October 20, 2012

Dear Carleton Students and Community Members,

Before I begin, I must thank all of the students who filled out the survey. At the time that I compiled all of the comments, there were 277 responses. Each and every one gave me more information and more specific experience to use in this report. Thank you, Carleton students, for sharing your stories.

I must make one point exceedingly clear: PaperCut and the printing quota were not implemented by the Carleton Student Association (CSA) and the CSA Senate never “approved” anything related to this policy. In fact, the Senate was drafting an official list of concerns with the policy during tenth week of Spring Term 2012.

Many people were upset with how the policy and software were rolled out. Few people knew anything about it before receiving an email from the Dean of the College. While the massive failure of communication cannot be attributed to any person or group (student or administration), I will take responsibility for failing to relay the limited details CSA Senate knew at the very end of last spring. Therefore, I resolve to fight for the desires of the student body.

The most important themes from the printing survey will be part of the “executive summary” enclosed in the next few pages, and the whole survey will follow as an appendix. Having read all 277 surveys, this is my highest-priority recommendation:

| There are significant technical and policy flaws related to student printing at Carleton. It is my belief that ITS and the college administration should **suspend the printing quota for the rest of Fall Term 2012** to address concerns of students, faculty, and staff regarding printing. A one-size-fits-all approach to printing budgets unfairly disadvantages some people at Carleton, and there must be a solution to this problem. |

| The students also deserve to know the rationale behind the change; is it to save paper, as has been told to many people on campus? If so, there **must be incentives to print duplex sheets**. If the rationale is to save the college money, then the students have the right to know where that money is going. |

Only by working together can we make Carleton better,

Michael McClellan  
President, Carleton Student Association
EXECUTIVE SUMMARY OF STUDENT SURVEY REGARDING PRINTING AT CARLETON: PAPERCUT AND THE PRINT QUOTA

MICHAEL MCCLELLAN
PRESIDENT, CARLETON STUDENT ASSOCIATION
OCTOBER 20, 2012

Introduction and Statistics .................................................................................................................. 2
Advantages of the New System ......................................................................................................... 3
  Environmental Impact .................................................................................................................... 3
  Comparison to Other Schools ........................................................................................................ 4
  Technical Improvements ............................................................................................................... 4
Problems with the New System ......................................................................................................... 4
  Course of Study ............................................................................................................................ 5
  Financial Burden .......................................................................................................................... 5
  Technical Limitations and Bugs ................................................................................................... 5
  Non-Academic Printing .................................................................................................................. 6
Action Suggestions ............................................................................................................................ 6
  Immediate, Low-Cost Actions ....................................................................................................... 6
  Duplex Printing Discount ............................................................................................................. 6
  Technical Fixes ............................................................................................................................. 7
  Flexibility with Printing ................................................................................................................. 7
  Non-Academic Printing ................................................................................................................. 8
  Remove the Quota ......................................................................................................................... 8
Conclusions ........................................................................................................................................ 8
“I don’t print out things I don’t need, and I feel like Carls in general are respectful and responsible enough to do the same.”

Introduction and Statistics

The purpose of this survey was to gather individual student accounts of experience with PaperCut and the new printing quota, a system implemented at the start of Fall Term 2012. In contrast to previous years (with the GoPrint client), students are now given an account that is debited each time a print job is released to a printer. Once that account reaches zero, the students must pay to refill it in order to continue printing. The Carleton Student Association (CSA) Senate and the CSA President (Michael McClellan) wanted to collect the real experiences of students in order to craft a full response to this new printing system. Again, as the cover letter to this survey states, PaperCut and the printing quota were not implemented by the CSA and the CSA Senate never “approved” anything related to this policy.

This survey received 277 responses, with a distribution of class years represented. Table 1 gives the response statistics of the first question of the survey, which read: “Which of these statements most accurately captures your opinion of PaperCut and the print quota?”

