

BlueStream Survey Report

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Executive Summary

We conducted a Survey with the current users of BlueStream to know more about their interaction with it. We used the Zoomerang survey website to post our survey for the pool of 2137 and directed the users to this link through an email. Initial pilots was done to account for discrepancies and errors on our part and also to make a judgment about the time required to complete the survey. Also there were many rounds of discussion with the BlueStream team in order to ensure that the right questions are asked and relevant data collected. To increase contribution we also promised the users with five \$10 Amazon gift certificates.

Overall we got 112 complete responses out of which 84 participants had already used BlueStream. We defined the goals of the survey as to:

- Identify who is using the system and how are they use it
- Understand the value of different functionality to different people
- Understand how people are currently using different functionality
- Find out what people like and dislike about the system
- Get an idea of how people feel certain things should behave

The questions which addressed these goals were both qualitative (open ended) and quantitative (rating scales, multiple choices). A detailed list of questions and their responses is available in Appendix I.

From the analysis of the survey data we can see that most of the users are undergraduate or graduate students (58%) followed by faculty (20%) and staff (15%). The requirements of all these groups are different when dealing with BlueStream. While there were a number of other non significant findings we limited our major findings to:

- Most of the users (43%) are short time users (1-3 months) who find the BlueStream web widgets easy to use. We therefore believe that the BlueStream team is doing an excellent work in developing more such widgets.
- Users had hard time using the Management interface. This can be observed from the drop in the ease of use values for management interface.
- Most of the users (74%) are satisfied by the current functionality but require more dynamic functions like RSS feeds, bulk import export, viewing PDFs in browser. Few users also noted that while they believe it has all the functionality these are less accessible
- We also compared BlueStream to other rival websites and found that YouTube and Google Video are far easier to upload and view content. A change in design in direction of these engines can definitely help.

We also believed that there might be some shortcomings of the survey mainly because of the technical nomenclature used and inability to clearly explain the participants what BlueStream really is because they access it from several other websites. Also, we think we could have got more responses considering out initial pool of users so that there were other significant findings.

Introduction

System Description

BlueStream is an online media repository, also known as a digital asset management system. BlueStream used by the University of Michigan to facilitate use of multimedia such as digital video, audio, images, and documents in higher education. It is currently managed by the Digital Media Commons at the University. It is comprised of four main components:

1. Digital asset ingestion and management
2. Video encoding and logging
3. Content management and production
4. Digital rights management

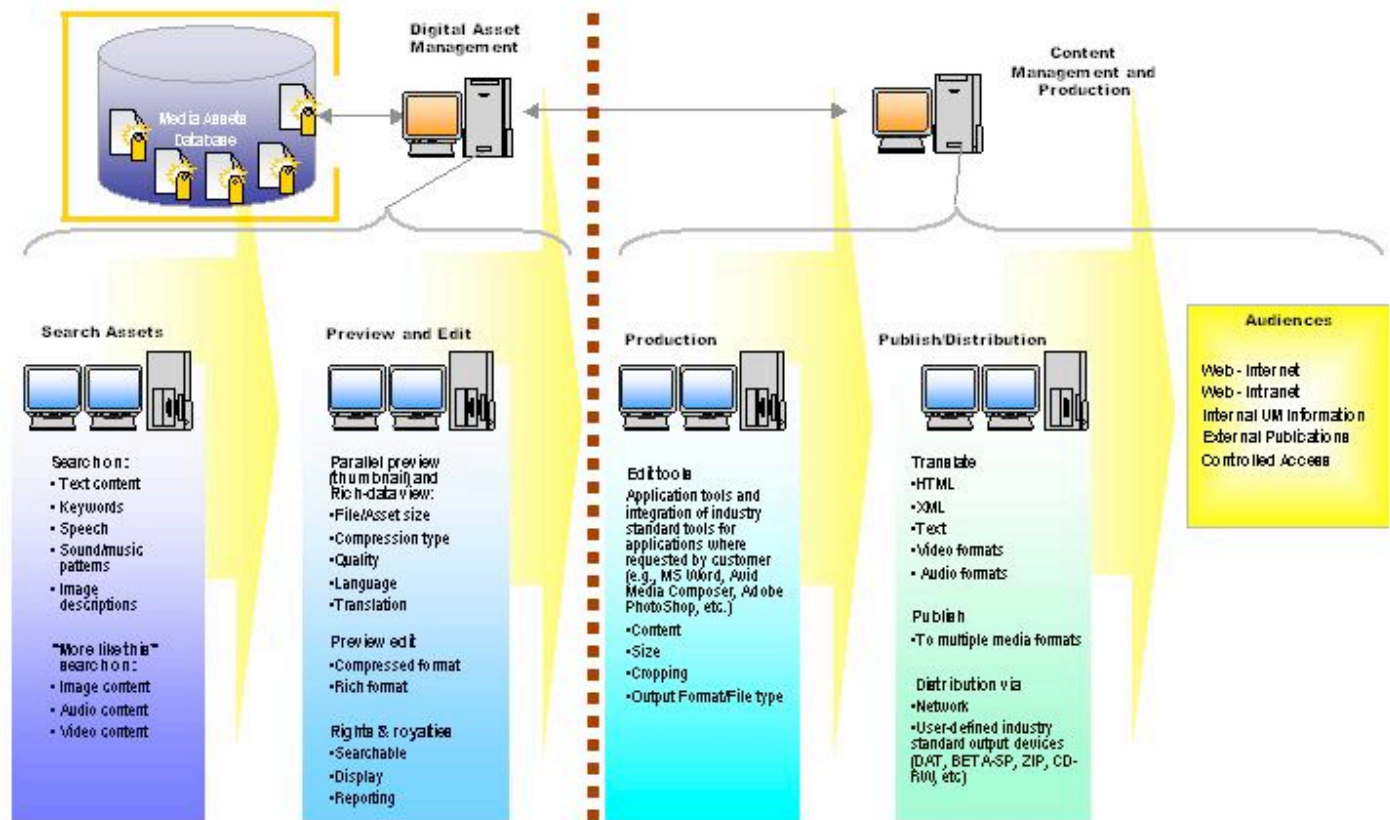


Figure1: Image showing the BlueStream system and working.

