The Pay for Print Initiative at Kalamazoo College

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Reasoning

Why was pay for print necessary?

- **Paper waste**
  - **1 recycle bin per lab per day**
- **Budget**
  - **Paper budget depleted halfway into the year**
  - **Toner cartridges**
  - **Printer maintenance**

Preliminary Work

Survey, July 2000

- **Oberlin Group and CLAC**
- **Details of cost, vendor, funding, etc.**
- **Some colleges implementing pay for print**
- **Many considering it**

Timeline

1999

- **Initial discussions about pay for print**

Summer/Fall 2000

- **Investigated software packages**
- **Surveyed Oberlin Group and CLAC colleges**

Spring 2001

- **Tested software; Preliminary marketing**

Summer 2001

- **Continued marketing; Implemented software**

Fall 2001

- **Final marketing phase**

The “K” Environment

- 3 PC labs running Windows 2000
- 2 PC/Macintosh labs
- 1 Macintosh only lab
- Library Reference PCs
- 1 printer / lab + 2 printers in Library = 8 printers

- NT 4.0 Print Server
- Students have individual logins
- Macs running Mac Administrator, authenticate w/ NT 4.0

Finding a Solution

- Identified several possible solutions
  - All too expensive (more than $10,000)
- With help of CLAC survey, learned of PCounter
- PCounter – www.andtechnologies.com
  - $495 + $150/year maintenance
  - Fits environment at Kalamazoo College

PCounter – Overview I

- Set price per page
  - 1 print credit = $0.10 = 1 printed page
- Each user gets print quota ($10+ per quarter)
  - Staff and faculty need quotas too ($50)
  - Staff and faculty given free quota boosts as needed
  - Works across NT domains
- Cost of print job subtracted from quota

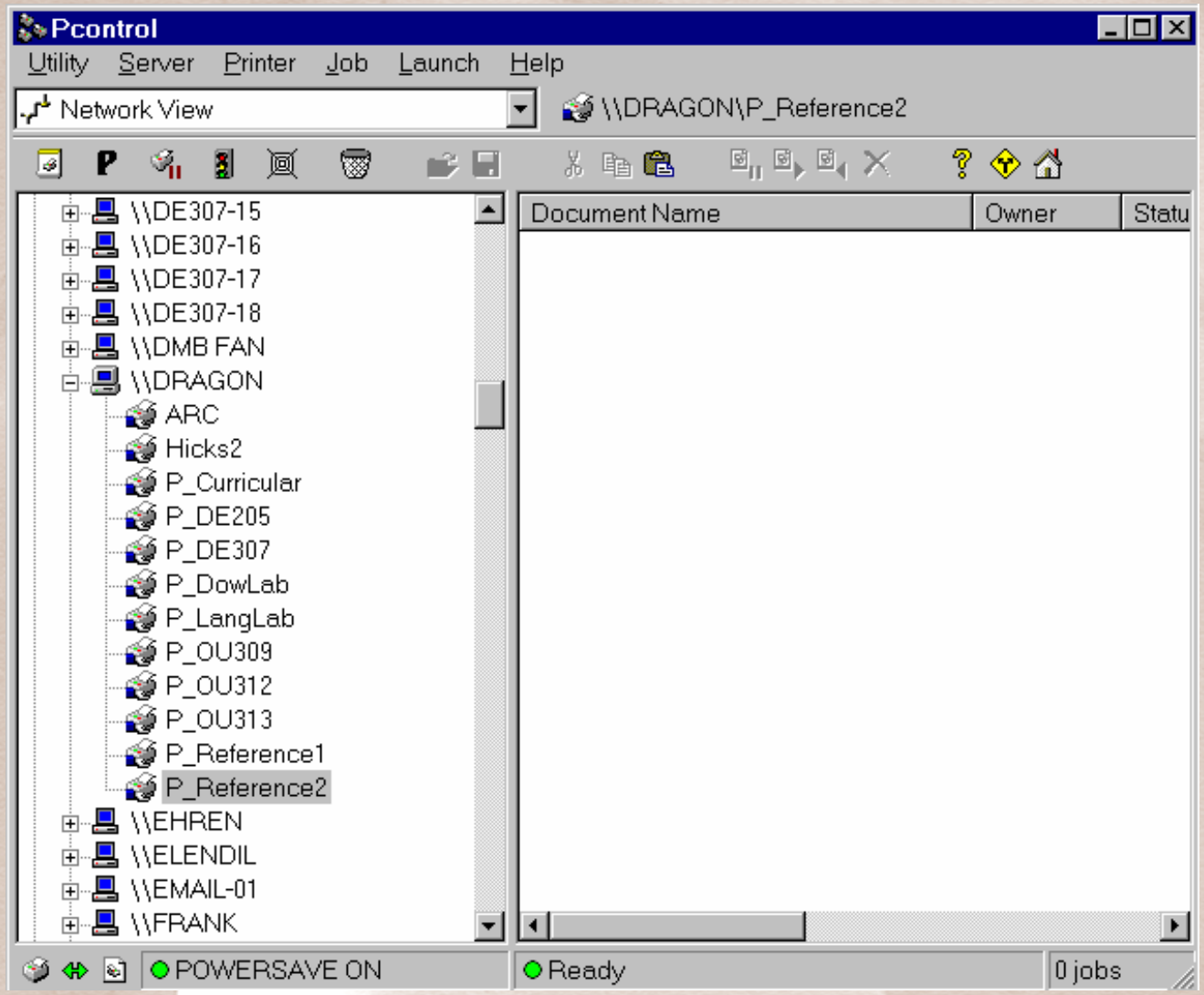
PCounter – Overview II

- In Labs, user identified by login account name
- In Library, PCounter prompts for username and password
- When quota used up, print jobs are rejected
- Can buy additional quota at Library Circulation Desk
  - Already handles money transactions
  - Provides extended hours