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Great</td>
<td>5</td>
<td>4.8%</td>
<td>2</td>
<td>3.0%</td>
<td>1</td>
<td>1.3%</td>
<td>4</td>
<td>13.3%</td>
<td>12</td>
<td>4.3%</td>
</tr>
<tr>
<td>2: No Problems</td>
<td>7</td>
<td>6.7%</td>
<td>11</td>
<td>16.4%</td>
<td>8</td>
<td>10.7%</td>
<td>7</td>
<td>23.3%</td>
<td>33</td>
<td>11.9%</td>
</tr>
<tr>
<td>3: Minor Changes</td>
<td>30</td>
<td>28.6%</td>
<td>15</td>
<td>22.4%</td>
<td>17</td>
<td>22.7%</td>
<td>11</td>
<td>36.7%</td>
<td>73</td>
<td>26.4%</td>
</tr>
<tr>
<td>4: Major Reform</td>
<td>30</td>
<td>28.6%</td>
<td>16</td>
<td>23.9%</td>
<td>31</td>
<td>41.3%</td>
<td>4</td>
<td>13.3%</td>
<td>81</td>
<td>29.2%</td>
</tr>
<tr>
<td>5: Abolish</td>
<td>29</td>
<td>27.6%</td>
<td>23</td>
<td>34.3%</td>
<td>17</td>
<td>22.7%</td>
<td>4</td>
<td>13.3%</td>
<td>73</td>
<td>26.4%</td>
</tr>
<tr>
<td>6: Other</td>
<td>4</td>
<td>3.8%</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>1.3%</td>
<td>0</td>
<td>0.0%</td>
<td>5</td>
<td>1.8%</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>67</td>
<td>75</td>
<td>30</td>
<td>277</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shown graphically, it becomes clear that among all classes, the most common responses fall within the range of Minor Changes to Major Reform to Abolish. Over 15% of students reported no problems (Great or No Problems) with the new printing system, and their voices will not be ignored; however, the large number of student accounts of problems and frustrations with the new system also indicates that there are many ways in which the system can be improved.
The remainder of this report will focus on the main points brought up by student responses, including numerous quotations directly from students (as indicated with the boxes bounding the text). The final sections of this report will spell out the suggestions for action posed by students.

Advantages of the New System

One question in the survey asked students to reflect on any advantages, if any, they saw in the new printing system. Most students filled this field with at least one thought. These advantages can be grouped into a few broad categories. One student remarks that these changes are welcome:

“No real problems. I am willing to pay the cost of everything I print.”

Environmental Impact

The PaperCut system is clearly living up to its name for many students; many respondents indicated that they print less now than they did in the past. This decreases the amount of consumables (paper, toner, and printer parts) that are used.

“It’s a good idea to limit the amount of paper Carleton consumes, and putting a monetary disincentive on printing is the responsible thing to do.”

Students can also see the rate of paper use and key translations of that use (number of trees, carbon equivalence, watt-hours). Students have remarked on how this can help “put things in perspective” when thinking about broader environmental impact. Another advantage is likely due to the increased value of each page: there have been many fewer print jobs left at the printer, which cuts down on waste and unnecessary printing.
Comparison to Other Schools

Some respondents pointed out the fact that Carleton still has an uncommon printing system because it pays for even a fraction of our printing. Students remarked that many other schools do not pay for any printing at all, and students often pay 5-10 cents a page all year.

“I think that we take the fact that Carleton pays for our printing for granted, and I think PaperCut will help us be more cost conscious. Students who go over the limit and don’t find it fair should be grateful that Carleton pays for ANY of their printing.”

Another survey response indicates that this system is still “less than you’d pay using your own printer!”

Technical Improvements

Many students had praise for some key technical improvements that have been rolled out this year, though some of them are not linked to PaperCut or the quota. The first is the new four-printer setup in the library. Though there are some critiques (to be addressed in the “problems” section), the availability of four printers at high-traffic times is an improvement to many students.

Another advantage that comes with the PaperCut client is the option to convert color print jobs to grayscale with the click of a button (in case one forgets to change it over to grayscale in the print options). The client shows how much money would be saved by switching to grayscale.

The PaperCut client also allows for uploads to the management website (https://print.ads.carleton.edu:9192/app) from personal computers. At the end of last year, GoPrint still had more capabilities, and did not limit the file types; these improvements would make PaperCut’s home printing more effective.