These components together create a powerful tool that not only acts like a repository, but allows access to multimedia in a number of different formats to a large audience with varied access rights. Its main features include time-coded meta-data, automatic synchronization of annotations, research markup, and transcripts, which enables sharing of knowledge over a wide

spectrum. Other features include state-of-the-art media analysis tools to automatically generate metadata from the spoken and printed word, recognition of faces, and scene changes. Most of the projects run with BlueStream are pilot at the moment.

Some of the greatest strengths of BlueStream are anytime access and ease of sharing resources. A number of blogs and sites (educational and media) can be built upon this system to pull content from BlueStream. Such media can also be used by other researchers and faculty for their own educational material. The Digital Media Commons team is now engaged in making web templates for BlueStream features. A combination of these features can be requested and put into one site depending on the purpose.

BlueStream has been used by several projects at the university. The primary way of accessing BlueStream is currently through the Ancept Media Server management interface, which allows direct access to all BlueStream features. Several projects use AJAX web services to allow access to content from other websites, including CTools. Some of these projects are CTools-Library DVR (Digital Video Reserves), SI523 Lecture Capture, English 125 Linguistics Video and audio clips, and Nursing 688 Training Videos.

As part of our analysis of BlueStream, we conducted a survey of its users. This survey was used to give us an idea of users' attitudes of the system from a usability standpoint. We also gathered data on what users feel is lacking from BlueStream in its current form and how they are compensating. We were also able to get a better idea of who the key user population is. The results of this survey will help us in the next stage of our analysis, usability testing. The data can show what tasks we want to concentrate on in the user testing. Below you will find the analysis and results of the survey.

Methodology

As a tightly controlled university service, BlueStream lacks the broad user base that many web services enjoy. This proved to be an advantage in both identifying a sample population and recruiting people to take our survey. As an evaluation rather than design problem, we identified the population as those who have used BlueStream. Its closed nature made recruiting particularly simple: rather than having to recruit from a seemingly unbounded pool, we were able to send an appeal to the list of 2,137 registered users.

That there are over 2,000 registered users did not mean that there were over 2,000 people who knew what BlueStream is; many users access the service through web service templates that retrieve their content from BlueStream, but do not mention BlueStream by name. To make the survey accessible to the greatest number of people, we had to rely on the invitation message, which, with help from our client contact, included a list of every widely used product that includes BlueStream components. The invitation also informed potential participants that by taking the survey and including their email address, they would be entered into a drawing for

one of five \$10 Amazon gift certificates. The full text of the invitation email is included in Appendix II.

To deliver the survey to the pool of 2,137 potential participants, we used a web survey service called Zoomerang. Zoomerang was chosen for its comparatively low price-to-feature ratio; for a one month, nineteen dollar subscription, we were able to take advantage of two important features not included in the free version of Zoomerang: first, given the size of the participant pool, we wanted to be able to take in more than 100 surveys. Second, we wanted to be able to design the survey using logical branches, with future questions depending on the answers a participant gives to previous ones.

Before releasing it to the full participant pool, the survey went through several rounds of testing, suggestions, and revisions with the BlueStream team. The reason for these changes is that although we had been able to familiarize ourselves with BlueStream, its capabilities, and its uses, the BlueStream team has a better knowledge of their broad range of users than we do, and so is better able to speak to their needs, and in their language. It was during this conversation that details about how to address the issue that many users had not heard of BlueStream by name were decided upon: the BlueStream team provided us with a list of ways users may have accessed BlueStream, and this list was included in the invitation to the survey. There is also a survey question that explicitly asks how users access BlueStream, which, in addition to providing us with that important piece of information, helps to disambiguate BlueStream to the participants.

We also got specific feedback on the type of data we were planning to collect. To this end, we added questions about the type of work users were doing with BlueStream, and whether they were doing it on their own or collaboratively. We opted not to add quantitative questions such as the number of hours of video a user watched and how many documents a user has stored on BlueStream. We made this decision for two reasons: such quantitative measures do not get at usability issues, but rather, usage issues; and a more accurate picture of these data should be obtainable from BlueStream server logs.

Questionnaire Design

Survey goals

The most important goal of the survey was to identify and understand the prime users of the system and their interactions with it. Before starting the survey we came up with research questions which the survey questions would address. This step helped us in giving a clear direction to the survey and designing appropriate questions. The goals of this survey were to:

- Identify who is using the system and how are they use it

- Understand the value of different functionality to different people
- Understand how people are currently using different functionality
- Find out what people like and dislike about the system
- Get an idea of how people feel certain things should behave

Through our question selection, which is discussed below, we tried to gather data that could lead to useful findings based on the goals.

Question selection and Design

The whole questionnaire can be divided into two main parts which among them had five sections (pages of the online survey) and 22 questions in total. Two main parts are

1. General questions
2. Questions specific to BlueStream.

Section I was comprised of general questions, which includes demographic questions like association with the university, department affiliation (important to know user distribution within campus), and a yes/no question for filtering out participants who have never used BlueStream. This strategy was helpful, as some of the participants (28 out of 112) had never used BlueStream. These participants were directed to the last section of the survey (Section V), which included general questions about internet usage, and uploading, sharing, and viewing media on other systems like YouTube, Google Video.