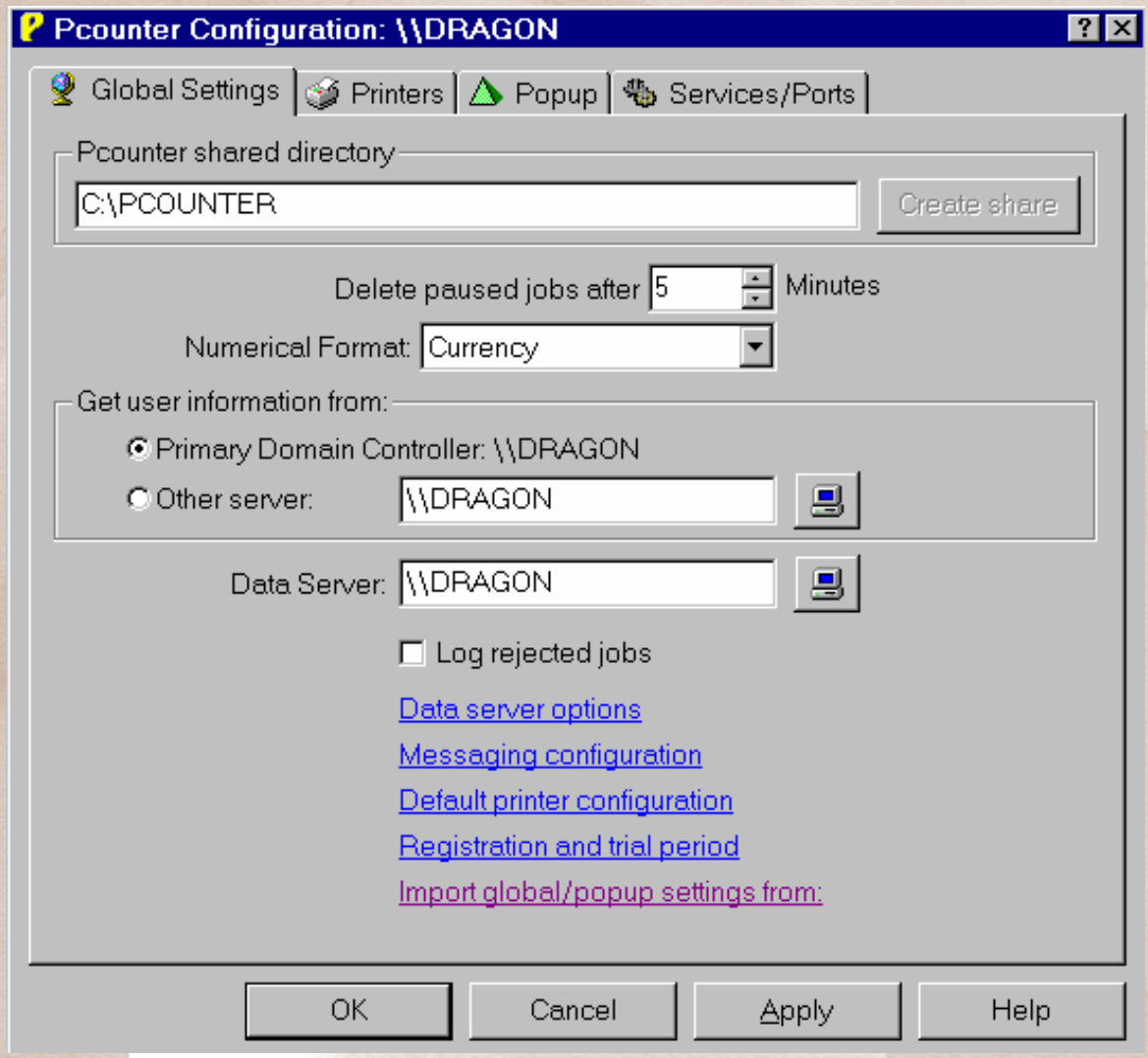
PCounter – Server Setup

- Data Service
  - Needs file share on server
  - All users have read access
  - Quota administrators need write access
- Print Monitors
  - Monitor and handle print queues
- Pcontrol
  - Configuration Management Program