Problems with the New System

By far, the most common thread linking the complaints with the new system relates to student majors. Majors in the humanities and social sciences report that they have been unfairly punished by this new system. The remaining disadvantages to be listed in this section will more fully flesh out this complaint, but some respondents also point to a different take on this, which is important to keep in mind:

“People complain that certain majors have to spend more money because they have to print off more pages. These tend to be majors that save a significant amount of money on textbooks every term.”
The purpose of this quotation is not to incite “major warfare” but to keep in mind that some low-printing courses of study will incur thousands of dollars in textbook costs over four years. This does not detract from the need to improve the system, and other problems will be listed in this section.

Course of Study
Choice of major is not the only way in which academic choices affect how many pages a student prints. When students register for their Integrative Exercise (Comps), they may be required to proofread and comment on other students’ work, which can take a large toll on quotas. Some of these tasks may be quite difficult to achieve in electronic formats.

“I rarely see students printing frivolously. We print because our professors assign readings and would much rather read on paper and annotate than read on a screen.”

Another metric to consider is the number of students with multiple majors or concentrations, or those students who “overload” in a given term may require more printing than the calculations used to determine the print quota would indicate. Will the quota system, as it currently stands, prevent students from taking on a more ambitious course of study? Will it cause some students to pay much more money out-of-pocket?

“Students generally say that their demand for printing is price-elastic; they need to print a certain amount of pages [for their classes] no matter what, so cost isn’t a deterrent.”

Financial Burden
What does it say about our current system when students may not be prepared for their classes because they cannot afford to print required materials? A commonly suggested alternative to printing is the use of tablets or e-readers, but a student that has trouble paying for printing would likely not have an iPad or Kindle to read class PDFs.

This brings up another question: how is this system significantly different than having printing costs within the comprehensive fee (which was implicitly the case in previous years)? Is this all “Monopoly money” (Schillers?) that we’re using to pay for printing? Students also wish to know where the money made on the quota goes.

Technical Limitations and Bugs
Students have also encountered numerous glitches and bugs in the PaperCut client. For example, the program has much trouble operating in the Windows environment. The web printing feature has a limit on the types of files that may be uploaded, which requires students to convert them to PDF or to print from a lab computer; the previous home-computer GoPrint client did not have this limitation.
“Right now, PaperCut performs fewer tasks than GoPrint and does them less effectively.”

Students report that when there is a jam or malfunction at the printer, the money on such a print job is lost; if a malfunction occurs in a 100-page job, and only a couple of shredded pages come out, the job must be printed again at cost to the student.

Non-Academic Printing

Students also have expressed frustration with the non-functionality of the PIN/shared accounts feature of PaperCut and problems printing to student organization accounts. This is currently being solved, but it remains clear that the “correct” way to use these features is neither fully functional nor widely publicized.

Action Suggestions

A final question in the survey invited students to suggest ways that would make printing more equitable and useful. Some students expressed that they did not wish to see any changes; in fact, a few indicated they would be upset if the college retreated from having a printing quota. Other suggestions focused on fixing technical problems or creating novel systems.

Immediate, Low-Cost Actions

There were many suggestions that could be implemented immediately with little cost to the college. One suggestion is to make signage on how to print multiple sheets per page. This would allow students to learn how to halve or quarter paper use. Another suggestion is to get professors in the loop; at the moment, many might not know that the printing quota exists, and may not have thought about how to modify their courses to reflect this. If students wish to use e-readers or computers to read their assignments, it would be helpful to have training and information on e-readers and PDF annotation software, possibly through ITS or the library. Professors could also use more online resources (such as Moodle) to turn in assignments; this would cut down on the number of pages that students must print, and could be used in concert with recent improvements to the Moodle software.

Duplex Printing Discount

There is one major way in which PaperCut is not living up to its name: there is no financial incentive for students to print on both sides of a page, since they are charged per impression and not per page.

“Quash the growing perception that the administration/Senate is taking the position that "paper doesn’t really matter" ecologically (actual statement) and our policies are aimed at ink use alone”
It is important to clarify that at no point has the CSA Senate tried to spin the print quota to be about saving toner. President Michael McClellan has been quoted in the Carletonian (and in conversations on campus) as trying to put himself in the role of the administration to rationalize the lack of a duplex discount as a way to save money or toner, even though “saving paper” has been the banner under which this change has occurred.