Those users who had used BlueStream were directed to Section II, which included questions asking them about their usage patterns (duration, frequency and use) for judging their competency with BlueStream. If participants had stopped using BlueStream, they were asked why, as we wanted to know if they did so because of some systemic problem, or because they no longer had a need for it.

Section III was the longest and most time consuming, but gave lots of valuable data. This section dealt with questions related to purpose, most used functions, strengths and ease of use and learning for BlueStream. These data was collected through a series questions asking participants to rate statements on a Likert scale.

17 * How frequently do you do the following activities while using BlueStream?

	1 Never	2 Seldom	3 Sometime	4 Usually	5 Often	N/A
Viewing content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening to audio content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uploading content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching for content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing Collections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supporting Faculty and Students work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building a repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transcoding media formats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure2: Layout of a rating matrix question

Section IV dealt with questions which specifically ask about BlueStream’s functional limitations and whether any users switched to competing products to solve their issues.

Questions marked with an asterisk (*) are mandatory.

14 * Does BlueStream have all the features that you need?
 YES NO

15 If not, what features are missing?

Figure3: Some questions related to limitations of BlueStream

After this, participants land on Section V, the last page, which is the general section which non-users of BlueStream land on.

Appropriateness of Length

The questions were all asked in an affirmative tone with a mix of open ended, multiple choice, and rating questions. The questionnaire was designed so that most of the dull and heavy sections of the survey were alternated with small engaging sections in between. In the pilot, the survey took at most 10 minutes of the participant’s time (for the slowest users) and can therefore be considered of appropriate length. Considering that most of the users were dedicated users of BlueStream, we did not find many dropouts from the survey (only 24 partial completes as compared to 112 completes) which also confirms the appropriateness of the

length. We seem to have achieved a balance between the indulging the user and getting maximum data through our design.

Results

Demographics

A total of 112 people participated in the survey out of which there were 84 users of BlueStream. The other users had never used BlueStream; therefore, much of their feedback was ignored. We managed a fair number of participants and therefore can project the findings of the survey to the whole population. The main users of BlueStream are college students who comprise 58% of the total users. Out of these there are 38% undergraduate students who have used BlueStream through some web based interface. Faculty and Staff at University of Michigan account for 35% (20% faculty and 15% staff) of the user population and rest are visitors working in collaboration with the university.

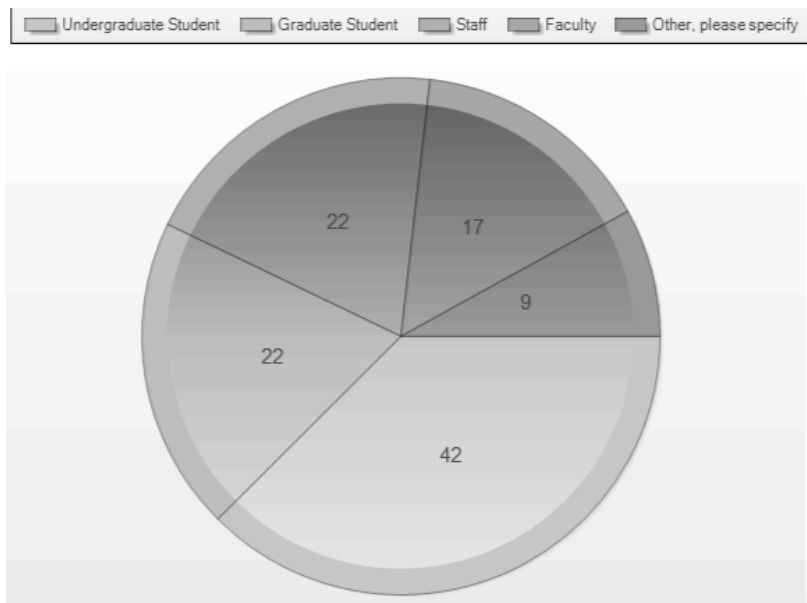


Figure4: Distribution of Users by affiliation to the University

Key Findings:

- 1) Most of the users of BlueStream are short term users (i.e. 1-3 months (43%)) whose main purpose is to view content. Of these, the users either strongly (22%) or somewhat agree (55%) that BlueStream easy to use. We account for this population's satisfaction with the interface because they mostly use web-services-based sites to access BlueStream content and do not use the Management interface. Therefore, we believe

that the BlueStream team is doing an excellent work by developing web based widgets to address the issue of disseminating content to short term users.