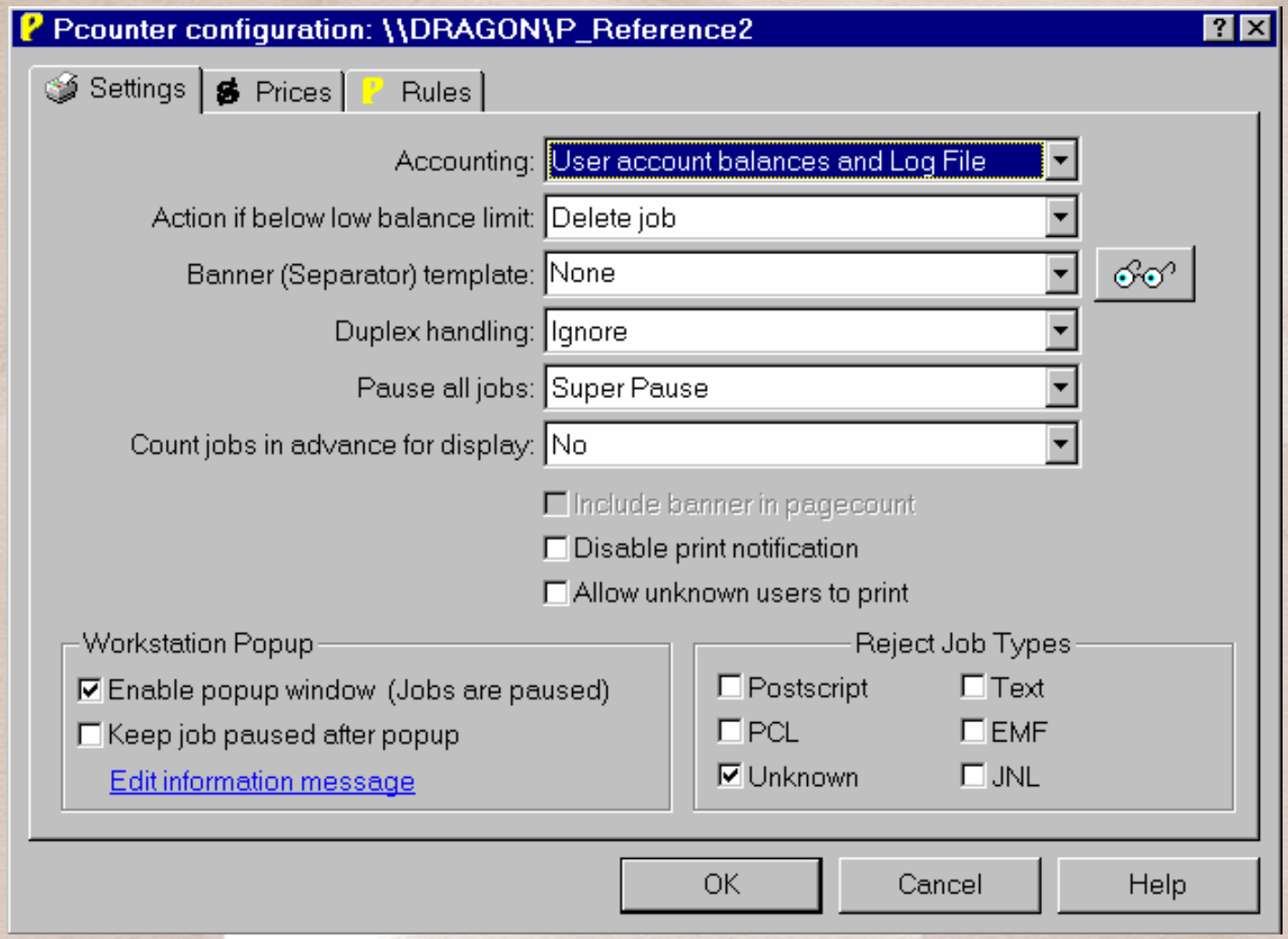
PControl


Pcontrol
Utility
Server
Printer
Job
Launch
Help
Network View
\\DRAGON\P_Reference2
\\DE307-15
\\DE307-16
\\DE307-17
\\DE307-18
\\DMB FAN
\\DRAGON
ARC
Hicks2
P_Curricular
P_DE205
P_DE307
P_DowLab
P_LangLab
P_OU309
P_OU312
P_OU313
P_Reference1
P_Reference2
\\EHREN
\\ELENDIL
\\EMAIL-01
\\FRANK
Document Name
Owner
Statu
POWERSAVE ON
Ready
0 jobs

PControl - Configuration



PControl – Printer Config



PCounter – Printer Setup

- Isolate printers
  - On own subnet
  - Can only communicate with print server
  - Prevents bypassing print queues
- Lock paper trays on printers and copiers
  - Prevents paper theft

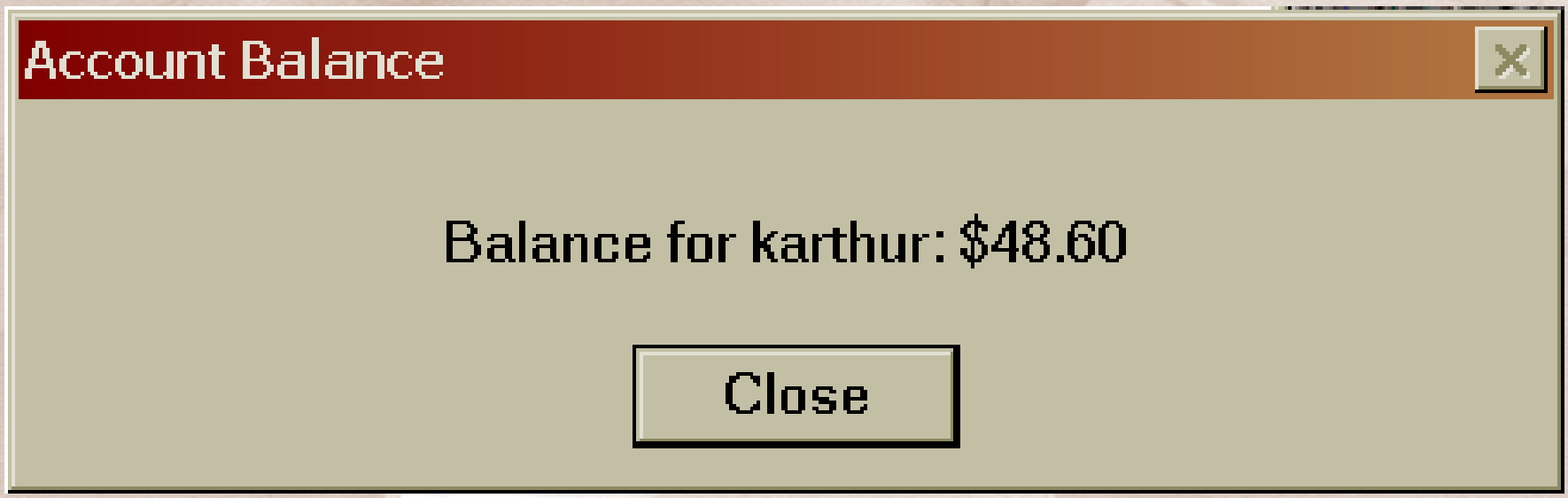
PCounter – Client Setup I

- Connect to PCounter print queue
  - Win 2000 – vbs script to automatically connect printer at login
  - Macintosh – defined via Mac Administrator
- Macintosh system name must be same as user login
  - Set with Mac Administrator