“What I was getting at every turn [from the administration] was ‘paper, paper, paper.’ What I’ve found is that’s not the case. If the idea was to save paper, you’d think there would be some system to encourage people to save paper. I understand that toner can be environmentally damaging, but we haven’t heard that in any of the narratives [from the administration].”

The students also deserve to know the rationale behind the change; is it to save paper, as has been told to many people on campus? If so, there must be incentives to print duplex sheets. If the rationale is to save the college money or toner, then the students have the right to know where that money is going.

Technical Fixes

There are many technical problems that could also be fixed without major overhaul. Students wish to see computers have the default set to duplex; many computers do not do this as they did in the past. The four-printer setup in the library is popular, but it would be more helpful to have all jobs from one person print at same location, rather than spread among the four printers. Students also remark that it is difficult to log out of PaperCut on the computers; the standard sign-in window is five minutes, and at the always-on computer stations in the library, this is often too long. Another complaint is that jobs are often defaulted to printers far away from the location of the computer; for example, the Sayles computers default to color and to CMC printers. Students wish to see strong warnings when printing is excessive, such as when half of the quota has been expended before midterm.

Flexibility with Printing

A one-size-fits-all approach to printing budgets unfairly disadvantage some people at Carleton, and there must be a solution to this problem. Students wish to see a way to modify the quota based on majors or class load. One way to implement this would be a comp credit or account for students currently enrolled in any class numbered 400; this would alleviate the “comps crunch” that many students have experienced this term. Another way to increase the quota for students in certain classes is to offer discounted printing packages available for specific classes (as a “textbook” in the bookstore). If that is not possible, professors could work with Print Services to create course readers available for purchase at the bookstore at lower cost than printing each page from e-reserves or Moodle. The term-by-term quota also uniquely
disadvantages students who have a print-heavy fall term, as they do not have access to rollover they might carry in later terms:

“I would suggest a yearly quota instead of a term by term quota, because even with rollovers, it is not really effective if you take a printing intensive course the first term and run out of money but then have a lot of extra for the rest of the year because you don’t need to print very much.”

Another important factor to consider is student financial need. The administration must work with Student Financial Services and TRiO in order to make sure that no student is ever placed in a position where they have exhausted their quota and cannot afford to refill their account.

A creative solution that has been discussed is a cap and trade system by which students can transfer their printing credit to other students; this could decrease our overall printing in a novel way.

Non-Academic Printing

There are solutions currently in the pipeline, but it is still important to highlight the need for solutions to printing for campus jobs and student organizations. With the limits on personal printing, most students are not willing to use their own account to print posters and prefect materials.

Remove the Quota

A sizeable number of students want to see the end of this quota, altogether. This is a course of action that may be unpopular with some members of the administration, but it must be considered as a viable option. There are many problems that students have experienced with the new printing system, and one way to address them is to suspend the quota, either permanently or until the structural problems are fixed. One student suggests:

“Instead of enforcing a hard cap, I believe that students should receive a warning upon reaching some arbitrary upper limit (and the warning should be displayed when they print), but no student should be prevented from printing material. … I see no end to the nightmare that printing has become, both for the people trying to help ease the situation and for the frustrated students and faculty.”

Conclusions

Again, without ample student involvement, the level of detail in the course of action would not be possible. The Carleton Student Association and CSA Senate thank every student for their valuable feedback.
The cover letter to this survey summary spells out the course of action that CSA President Michael McClellan suggests based on all of these accounts:

There are significant technical and policy flaws related to student printing at Carleton. It is my belief that ITS and the college administration should suspend the printing quota for the rest of Fall Term 2012 to address concerns of students, faculty, and staff regarding printing. A one-size-fits-all approach to printing budgets unfairly disadvantages some people at Carleton, and there must be a solution to this problem.

The students also deserve to know the rationale behind the change; is it to save paper, as has been told to many people on campus? If so, there must be incentives to print duplex sheets. If the rationale is to save the college money, then the students have the right to know where that money is going.

Of course, the end of this survey does not indicate the end of this conversation. Everyone involved wants to see Carleton improve; it is important that no one loses sight of this. Now, all students need to work together to bring these courses of action to pass.