ABSTRACT

JAGANNATHAN, BALACHANDAR. Modeling the Establishment of an Electronic Journal in Textiles & Apparel. (Under the direction of Dr. Nancy L. Cassill and Dr. Michelle Jones)

This study identifies how an electronic journal can be established and implemented in the textile and apparel field. The study considers, Journal of Textile & Apparel Technology & Management (http://www.tx.ncsu.edu/jtatm) as an innovation in the textile and apparel field, and analyzes electronic media as a way of disseminating information to scholarly and industrial communities in a better way. This study documented the process of establishing the electronic journal, and also provides the importance of a feedback loop to provide inputs for future journals. The readership behavior of the journal, including unique visits, repetitive visits, hits (page impressions), geographic location of the readers/visitors, entry page, was examined with the help of log files collected from College of Textiles and Sitestats, a UK based company. Issue analysis (volume 1, issues 1-4, volume 2, issue 1) was compared with previous issues and the results were related to Rogers' Model of the Innovation-Decision process (1995) and proved that JTATM is an innovation in the textile and apparel field.

Modeling the Establishment of an Electronic Journal in Textiles & Apparel

by

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(Co-chair)

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DEDICATION

I would like to dedicate this thesis to my family. They have given me the strongest foundation upon which I have grown until now. I will never be able to express what you all mean to me. Pursuing this graduate study was only possible with your help and God by my side.

PERSONAL BIOGRAPHY

Balachandar Jagannathan (Bala) is the son of Jagannathan and Vasanthakumari of Coimbatore, India. He graduated from Stanes Higher Secondary School, India in 1995 and received an undergraduate degree in Textile Technology in PSG College of Technology, India. He joined North Carolina State University, NC for a Masters degree in Textile Management in 2000. During his first semester, he became interested in e-commerce and its application. As part of his graduate assistantship Bala worked on an electronic journal, *Journal of Textile and Apparel, Technology and Management* assisting the JTATM Managing Editor, responsible for managerial issues and the JTATM Technical Editor, responsible for technical issues. He enjoyed the work that he did over the course of his studies.

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Modeling the Establishment of an Electronic Journal in Textiles & Apparel

Chapter I

Introduction

Background of the Problem

With the advent of the World Wide Web (WWW) information dissemination is faster. The WWW is presently comprised of tens of millions of files, documents and other pages that are linked to one another via their hypertext, ftp and gopher URL's (Harter and Ford, 2000). Internet access grew to 304 Million in 2000 up from 171 Million in 1999 (Daley, 2000).

Research journals are compilations of research articles; current issues of research journals serve as a foundation for the advancement of science. Digital communication allows global access to information but access sources are predominantly in North American and European countries (WIPO, 2001). The traditional printing method for research journals is costly (with respect to time and money) presenting a challenge to the scientific world. It has been reported that one issue of a paper journal could cost $.75 per copy (Zahray, 1990). Some journals have a backlog of articles awaiting publication, which does not allow for the timely dissemination of new information.

With the advent of electronic journals, information is disseminated through electronic media instead of (or in addition to) paper publication. When the traditional journal is replaced by an electronic journal, this potentially reduces the time to publication and the cost of the publication. Since 1992, the number of electronic journals has grown significantly with approximately 21 in 1991 to 2459 in 1997 (McEldowney, 1997). Some electronic journals (e-

journals) are new journals while others are electronic versions of conventional print journals. Some believe that traditional paper journals will disappear from the landscape within the next 20 years due to the drastic development of telecommunication networks. For example, Elsevier, based in Europe, the largest publisher of scholarly journals in the world, has made most of its offerings available electronically and MCB Press, based in United Kingdom, is moving forward in the similar fashion.

An electronic journal provides significant advantages to traditional (print) journals. These advantages include cost-effectiveness, faster distribution, easily accessible, and online search, and capabilities to publish data, programs, animations and multimedia components that no print journal can publish (Moret, 1997). Successful online journals must provide readers/authors with various functions, such as providing initial access, academic recognition by preserving the right to be associated with the work as author, considering license/cost factors, archiving the content, content evaluation, information technology implications and having future access.