PCounter – Client Setup II

PC labs only: install wbalance.exe

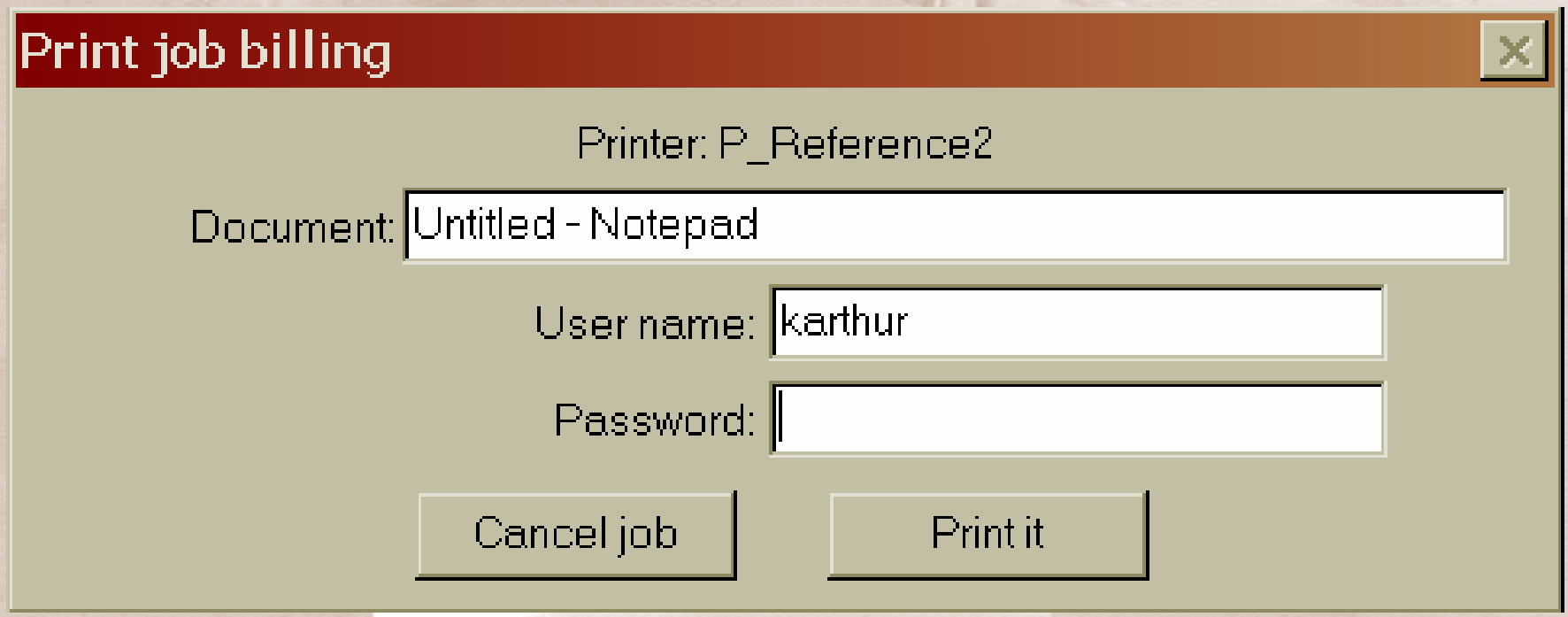
- **Allows user to see balance**
- **Must be logged in as self to be useful**
- **Shows up in System Tray**



PCounter – Client Setup III

Library PCs only: install ppopup.exe

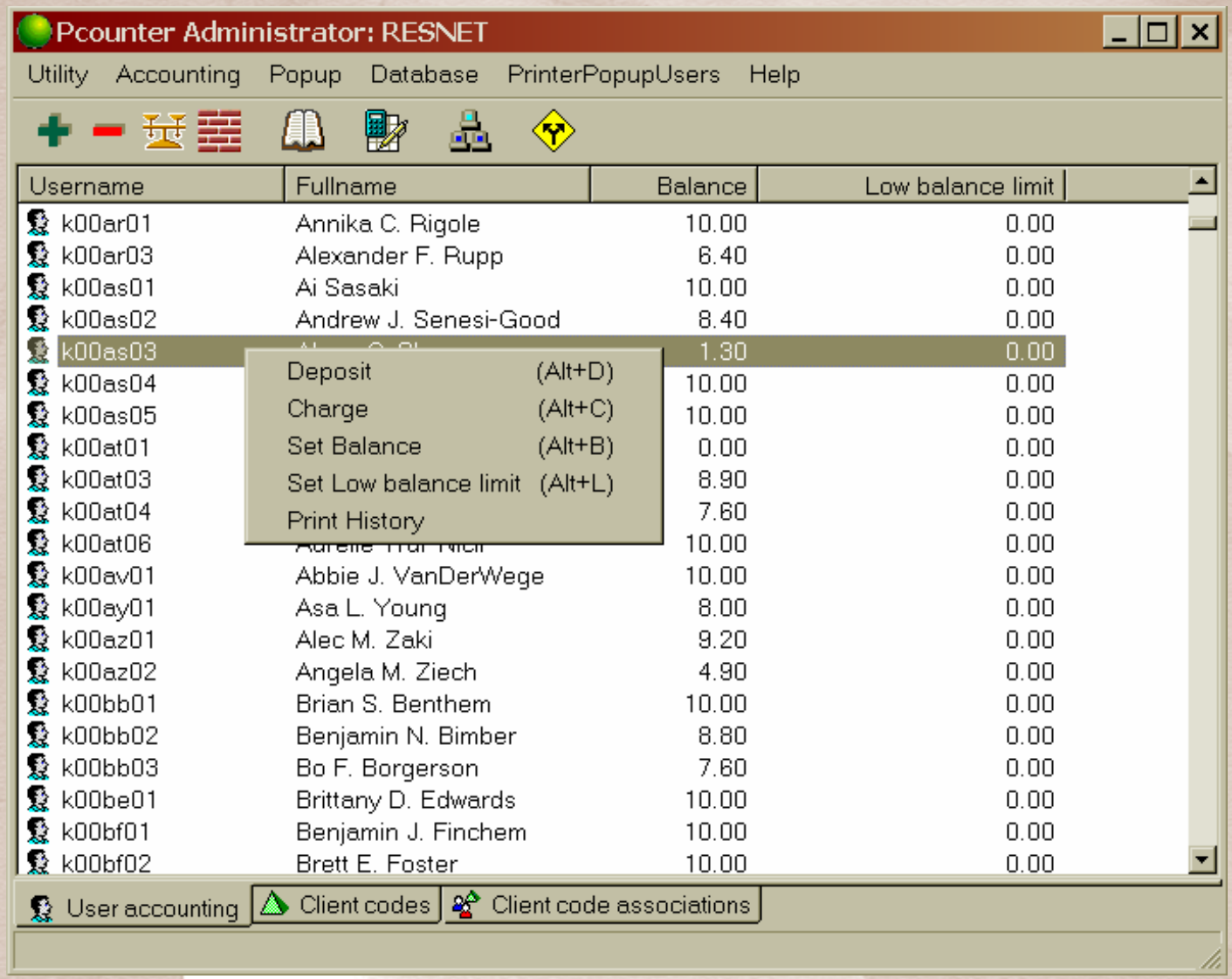
- **Allows PCounter to prompt user**
- **Shows up in System Tray, can be hidden**