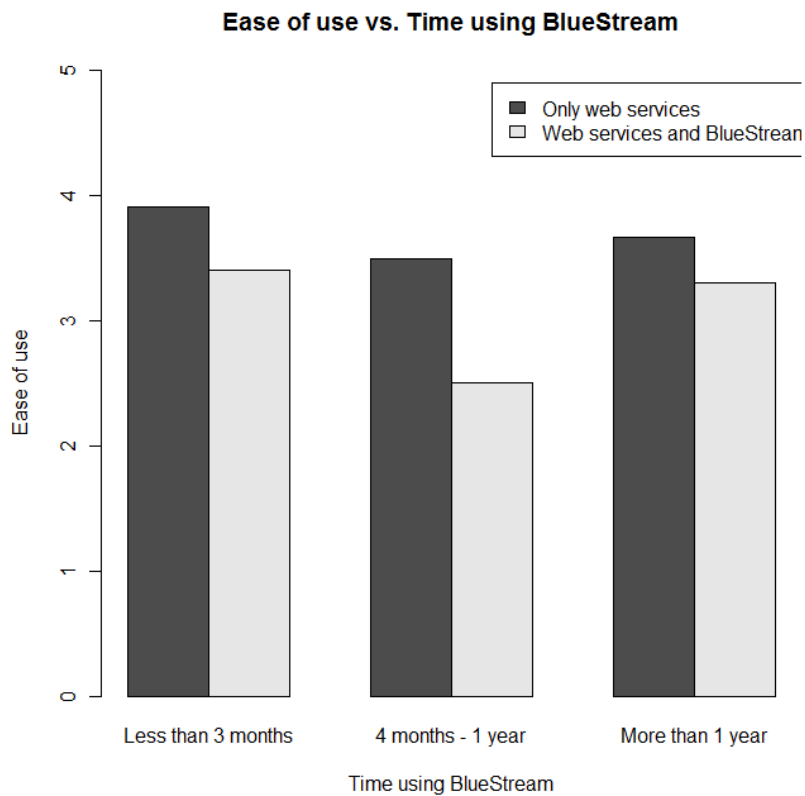


Figure5: Ease of use of BlueStream and web services when compared with usage duration.

- 2) Users do not find the management interface is easy to use. Figure 5 above shows that those BlueStream users who use only the web services part of Bluestream tend to find the system easier to use than those who also use the management interface: people find that it is harder to use the management interface when working with BlueStream. The most notable difference is in those people who have used Bluestream for four months–one year. People who use the CARMA page find Bluestream easiest to use (Figure 6). However, if you were to look at the box plot for this data you would see that the differences in ease of use between the sites is not very statistically significant: all the data match up in the 25% confidence intervals.

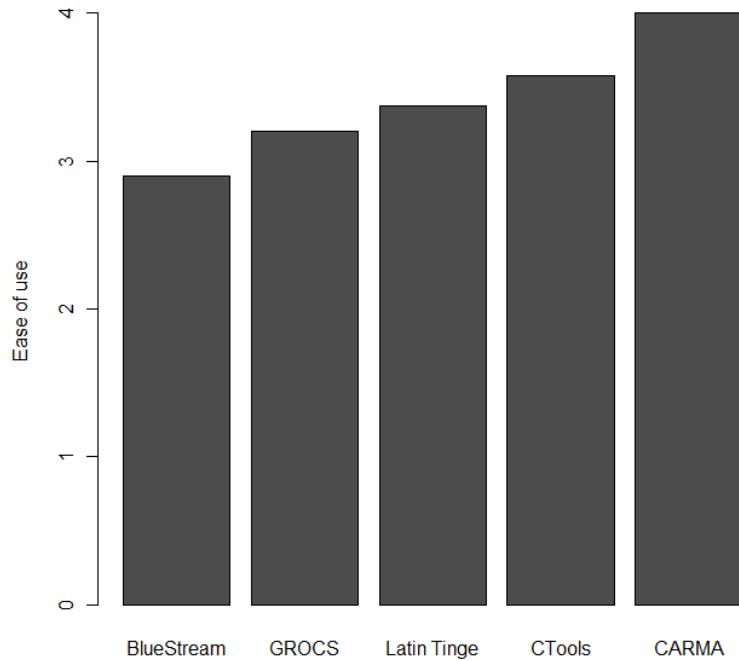


Figure 6a: Figure showing ease of use of BlueStream from different websites.



Figure 6b: Boxplot of ease of use of BlueStream from different websites

- 74% of the users find that BlueStream has all the functionality they need. Although most of the work done is related to uploading and viewing media, people rarely transcode media or tag it. These are the strongest features of BlueStream and therefore

should be highlighted. According to one participant, “I think it has features I need, but I have a hard time figuring them out” which clearly means that although there is inbuilt functionality, some users have hard time finding it. Some of the participants indicated that they want some extra features like organizing by data, RSS feeds, ability to search for assets without errors occurring, easy bulk import/export, and viewing PDFs from within the browser.

Some other responses clearly stated problems with functionality like, “I still can't access it easily through CTools - can't find the icon” which point towards usability problems of CTools templates.

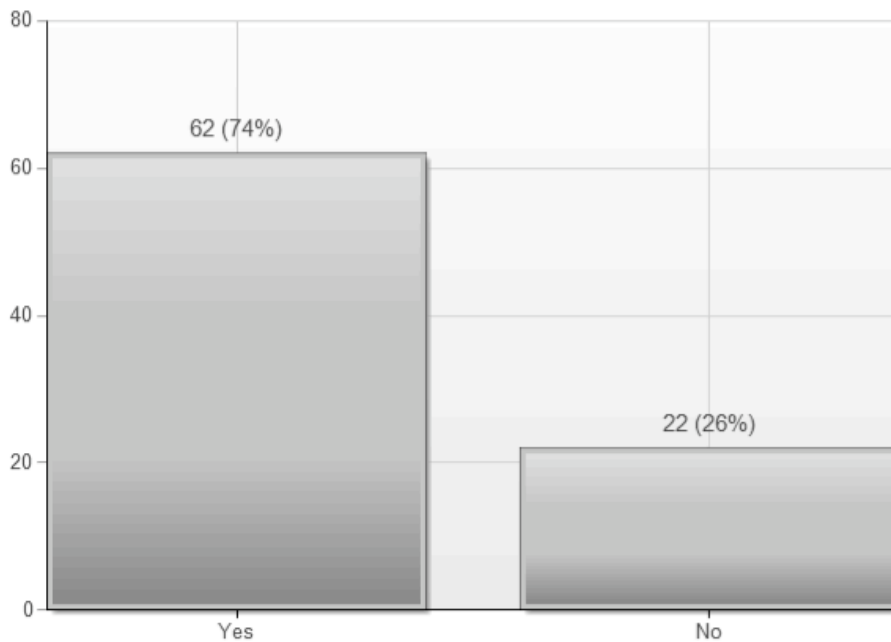


Figure 7: Plot showing users answers on “Does BlueStream have all the feature that you need?”