Journals can be classified into two broad categories: trade journals and scholarly journals. Trade journals publish or provide articles which are of industry use and these journals are based on subscription business models that accrue profit from the advertisers. When the trade journal is converted to electronic format, it is more easily adopted as the subscribers are more with diverse preferences for obtaining written information, therefore economic impact is less, unlike scholarly journals. Scholarly journals contain research articles and hence the number of subscribers is limited to researchers, universities and industries. In the discipline of textiles and apparel, trade journals include Bobbin, Textile

Web, Home Textiles Today, and Emerging Textiles. These journals provide timely product research and industry information to industry personnel, academicians and students.

An opportunity existed to establish an electronic journal in the field of textiles and apparel. The NCSU Department of Textile and Apparel Technology and Management (TATM) began the planning for an electronic journal in Summer 2000. The first issue (Volume 1, Issue 1) of the *Journal of Textile and Apparel Technology and Management* (JTATM) was launched October 2000. Since this e-journal is a new innovation, Roger's Model of the Innovation-Decision Process (Rogers, 1995) provides a framework to examine the process of establishing the journal.

Statement of the Problem

The purpose of this research is to model the establishment of an electronic journal for textiles and apparel.

Specific research objectives include:

1. Document the process of the e-journal, including
    a. Technical and management components, and
    b. Process for launching a journal and the inter-relationships between components necessary to launch each issue.
2. Analyze the journal readership including
    a. The behavior of readers/visitors of the journal's issues
    b. An overall comparative analysis of each of JTATM five issues
    c. Analysis results related to Roger's (1995) persuasion stage.

3. Establish the feedback loop to the process for future design and development of the e-journal.

Significance

It is crucial to document the process of establishing the electronic journal, as it provides a framework from which to identify the various components (technical and management) that are involved in establishing an electronic journal and launching each issue. This process, once documented, can be improved to provide timely dissemination of information.

Having the capabilities to analyze the behavior of readers/visitors can provide the JTATM editorial board with data about relevant and interesting topics for future issues – adding value to target audiences (academic, industry, research). Likewise, the development of a feedback loop can lead to improvement in the future by exposing internal and external communication patterns, which also helps the journal to effectively serve their customers in a better manner.

Limitations of Study

1. The readers/visitor analysis is limited to the data generated by SiteStats (www.sitestats.com) and statistics from the College of Textiles server.
2. Some analysis of the visitor behavior may be inaccurate. For example, the statistics received as unique visitors cannot be determined accurately – when the same person uses two computers (different IP address), the Internet Service Provider (ISP) will still be recorded as two different persons.

3. Statistics for all issues were not consistent. In later issues, more sophisticated software was available, generating more detailed statistics.

Assumptions

1. The JTATM e-journal is being sent to targeted customers who have some level of interest and knowledge in the textile and apparel industry.
2. The Internet will continue to grow and the network becomes faster, thus electronic means of information dissemination is a welcomed media.

Definition of Terms

Apparel	Personal outfit, garments, clothing or attire, including headwear and footwear (Texworld.com © - Textile Definition).
Electronic journal	An electronic publication typically found in academic circles and is a regularly published journal either published solely in electronic form or made available in electronic form (Alphabetical Listing of Glossary Terms: E).
FTP	File Transfer Protocol, a network protocol that allows computer files to be transferred from one Internet site to another (Curtis, Scheschy & Tarango, 2000).
Gopher	A sysetem that pre-dates the World Wide Web for organizing and displaying files on Internet servers. A Gopher server presents its contents as a hierarchiacally structured list of files. (Gopher - Webopedia.com).