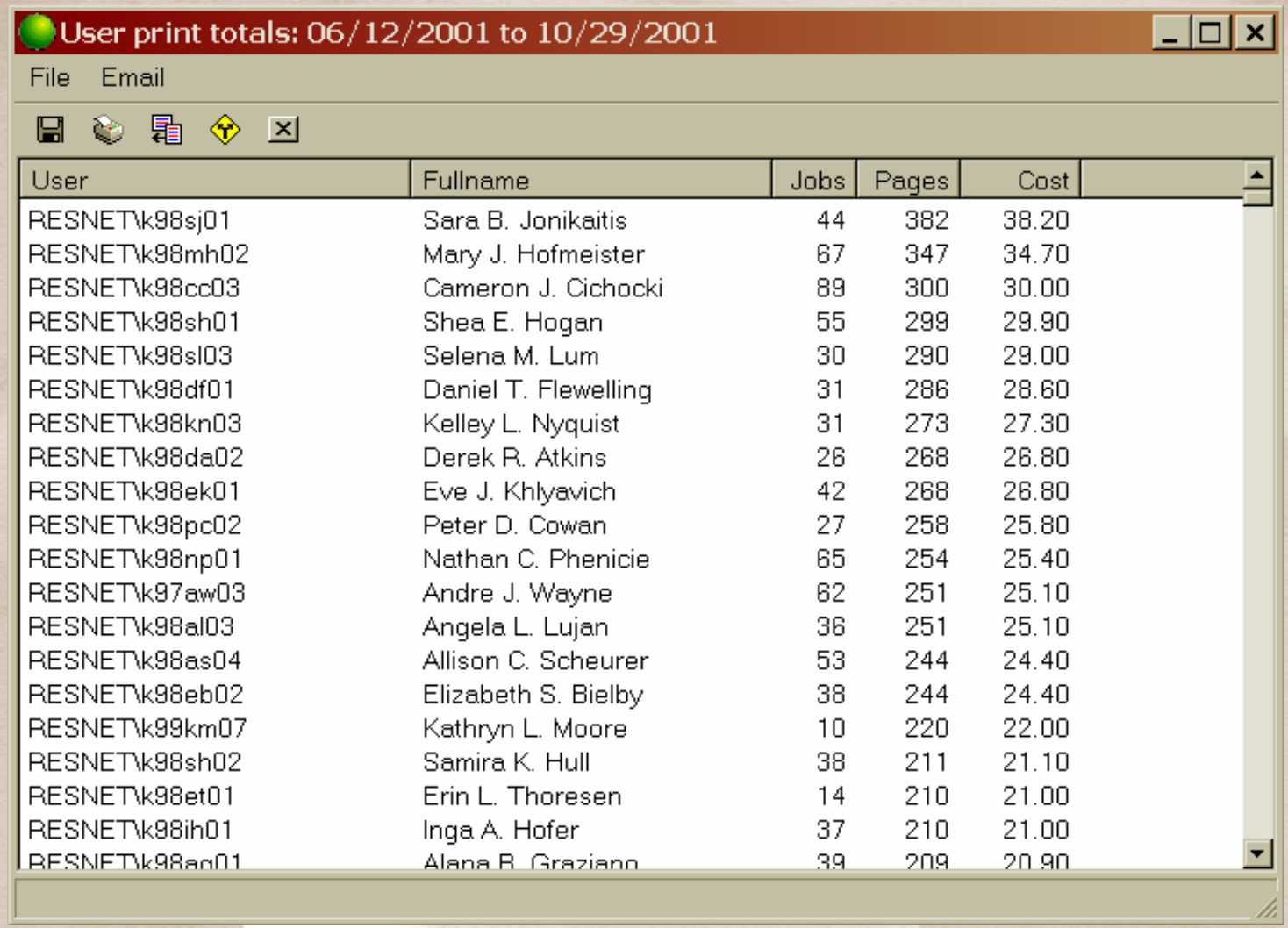
PCounter – Administration

- PAdmin Application
  - Provided to everyone who needs to change quotas
    - All librarians
    - System administrators
  - Deposit funds
  - Charge funds
  - View print history
  - Create print-only accounts (not in NT domain)
  - Create reports by user, printer, etc.

