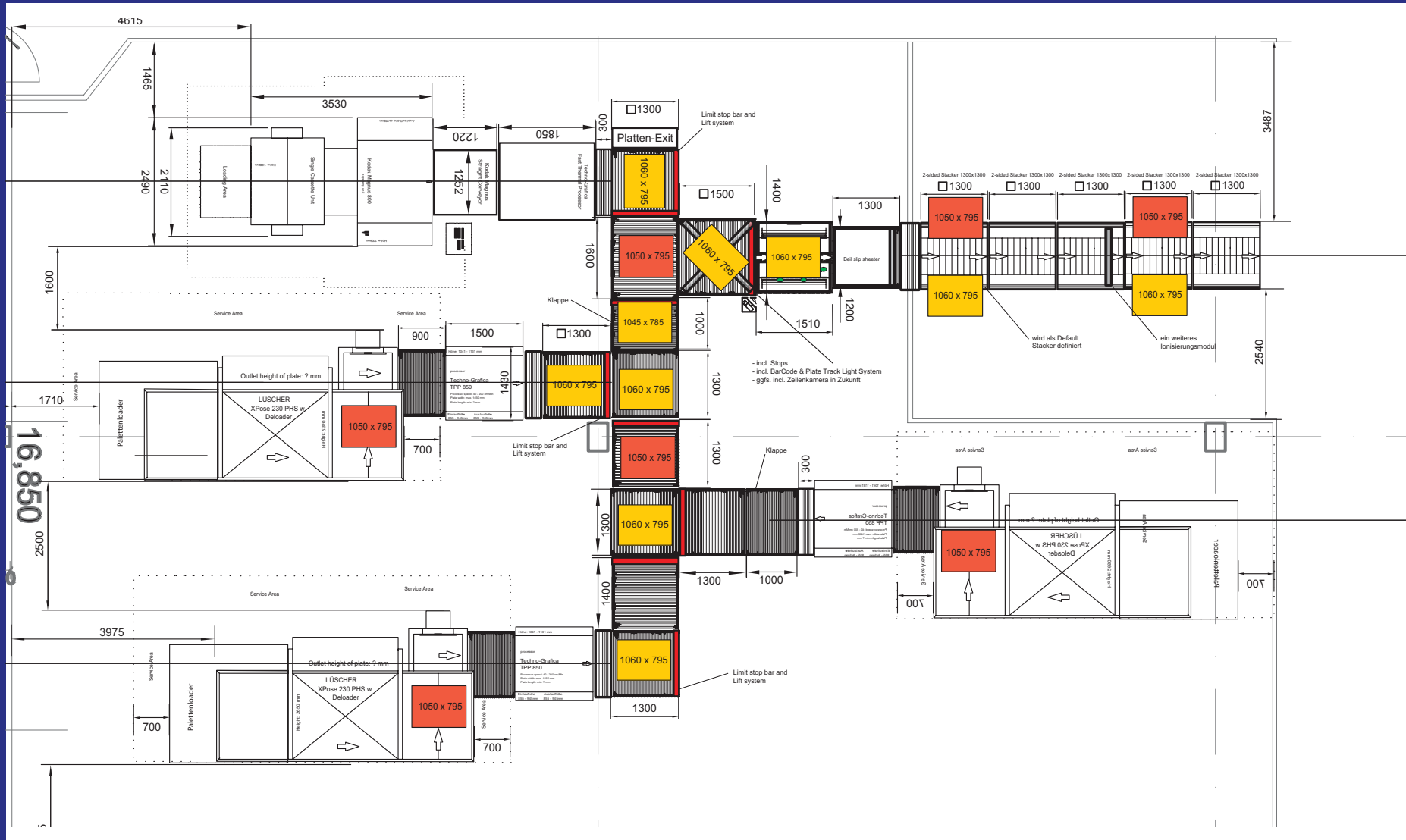
Automation

- ★ „Press calls for plates“ (Newspaper)
- ★ Plates are marked with barcode
- ★ Barcode done by Rip, controlled by workflow
- ★ Barcode is read, plate identified
- ★ Multiple Barcode readers possible before punch, after, stacker etc.