Hypertext	A term coined by Ted Nelson around 1965 for a collection of documents (or "nodes") containing cross-references or "links" which, with the aid of an interactive browser program, allow the reader to move easily from one document to another (Systran, 2001).
Innovation	“An idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers, 1995, p. 11).
Innovation-Decision	“The process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision” (Rogers, 1995, p. 161).
Internet	The worldwide electronic communication system linking computers (Antley, 1995).
Internet Protocol (IP)	IP specifies the format of packets, also called *datagrams,* and the addressing scheme. Most networks combine IP with a higher-level protocol called *Transport Control Protocol (TCP),* which establishes a virtual connection between a destination and a source (IP - Webopedia.com).
Internet Service Provider	ISP is a company that provides access to the Internet, may charge a monthly fee. (ISP - Webopedia.com).

Persuasion Stage	"One of the stage in the innovation-decision process, where the individual forms a favorable or unfavorable attitude toward the innovation" (Rogers, 1995, p. 167-168).
Server	A computer that stores data files and provides data files and provides access to them when requested by another computer, or client (Curtis, Scheschy & Tarango, 2000).
Textile	A term which refers to fiber, yarn, fabric or anything made from fibers, yarns or fabric (Kadolph, Langford, Hollen, and Saddler, 1993).
Unique visitors	When tracking the amount of traffic on a Web site, it refers to a person who visits a Web site more than once within a specified period of time (Unique visitor - Webopedia.com).
URL	Uniform resource locator, an address format on the internet; it is comprised of the protocol used, the server address on which the data is stored, and the path to the information (Curtis, Scheschy & Tarango, 2000).
World Wide Web	A graphical magazine-style interface to the Internet. Uses hypertext-linked documents which enable the user to move from one piece of information to another by simply clicking a button. The information could be text, sound, graphical or video (Antley, 1995).

Chapter II

Review of Literature

Introduction

This chapter includes the conceptual framework and a literature review, which includes various aspects of electronic journals including textile and apparel electronic journals.

Conceptual Framework

Roger's Model of the Innovation-Decision Process (1995) is the conceptual model for this study.

> "It is the process by which an individual (or other decision making unit) passes from first knowledge of innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision" (Rogers, 1995 p.163).

Roger's model (1995) consists of five stages: knowledge, persuasion, decision, implementation, and confirmation (See Figure 1).

Knowledge

Knowledge occurs when the individual is exposed to an innovation's existence and gains some understanding of how it works. This information-decision process is essentially an information-seeking and information-processing activity in which the individual is motivated to reduce uncertainty about the advantages and disadvantages of the innovation. The three types of knowledge about an innovation are 1) awareness knowledge, which

motivates to seek "how-to" knowledge and principles knowledge. (2) how to knowledge, which consists of information necessary to use an innovation properly. (3) principles knowledge, which consists of information dealing with the functioning principles underlying how the innovation works. Knowledge leads to Persuasion (Rogers, 1995).