PAdmin

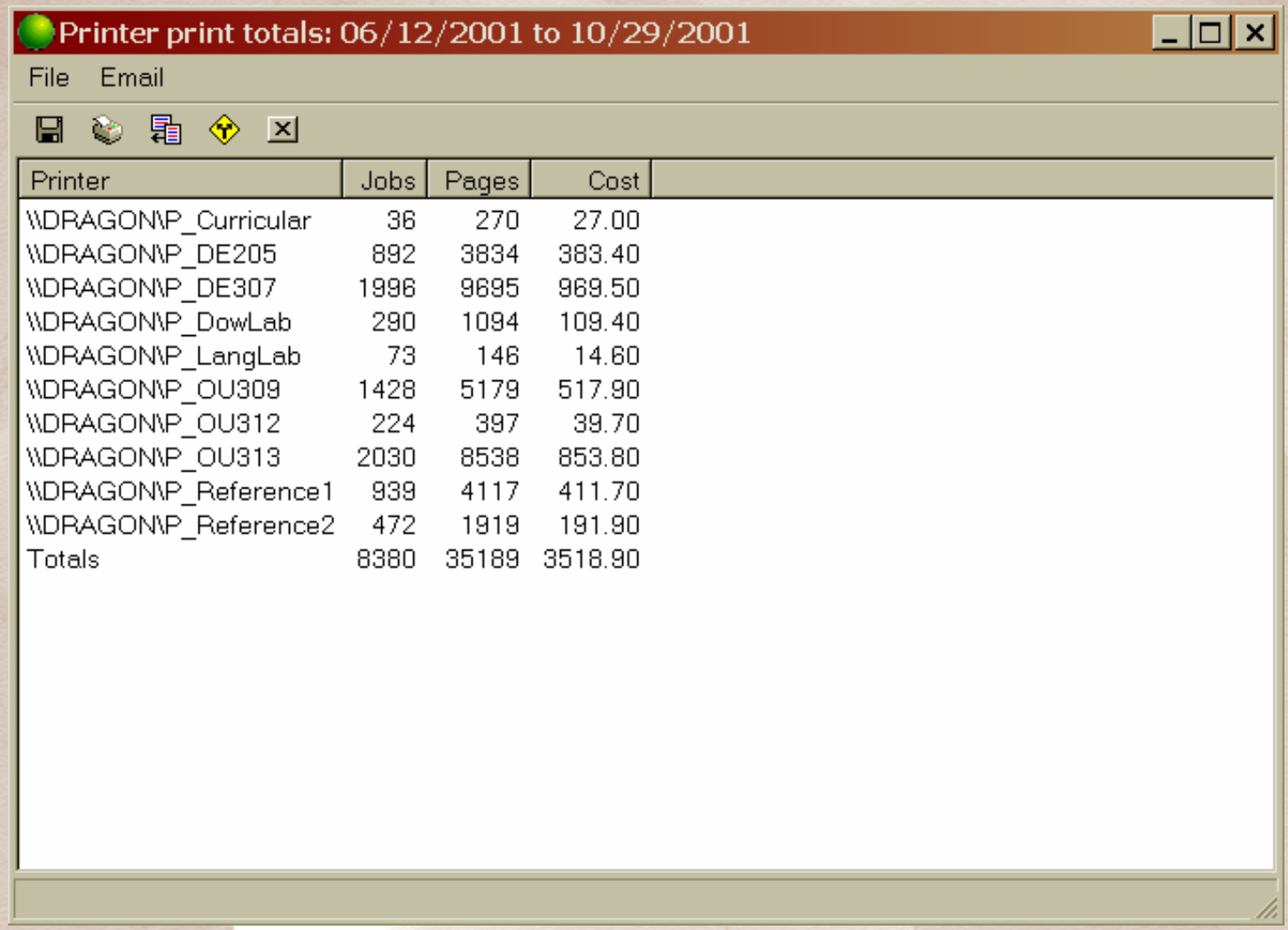

Pcounter Administrator: RESNET
Utility
Accounting
Popup
Database
PrinterPopupUsers
Help
Username
Fullname
Balance
Low balance limit
k00ar01 Annika C. Rigole 10.00 0.00
k00ar03 Alexander F. Rupp 6.40 0.00
k00as01 Ai Sasaki 10.00 0.00
k00as02 Andrew J. Senesi-Good 8.40 0.00
k00as03 1.30 0.00
k00as04 10.00 0.00
k00as05 10.00 0.00
k00at01 0.00 0.00
k00at03 8.90 0.00
k00at04 7.60 0.00
k00at06 10.00 0.00
k00av01 Abbie J. VanDerWege 10.00 0.00
k00ay01 Asa L. Young 8.00 0.00
k00az01 Alec M. Zaki 9.20 0.00
k00az02 Angela M. Ziech 4.90 0.00
k00bb01 Brian S. Benthem 10.00 0.00
k00bb02 Benjamin N. Bimber 8.80 0.00
k00bb03 Bo F. Borgerson 7.60 0.00
k00be01 Brittany D. Edwards 10.00 0.00
k00bf01 Benjamin J. Finchem 10.00 0.00
k00bf02 Brett E. Foster 10.00 0.00
Deposit (Alt+D)
Charge (Alt+C)
Set Balance (Alt+B)
Set Low balance limit (Alt+L)
Print History
User accounting
Client codes
Client code associations

PAdmin – User Report



User	Fullname	Jobs	Pages	Cost
RESNET\k98sj01	Sara B. Jonikaitis	44	382	38.20
RESNET\k98mh02	Mary J. Hofmeister	67	347	34.70
RESNET\k98cc03	Cameron J. Cichocki	89	300	30.00
RESNET\k98sh01	Shea E. Hogan	55	299	29.90
RESNET\k98sl03	Selena M. Lum	30	290	29.00
RESNET\k98df01	Daniel T. Flewelling	31	286	28.60
RESNET\k98kn03	Kelley L. Nyquist	31	273	27.30
RESNET\k98da02	Derek R. Atkins	26	268	26.80
RESNET\k98ek01	Eve J. Khlyavich	42	268	26.80
RESNET\k98pc02	Peter D. Cowan	27	258	25.80
RESNET\k98np01	Nathan C. Phenicie	65	254	25.40
RESNET\k97aw03	Andre J. Wayne	62	251	25.10
RESNET\k98al03	Angela L. Lujan	36	251	25.10
RESNET\k98as04	Allison C. Scheurer	53	244	24.40
RESNET\k98eb02	Elizabeth S. Bielby	38	244	24.40
RESNET\k99km07	Kathryn L. Moore	10	220	22.00
RESNET\k98sh02	Samira K. Hull	38	211	21.10
RESNET\k98et01	Erin L. Thoresen	14	210	21.00
RESNET\k98ih01	Inga A. Hofer	37	210	21.00
RESNET\k98ag01	Alana B. Graziano	39	209	20.90

PAdmin – Printer Report



Printer	Jobs	Pages	Cost
\\DRAGON\P_Curricular	36	270	27.00
\\DRAGON\P_DE205	892	3834	383.40
\\DRAGON\P_DE307	1996	9695	969.50
\\DRAGON\P_DowLab	290	1094	109.40
\\DRAGON\P_LangLab	73	146	14.60
\\DRAGON\P_OU309	1428	5179	517.90
\\DRAGON\P_OU312	224	397	39.70
\\DRAGON\P_OU313	2030	8538	853.80
\\DRAGON\P_Reference1	939	4117	411.70
\\DRAGON\P_Reference2	472	1919	191.90
Totals	8380	35189	3518.90

PCounter - Quotas

- Put students in appropriate NT groups
  - All students, first-years, seniors
  - Query College Administrative Database
  - Turn query result into NT script
- Assign quota to NT group
- Adjustments to be made beginning of every quarter

PCounter - Rollout

- Test in Spring 2001
  - Turned on in one PC lab and one Mac lab
  - Invisible to users
  - Allowed users to go beyond quotas
  - Publicity campaign towards end of quarter
- Implement in Summer 2001
  - Turned on for all labs
  - Visible to users
  - Wrap up details (set quotas, isolate printers, lock trays, etc.)
- Live in Fall 2001