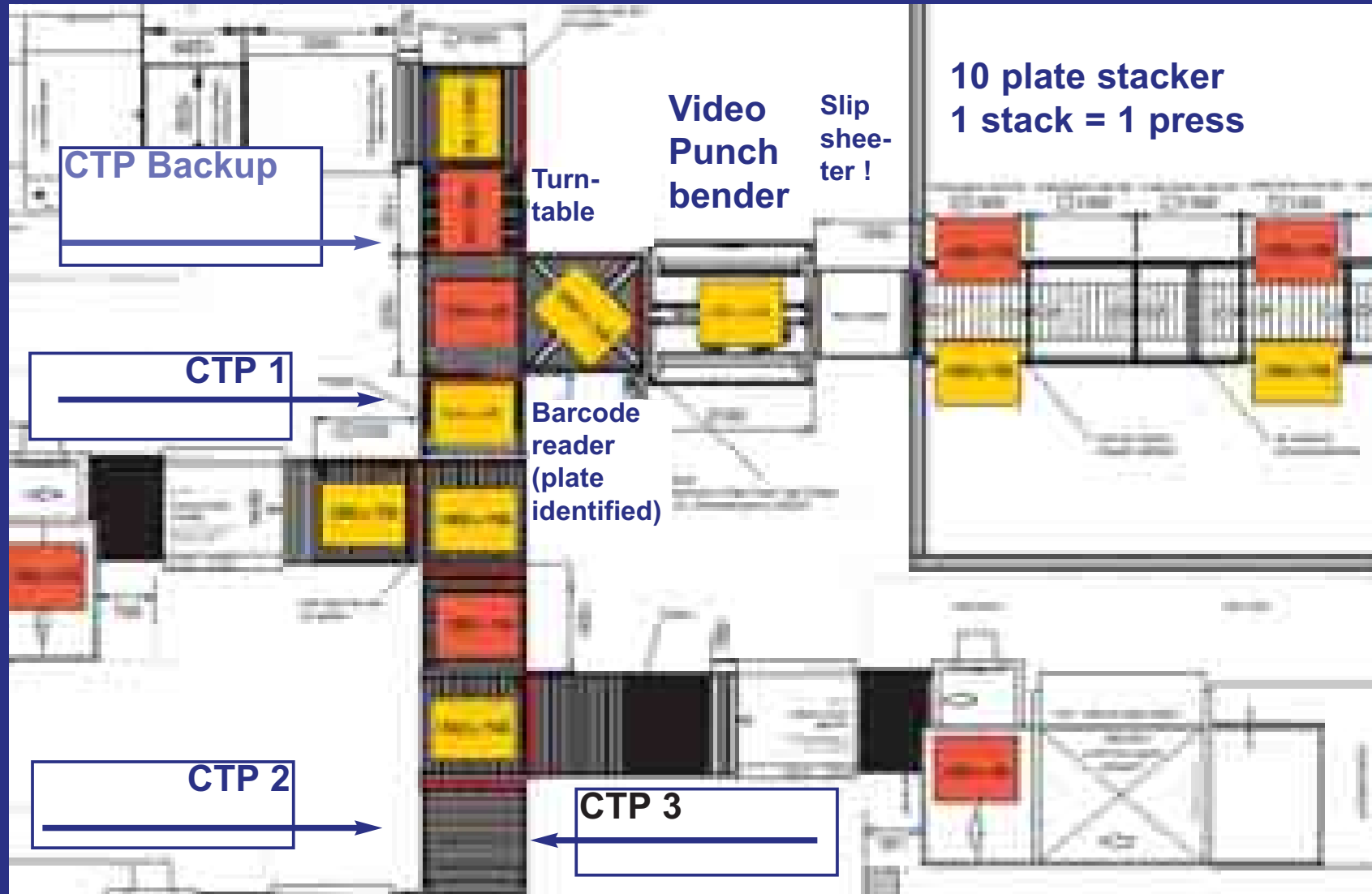
Automation

- ★ Video controlled punch /bending
1 punch / 3 CtP; web punching
- ★ Possible: plate cutters, *slip sheet
Injector (fresh paper)*
- ★ Barcode controlled sorting
(Barcode controlled plate loading)
- ★ XML Feedback to workflow

Automation



Automation



Chinese are coming!



★ Report on Chinese plate manufacturers

★ See www.mittelhaus.com

Chinese are coming!

- ★ Drupa 2008: 15 Asian plate vendors
- ★ Arsc, PNE Printing Technology, C&W Tech
DingKaiLong (Fujian), 2nd Film Factory
Cron, Zhejiang Aoguang, Xinggraphics
Juguang, Wenzhou Konita, Longma,
Foleitech, Guangxi Yukin Jinlong
Top High Image, Taizhou Dongfang

Chinese vendors



<http://www.mittelhaus.com>

Chang Shao-Kong
 中国航空工业集团公司
 中国航空工业集团公司

中航工业
 中国航空工业集团公司

地址: 北京市朝阳区...
 电话: ...
 传真: ...
 邮编: ...

Lucky Group

MR. CANETTAN

...
 ...
 ...

MR. CANETTAN

...
 ...
 ...

P

CRON
 科雷机电

...
 ...
 ...

Cron

Um die Mikroschrift der Visitenkarte allen Lesern zugänglich zu machen, folgt auf der nächsten Seite eine 5,4-fache Vergrößerung der Karte

Chinese plates

- ★ UV, Thermal and Violet plates
- ★ Xingraphics: Chemfree plate!
- ★ Fuji Tilburg: 30 mill sqm
- ★ Longma: 45 mill, Xingraphics: 40 mill
2nd Film 43 mill, PNE 34 mill
- ★ All Chinese are expanding

Chinese plates

- ★ World market offset plates: 600 mill sqm
- ★ Chinese: 30-50% (today), 50-60% (future)
- ★ Plate prices: 1-2,5 € below standard!
- ★ UV 2,5-4 €/sqm, Thermal/Vio 5,5-7 €/sqm
- ★ Quality and service / local dealer