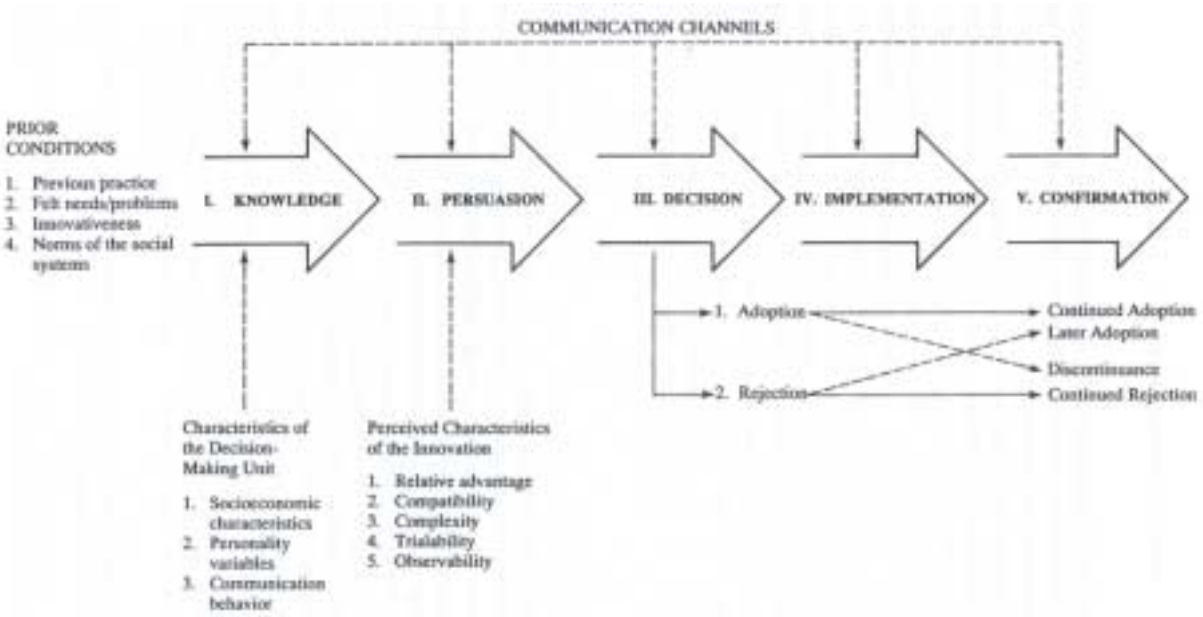

Figure 1: A Model of Stages in the Innovation-Decision process

Source: Rogers, E., M. (1995). Diffusion of Innovations (3rd ed.). New York: The Free Press. p.163

Persuasion

Persuasion occurs when the individual forms a favorable or unfavorable attitude toward the innovation. The individual actively seeks information about the new idea, what messages he or she receives, and how he or she interprets the information that is received. In

deciding whether to develop a favorable or unfavorable attitude toward the innovation, an individual may mentally apply the new idea to his or her present or anticipated future scenario (Rogers, 1995). Rogers (1995) provides five perceived characteristics of the persuasion stage:

Relative Advantage: Relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes. The degree of relative advantage is often expressed in economic profitability, status prestige or other benefits. This aspect perceives whether the innovation is advantage for an individual (Rogers, 1995).

Compatibility: Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of the potential adopter. An innovation can be compatible or incompatible with (1) socio cultural values and beliefs (2) with previously introduced ideas, or (3) with client needs for innovations (Rogers, 1995).

Complexity: Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use. “The complexity of an innovation, as perceived by members of a social system, is negatively related to its rate of adoption” (Rogers, 1995, p.242).

Trialability: Trialability is the degree to which an innovation may be experimented with on a limited basis. “The trialability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption” (Rogers, 1995, p.243).

Observability: Observability is the degree to which the results of an innovation are visible to others. “The observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption” (Rogers, 1995, p.244). Once the

individual is persuaded that the innovation is favorable, the next stage is decision-making. Persuasion leads to Decision (Rogers, 1995).

Decision

The decision stage in the innovation-decision process occurs when the individual engages in adopting or rejecting the innovation. Adoption is the decision to make full use of an innovation as the best course of action available. Rejection is a decision not to adopt an innovation. Most individuals try the innovation on a probationary basis, dividing into small-scale trial. Innovations that can be divided for trial are generally adopted more rapidly.

Two different types of rejection can be distinguished,

1. Active rejection, considering adoption of the innovation and then deciding not to adopt it, or
2. Passive rejection, not adopting the innovation without considering the innovation.

Decision leads to Implementation (Rogers, 1995).

Implementation

Implementation occurs when the individual puts an innovation into use. Usually the decision stage is followed by implementation, unless it is held up by some logistical problem. Active information seeking usually takes place at the implementation stage. The implementation stage ends when the new idea becomes an institutionalized and regular part of the adopter's ongoing operations. Implementation leads to Confirmation (Rogers, 1995).

Confirmation

Confirmation occurs when the individual seeks reinforcement of an innovation-decision already made, but may reverse this previous decision if exposed to conflicting messages about the innovation.

Elements of Innovation

The four main elements in the diffusion of innovation are innovation, communication channels, time and a social system.