PCounter - Issues

- Printing errors are higher profile
  - Students don’t want to be charged for errors
  - Extra burden to investigate, adjust quotas
- Seniors who aren’t seniors
  - Not officially seniors but doing Senior Project
  - Missed when querying database for seniors
  - Will fix next year with more complex query

Policies

- **Amount to charge**
  - **10 cents is the same as photocopies**
- **Dealing with guests**
  - **Special accounts**
- **Dealing with printer problems**
  - **Credits for printer errors**
- **Point of contact**
  - **Circulation desk has extended hours**
  - **Already handles monetary transactions**

Policies

- **Student standing**
  - **Determines number of free credits**

Quarter	Allotted Free Credits
First year fall	150 pages
First year winter and spring	100 pages per quarter
Sophomore fall, winter, and spring	100 pages per quarter
Junior fall, winter, and spring	100 pages per quarter
Senior fall	300 pages
Senior winter and spring	100 pages per quarter

Policies

Policy/FAQ Web site:

http://www.kzoo.edu/is/library/printing/

Marketing

- **Spring 2001**
  - **Visited campus groups**
    - **Presidential Advisory Committee**
    - **Student Commission**
    - **EnvOrg (recycling)**
  - **Emailed campus-wide message**
  - **Created Policy/FAQ Web site**
  - **Article in the *Index* (student paper)**

Marketing

- **Summer 2001**
  - ***Connections*** **(newsletter for new and returning students)**
  - ***Faculty Handbook***
  - ***Parent Handbook***
- **Fall 2001**
  - ***Compass*** **(newsletter for New Student Orientation)**

Marketing - Posters

Love a Tree!

Please help conserve paper and toner

Printing Services are in Effect:

Use your Print Credits Wisely!

http://www.kzoo.edu/is/library/printing/

Call the Help Desk at x5800 with questions!

Printing Services are in Effect!

How Many Print Credits do You Get?

Quarter	Allotted Free Credits
First year fall	150 pages
First year winter and spring	100 pages per quarter
Sophomore fall, winter, spring	100 pages per quarter
Junior fall, winter, and spring	100 pages per quarter
Senior fall	300 pages
Senior winter and spring	100 pages per quarter

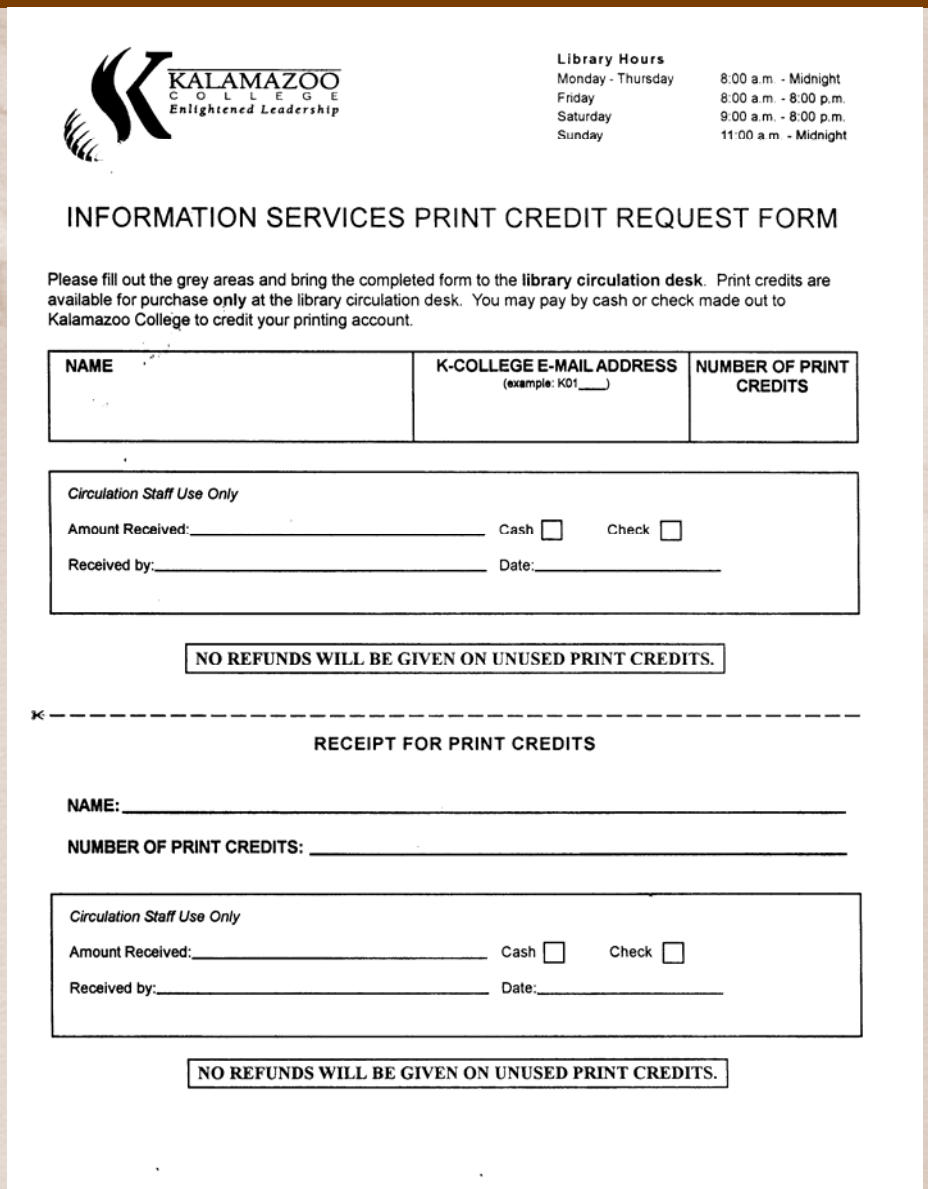
Use your Print Credits Wisely!

http://www.kzoo.edu/is/library/printing/

Call the Help Desk at x5800 with questions!