- 4) The ease of use of BlueStream is very small while compared to other websites such as YouTube, Google Video or Flickr, which means that the functionality is not properly exploited. Content should be made easily browsable and searchable. This does not seem to be the case as of now.

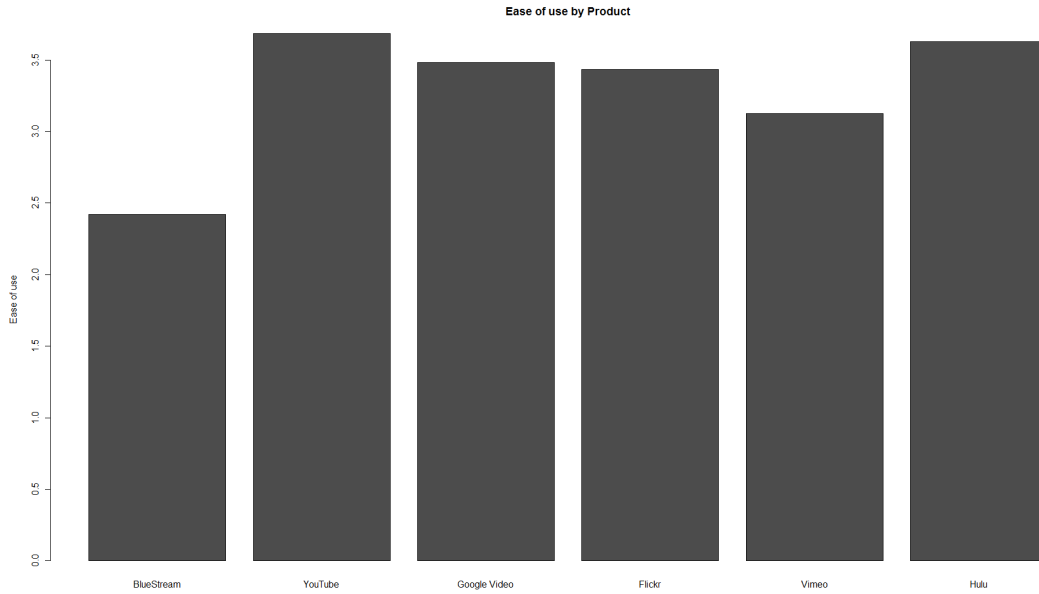


Figure 8a: Ease of use of BlueStream when compared to other sites.

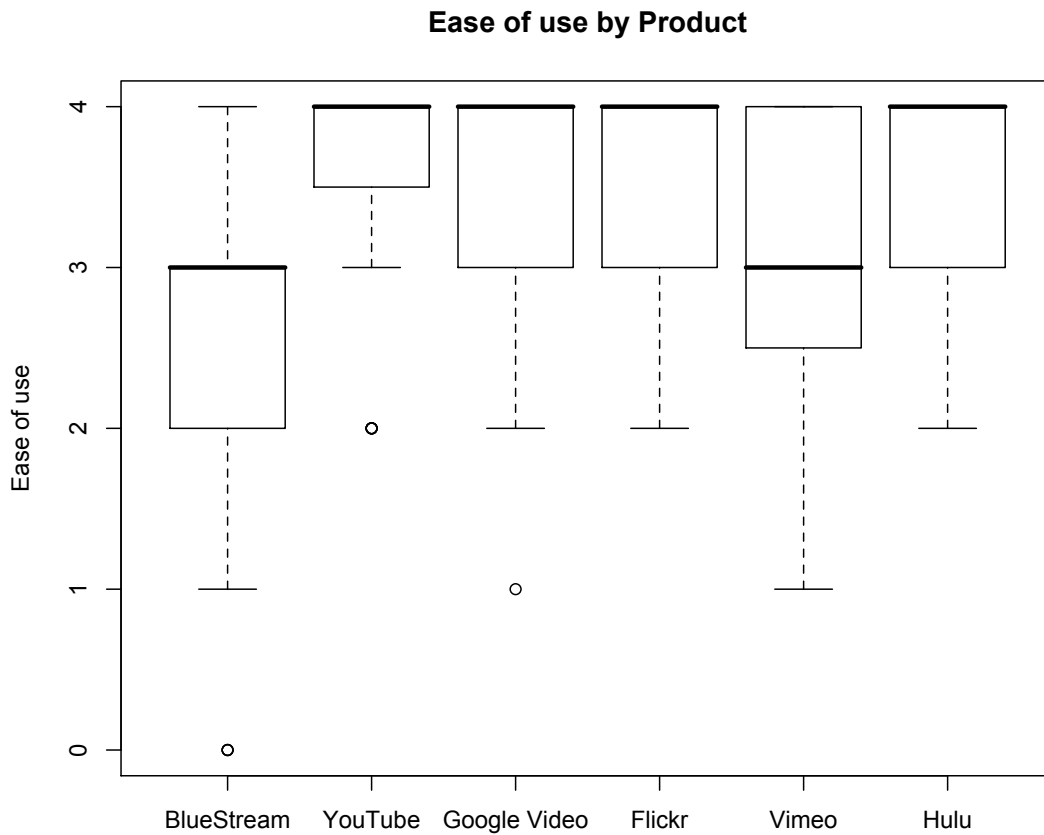


Figure 8b: Box plot of ease of use of BlueStream when compared to other sites.