The Innovation: An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. Newness in an innovation need not involve new knowledge. Someone might have known about an innovation for some time but not yet developed a favorable or unfavorable attitude toward it, nor have adapted or rejected it. Innovations that are perceived by individuals as having greater relative advantage, compatibility, trialability, observability and less complexity will be adopted more rapidly than other innovations. Past research indicates that these five qualities are the most important characteristics of innovations in explaining the rate of adoption (Rogers, 1995)

Communication channel: The communication channel can be defined as the process by which participants create and share information with one another in order to reach an understanding (Rogers, 1995). The elementary form of the communication channel needs an innovation, an individual who has used/experienced the innovation, another individual who does not have the knowledge of the innovation and a communication channel connecting the two units.

Interpersonal channels involve face-to-face exchange between the two individuals. This channel is most likely when there is a certain degree of homophily. Homophily is the degree to which pairs of individuals who interact are similar in certain attributes, such as beliefs, education, social status and the like. One problem that could be a stumbling block for the communication is that the participants can be heterophilous (Rogers, 1995).

Time: Time is an obvious player in any of the communication process. Time does not exist independently of events, but it is an aspect of every activity. The inclusion of time as a variable in the diffusion research is one of its strengths, but the measurement can be difficult. The time dimension is involved in diffusion (1) in the innovation decision process by which an individual passes from first knowledge of an innovation through its adoption or rejection (2) rate of adoption compared with the other members, and (3) innovations rate of adoption (usually the number of members of the system) (Rogers, 1995).

Social System: A social system is defined as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organizations, and/ or subsystems. Diffusion occurs within a social system. The social system constitutes a boundary within which an innovation diffuses (Rogers, 1995).

Related Literature

History of Electronic Journal

The first electronic journals, developed in the 1980's, were e-mailed to subscribers or made available through FTP in strict plain-text format (Curtis, Scheschy, & Tarango, 2000). Sometimes the CD-ROM format was also used for distribution. The community of Internet

users was small, and specialized journals did not have many readers. The first pre-web electronic journal with a graphical user interface (GUI) was the Online Journal of Current Clinical Trials (University of Manitoba, 1994). The OCLC developed the proprietary GUI, called Guidon, expressly for the purpose of presenting this prototype electronic journal. It served as a model for some of the later web-based electronic-only journals. Electronic journals first began to appear as electronic products on the web in 1995, with Project Muse from the John Hopkins University Press and the journals offered by OCLC's Electronic Collections Online (ECO), then called Electronic Journals Online. By 1990, e-journals were assured a good future (Okerson, 1993).

After traditional publishing, CD-ROM became the next mode of disseminating information. However, the CD-ROM soon became obsolete as electronic publishing emerged. Some of the characteristics of publishing are tabulated in Table 1.

Table 1: Characteristics of Publishing

	Traditional	CD-ROM	Electronic
Accessibility	+	-	+
Timeliness	-	-	+
Compactness	-	+	+
Search ability	-	+	+
Preservability	+	+	+
Authenticity	+	+	-
Appearance	+	-	+

Source: Hagen, von J. (1992). The electronic journal: Is the future with us? The Haworth Press Inc. New York.

Traditional vs Electronic Publishing

The paper-publishing model does not require advanced technology, as most of the process is done manually. Composing body text, merging art and text, typesetting, proofreading and developing negatives are done manually. The process needs skill that can be obtained by training in the publishing field. When compared to the modern computer links achieved by hypertext formats, new technological advancements were not needed at that time.

Traditional Publishing

For many years the process of publishing traditional (print) journals required much time. The traditional (print) process is presented in Table 2.

Table 2: Traditional Publishing Process

Steps	Process	Explanation
I	Preparation	The author drafts a preliminary version with early results and obtains informal review by close colleagues Phase ends with the submission of manuscript to an editor with a request to review and publish it
II	Review and Revision	The editor commissions review from several experts, called 'referees' and based on their advice, either rejects or requests revision from the author Phase ends with the editor accepting the paper

Table 2: Traditional Publishing Process (Continued)

III	Publication processing	The editor sends manuscript to publication-to-publication office for copyediting, layout, queuing, and printing Phase ends with the actual publication of the paper in a journal and its dissemination to subscribers
IV	Archiving and indexing	Societies and libraries preserve back issues; catalog papers; abstracting services summarize recent papers; citation services accumulate citation indices

Source: Denning, J. P., & Rous, B. (1995, April). The ACM Electronic Publishing Plan. Communications of ACM. 97-109.