Training

Created form for adding print credits



KALAMAZOO COLLEGE
Enlightened Leadership

Library Hours

Monday - Thursday	8:00 a.m. - Midnight
Friday	8:00 a.m. - 8:00 p.m.
Saturday	9:00 a.m. - 8:00 p.m.
Sunday	11:00 a.m. - Midnight

INFORMATION SERVICES PRINT CREDIT REQUEST FORM

Please fill out the grey areas and bring the completed form to the **library circulation desk**. Print credits are available for purchase **only** at the library circulation desk. You may pay by cash or check made out to Kalamazoo College to credit your printing account.

NAME	K-COLLEGE E-MAIL ADDRESS (example: K01____)	NUMBER OF PRINT CREDITS

Circulation Staff Use Only

Amount Received:_____ Cash ☐ Check ☐

Received by:_____ Date:_____

NO REFUNDS WILL BE GIVEN ON UNUSED PRINT CREDITS.

RECEIPT FOR PRINT CREDITS

NAME: _____

NUMBER OF PRINT CREDITS: _____

Circulation Staff Use Only

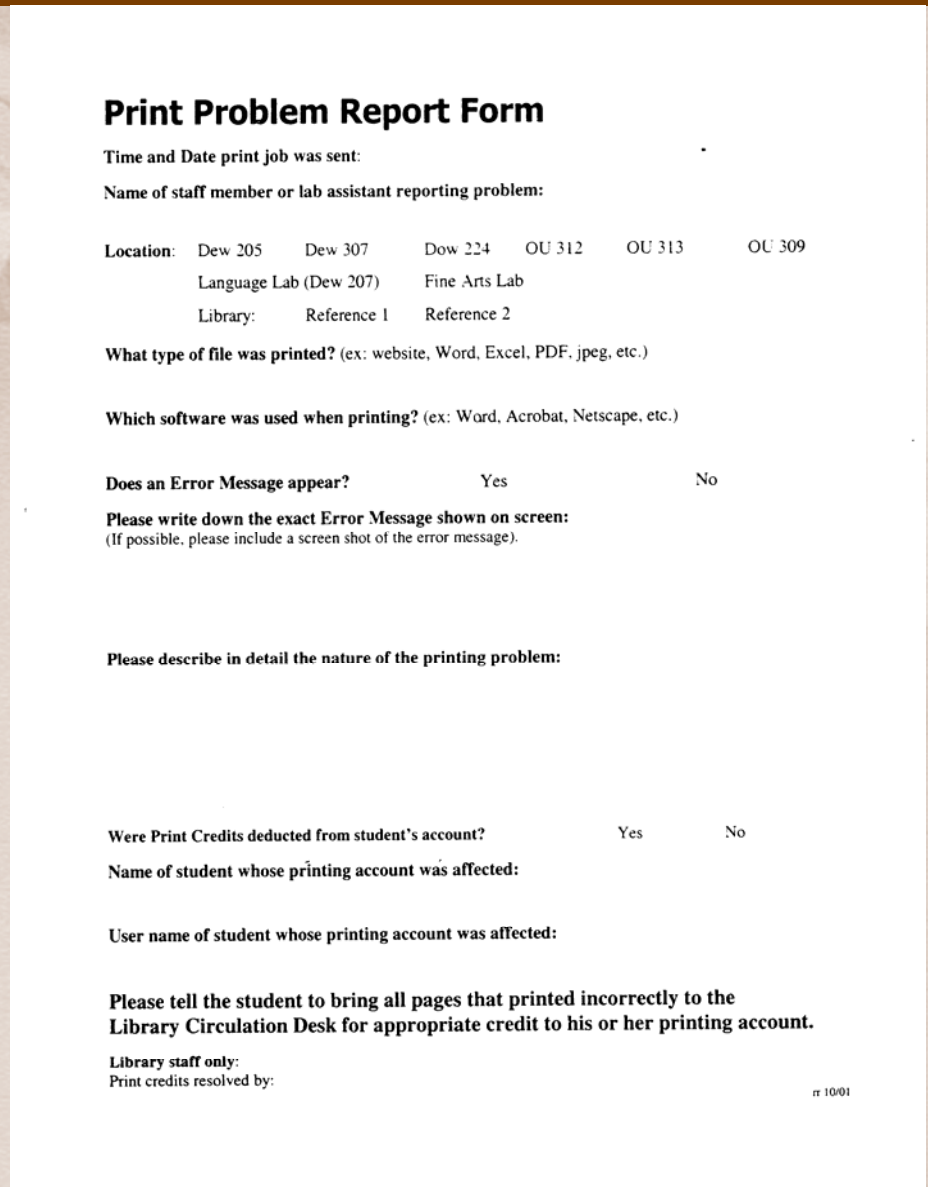
Amount Received:_____ Cash ☐ Check ☐

Received by:_____ Date:_____

NO REFUNDS WILL BE GIVEN ON UNUSED PRINT CREDITS.

Training

Created form for reporting printer problems



Print Problem Report Form

Time and Date print job was sent:

Name of staff member or lab assistant reporting problem:

Location: Dew 205 Dew 307 Dow 224 OU 312 OU 313 OU 309
Language Lab (Dew 207) Fine Arts Lab
Library: Reference 1 Reference 2

What type of file was printed? (ex: website, Word, Excel, PDF, jpeg, etc.)

Which software was used when printing? (ex: Word, Acrobat, Netscape, etc.)

Does an Error Message appear? Yes No

Please write down the exact Error Message shown on screen:
(If possible, please include a screen shot of the error message).

Please describe in detail the nature of the printing problem:

Were Print Credits deducted from student's account? Yes No

Name of student whose printing account was affected:

User name of student whose printing account was affected:

Please tell the student to bring all pages that printed incorrectly to the Library Circulation Desk for appropriate credit to his or her printing account.

Library staff only:
Print credits resolved by:

rr 10/01

Training

- Developed instructions for administrators
- Reference: The *Helpful* Computer Manual
  - Instructions (adding/deleting credits)
  - How to clear print queue
  - How to deal with printing problems
  - Forms
- Training sessions for library staff

Changes in Library and Labs

- **Word 97 viewer vs. full program in Reference**
- **Increased change available at circ**
- **Locked paper trays on copiers and printers**
- **Enabled library supervisors to clear print queues**

Results and Impact

- **Paper and toner use down**
- **Much less paper waste**
- **Fewer toner cartridges replaced**
- **Photocopying up**
- **Increased printing in rooms?**
- **Few student complaints**