Based on the graph above YouTube appears to be the easiest site to use out of the sites that we tested. We choose to leave out Ustream.tv and Joost from the graph above because we had only a few answers for those sites compared to everything else. Based on the box plot (Figure 8b), Youtube and Hulu are considered to be easier than BlueStream for watching video content. The rest are not considered to be significantly easier than BlueStream to use.

Shortcomings of the survey

One significant shortcoming of the survey is that many participants may not have known what “BlueStream” is. Although we explained it in the invitation email, our use of the term to refer to the Ancept management interface may not have been clear to all participants. We do not feel that this has impacted the results of our survey greatly because the results of the survey agree with the hypothesis suggested by our heuristic evaluation: that the BlueStream management interface is more difficult to use than other interfaces to BlueStream.

A second possible shortcoming of the survey is our use of terms that we did not feel were jargon, such as “uploading”, “collections”, and “transcoding”, but that others may not have been able to interpret as we had intended. This was a trade-off we made in favor of brevity.

This problem was exacerbated by the fact that our survey must get at specific issues while still applying to a broad audience. The nature of the BlueStream user base is such that some users have years of experience in managing online media, while others are undergraduate students whose only exposure to BlueStream was a single semester of watching videos embedded in CTools. This posed challenges both for the scope of the survey itself, discussed above, and for the wording of the questions.

Response Bias

Out of 112 respondents, 84 had used BlueStream. This was somewhat disappointing since we invited such a large group of people — the 2,137 registered users of BlueStream. It appears that we got a relatively even sample of each of the four major groups (faculty, staff, undergraduate students, and graduate students). This was counter to our intuition: we were expecting more faculty and staff responses because of our impression that faculty and staff made up the majority of the user population, followed by graduate students.

We also have some sampling bias in the fact the majority of our users that we got responses from are using both the management interface and CTools together. We were under the impression that most people used CTools to view and watch content from BlueStream, while users who upload data to BlueStream use the management interface. In reality, there is more overlap between the two groups than we had anticipated, which may have skewed our data in terms of how people feel about the ease of use of BlueStream or how easy it is to learn. Specifically, ratings of the management interface may have pushed down overall usability

ratings of BlueStream. Despite this, we were still able to show that the web services are perceived to be more usable than the management interface.

Some of the problems may be caused by the issues mentioned above are that we may not have accurately represented our target population. We also may not have an accurate representation of how people feel about the web services part of BlueStream. Based on these issues, further research may be required. This will involve us to talk with the BlueStream team to if our picture of the user base is accurate. We will want to know by tracking usage if the population consists mostly of students or faculty and staff before we start our usability testing to make sure that we have an accurate population in that step.

Conclusion

Our survey of 84 BlueStream users has revealed some interested trends:

- Most of the users (43%) are short time users (1-3 months) who find the BlueStream web widgets easy to use. We therefore believe that the BlueStream team is doing an excellent work in developing more such widgets.
- Users had hard time using the Management interface. This can be observed from the drop in the ease of use values for management interface.
- Most of the users (74%) are satisfied by the current functionality but require more dynamic functions like RSS feeds, bulk import export, viewing PDFs in browser. Few users also noted that while they believe it has all the functionality these are less accessible
- We also compared BlueStream to other rival websites and found that YouTube and Google Video are far easier to upload and view content. A change in design in direction of these engines can definitely help.

We believe that this gives the BlueStream team a solid set of results on which to base future improvements to BlueStream.

Appendix I

(Questions 7-13 are same as 14-20 only difference is the tense to accommodate for users who have stopped using BlueStream and those who still use it.)

Zoomerang Survey Results

BlueStream :: Questionnaire

Response Status: Completes

Filter: No filter applied

Mar 16, 2009 1:57 PM PST

1. Have you ever used BlueStream?

Yes	84	75%
No	28	25%
Total	112	100%

2. What is your affiliation with the university?

Undergraduate Student	42	38%
Graduate Student	22	20%
Staff	22	20%
Faculty	17	15%
Other, please specify	9	8%
Total	112	100%

3. What university department are you in? (ex, Linguistics, Education)

112 Responses

4. How long have you been using BlueStream?

less than 3 months	28	33%
4 months - 1 year	33	39%
more than 1 year	23	27%
Total	84	100%

5. Do you still use BlueStream?

Yes	58	69%
No	26	31%
Total	84	100%

6. If you no longer use BlueStream, why did you stop?

I no longer have a use for it.	17	61%
I no longer have access to it.	5	18%
I found an alternative that suits my needs better.	0	0%
I found that it was more trouble than it was worth.	2	7%
Other, please specify	7	25%

7. Did you use BlueStream on your own, or in a collaborative environment?

On my own	6	23%
Collaborative	20	77%
Total	26	100%

8. Which of the following websites did you use to access BlueStream content?

CTools	8	31%
BlueStream	16	62%
CARMA (campus automated rich media archiving)	1	4%
Latin Tinge	6	23%
GROCS	2	8%
None	0	0%
Other, please specify	1	4%

9. What purpose did you use BlueStream for?

For research data	5	19%
For a class I took	9	35%
For a class I taught	4	15%
For a project	7	27%
To store content	8	31%
To view content	9	35%
To share content	8	31%
Other, please specify	0	0%

10. How frequently did you do the following activities while using BlueStream?

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Never	Seldom	Sometime	Usually	Often	N/A
Viewing content	2 8%	1 4%	6 23%	8 31%	8 31%	1 4%
Listening to audio content	4 15%	4 15%	9 35%	5 19%	2 8%	2 8%
Sharing content	3 12%	4 15%	7 27%	6 23%	4 15%	2 8%
Uploading content	4 15%	3 12%	6 23%	6 23%	5 19%	2 8%
Searching for content	6 23%	5 19%	3 12%	6 23%	4 15%	2 8%
Managing Collections	9 35%	6 23%	1 4%	4 15%	2 8%	4 15%
Supporting Faculty and Students work	9 35%	4 15%	1 4%	4 15%	4 15%	4 15%
Building a repository	11 42%	3 12%	0 0%	4 15%	3 12%	5 19%
Transcoding media formats	16 62%	3 12%	1 4%	1 4%	0 0%	5 19%

11. How important were the following features of BlueStream to you?

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Least Important	Less Important	Neutral	Important	Very Important	N/A
The ability to store media and documents online in one place	0 0%	2 8%	1 4%	7 27%	13 50%	3 12%
The ability to search for content	0 0%	2 8%	4 15%	7 27%	11 42%	2 8%
The ability to distribute media and documents online	0 0%	1 4%	2 8%	10 38%	12 46%	1 4%
The ability to share audio and video in multiple formats (ex. Quicktime, Flash, Windows Media)	3 12%	1 4%	2 8%	13 50%	5 19%	2 8%
The ability to access BlueStream content from CTools	4 15%	4 15%	3 12%	9 35%	5 19%	1 4%
The ability to access BlueStream content from other websites	5 19%	2 8%	5 19%	6 23%	6 23%	2 8%
The security BlueStream provides for your content	0 0%	1 4%	6 23%	10 38%	7 27%	2 8%
The ability to add metadata to your content (ex. tags, artist and date information, labels, categories, copyright, etc.)	1 4%	1 4%	9 35%	7 27%	5 19%	3 12%

12. Which features, if any, did you find frustrating?		
Uploading content ("Adding an asset")	10	45%
Viewing content	8	36%
Searching for content	10	45%
Sharing content	4	18%
Configuring security levels for your content	4	18%
Adding metadata to your content (ex. tags, artist and date information, labels, categories, copyright, etc.)	6	27%
Other, please specify	0	0%

13. Please rate the following:

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree	N/A
BlueStream was easy to use	3 12%	6 23%	6 23%	9 35%	2 8%	0 0%
BlueStream was easy to learn	2 8%	6 23%	5 19%	11 42%	2 8%	0 0%

14. Do you use BlueStream on your own, or in a collaborative environment?

On my own	27	32%
Collaborative	57	68%
Total	84	100%

15. Which of the following websites do you use to access BlueStream content?

CTools	39	46%
BlueStream	50	60%
CARMA (campus automated rich media archiving)	1	1%
Latin Tinge	7	8%
GROCS	5	6%
None	0	0%
Other, please specify	10	12%

16. What purpose do you use BlueStream for?

For research data	19	23%
For a class I am taking	33	39%
For a class I teach	18	21%
For a project	18	21%
To store content	23	27%
To view content	33	39%
To share content	25	30%
Other, please specify	2	2%

17. How frequently do you do the following activities while using BlueStream?

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Never	Seldom	Someti me	Usually	Often	N/ A
Viewing content	2 2%	9 11%	17 20%	22 26%	33 39%	1 1%
Listening to audio content	25 30%	10 12%	14 17%	15 18%	11 13%	9 11 %
Sharing content	16 19%	11 13%	15 18%	14 17%	20 24%	8 10 %
Uploading content	26 31%	6 7%	12 14%	9 11%	23 27%	8 10 %
Searching for content	21 25%	8 10%	18 21%	17 20%	13 15%	7 8%
Managing Collections	38 45%	10 12%	9 11%	9 11%	6 7%	12 14 %
Supporting Faculty and Students work	35 42%	7 8%	6 7%	10 12%	13 15%	13 15 %
Building a repository	38	10	6	9	9	12

	45%	12%	7%	11%	11%	14%
	48	8	4	5	3	16
Transcoding media formats	57%	10%	5%	6%	4%	19%

18. How important are the following features of BlueStream to you?

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Least Important	Less Important	Neutral	Important	Very Important	N/A
The ability to store media and documents online in one place	3 4%	3 4%	7 8%	21 25%	43 51%	7 8%
The ability to search for content	5 6%	6 7%	13 15%	18 21%	35 42%	7 8%
The ability to distribute media and documents online	3 4%	4 5%	11 13%	25 30%	36 43%	5 6%
The ability to share audio and video in multiple formats (ex. Quicktime, Flash, Windows Media)	4 5%	6 7%	13 15%	23 27%	32 38%	6 7%
The ability to access BlueStream content from CTools	10 12%	8 10%	13 15%	14 17%	32 38%	7 8%
The ability to access BlueStream content from other websites	15 18%	5 6%	23 27%	18 21%	14 17%	9 11%
The security BlueStream provides for your content	10 12%	6 7%	9 11%	18 21%	33 39%	8 10%
The ability to add metadata to your content (ex. tags, artist and date information, labels, categories, copyright, etc.)	12 14%	8 10%	17 20%	21 25%	17 20%	9 11%

19. Which features, if any, do you find frustrating?

Uploading content ("Adding an asset")	31	50%
Viewing content	20	32%
Searching for content	25	40%
Sharing content	13	21%
Configuring security levels for your content	8	13%
Adding metadata to your content (ex. tags, artist and date information, labels, categories, copyright, etc.)	14	23%
Other, please specify	8	13%

20. Please rate the following:						
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree	N/A
BlueStream is easy to use	9 11%	17 20%	12 14%	34 40%	12 14%	0 0%
BlueStream is easy to learn	5 6%	15 18%	16 19%	33 39%	13 15%	2 2%

21. Does BlueStream have all the features that you need?		
Yes	62	74%
No	22	26%
Total	84	100%

22. If not, what features are missing?
22 Responses

23. Again, if BlueStream does not meet your needs, is there a product or products that you use to meet these needs?

Yes	4	6%
No	64	94%
Total	68	100%

24. If you answered "yes" to the previous question, please list those products here:

5 Responses

25. Rate the following websites in terms of ease of use while UPLOADING content.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Easy	Easy	Neutral	Difficult	Very Difficult	N/A
BlueStream	3 3%	16 14%	19 17%	17 15%	8 7%	49 44%
YouTube	21 19%	27 24%	15 13%	2 2%	0 0%	47 42%
Google Video	9 8%	15 13%	13 12%	2 2%	0 0%	73 65%
Flickr	13 12%	15 13%	8 7%	1 1%	0 0%	75 67%
Ustream.tv	0 0%	1 1%	3 3%	2 2%	0 0%	106 95%

	1	3	4	1	0	10
Vimeo	1%	3%	4%	1%	0%	32
						%

26. Rate the following websites in terms of ease of use while VIEWING content.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Easy	Easy	Neutral	Difficult	Very Difficult	N/A
BlueStream	15 13%	31 28%	23 21%	15 13%	3 3%	25 22%
YouTube	74 66%	20 18%	8 7%	1 1%	0 0%	9 8%
Google Video	45 40%	23 21%	8 7%	2 2%	0 0%	34 30%
Flickr	26 23%	15 13%	9 8%	1 1%	0 0%	61 54%
Ustream.tv	2 2%	1 1%	3 3%	2 2%	0 0%	104 93%
Vimeo	8 7%	5 4%	3 3%	2 2%	0 0%	94 84%
HULU	32 29%	12 11%	3 3%	1 1%	2 2%	62 55%
Joost	3 3%	3 3%	4 4%	1 1%	1 1%	100 89%

27. Rate the following websites in terms of ease of use while SHARING content.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Easy	Easy	Neutral	Difficult	Very Difficult	N/A
BlueStream	4 4%	21 19%	19 17%	13 12%	6 5%	49 44%
YouTube	40 36%	22 20%	7 6%	2 2%	0 0%	41 37%
Google Video	24 21%	15 13%	4 4%	3 3%	0 0%	66 59%
Flickr	17 15%	14 12%	6 5%	1 1%	0 0%	74 66%
Ustream.tv	2 2%	0 0%	3 3%	1 1%	1 1%	105 94%
Vimeo	8 7%	1 1%	3 3%	0 0%	1 1%	99 88%
HULU	9 8%	3 3%	3 3%	6 5%	3 3%	88 79%
Joost	3 3%	0 0%	3 3%	0 0%	2 2%	104 93%

28. How many hours a day do you spend on the internet?

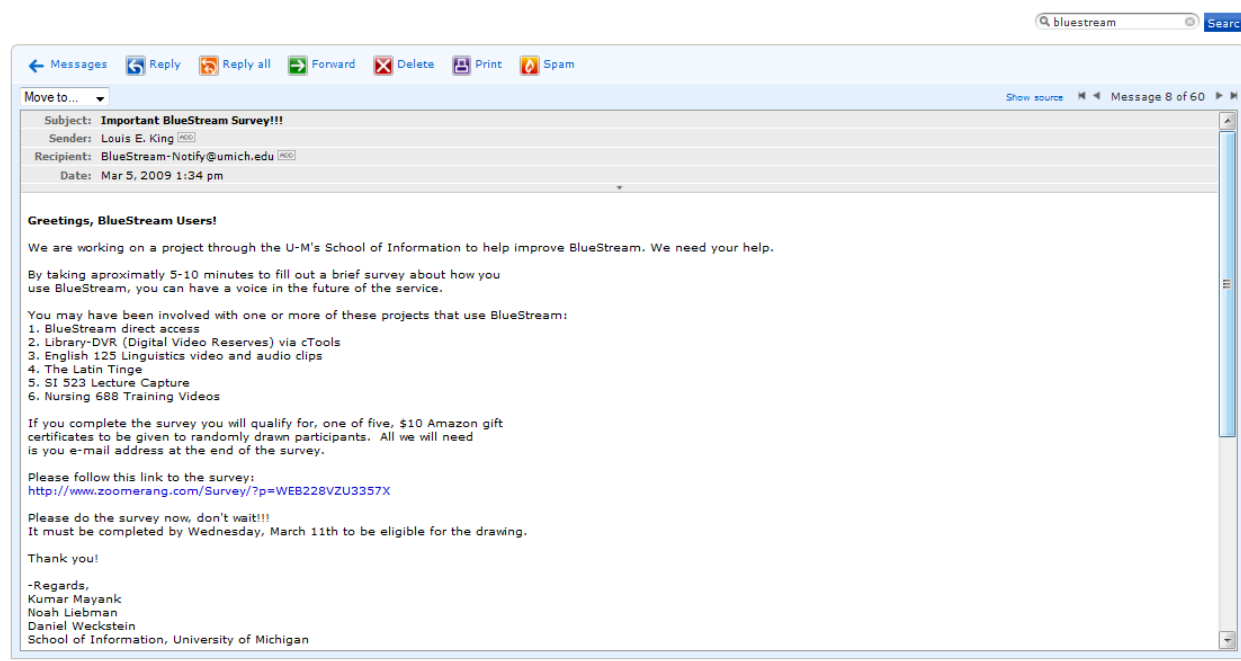
less than 1 hour	5	4%
1–5 hours	71	63%
more than 5 hours	36	32%

Total	112	100%
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29. Please enter you email address so that we can inform you if you win the gift certificate.

112 Responses

Appendix II



Email sent to participants for taking the survey.

Appendix III

Raw survey data and R statistical analysis script is available for download at <http://noahliebman.com/uploads/bluestreamdata.zip>