Note: The second and third phases typically take 6-18 months each, or a total time from submission to publication of 12-36 months. The fourth phase is ongoing.

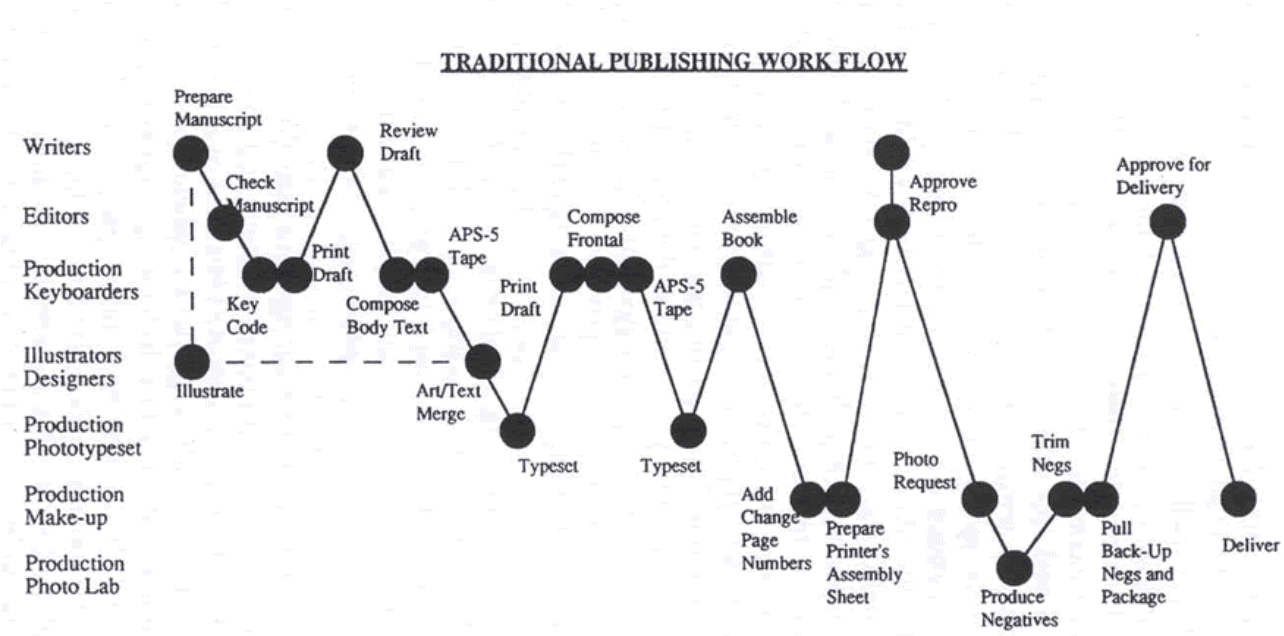

Figure 2: Process in Print Publishing

Source: Brian Cook (1992). The Electronic Journal: The future of Serials- Based Information, New York, Haworth Press Inc., p. 12.

COST OF TRADITIONAL PUBLISHING

An average institutional price of a scholarly journal subscription has increased from $39 in 1975 to $284 in 1995, a factor of 7.3 in twenty years. It was concluded that: “It is

clear that traditional scholarly publishing is in serious economic difficulty" (Bot and Roes, 1998). Figure 2 presents the process in traditional publishing.

Electronic Publishing

Publishing today has changed in structure and method, but not in substance. There has been a drastic change in the means of publication between the traditional (paper) and electronic publishing (See Figure 3). It can be clearly identified that a large amount of work has been eliminated or reduced using the electronic form, which will reduce the cost of publishing and the time of publishing. Also updating the electronic version is far better than creating a new negative and disposing the old one.

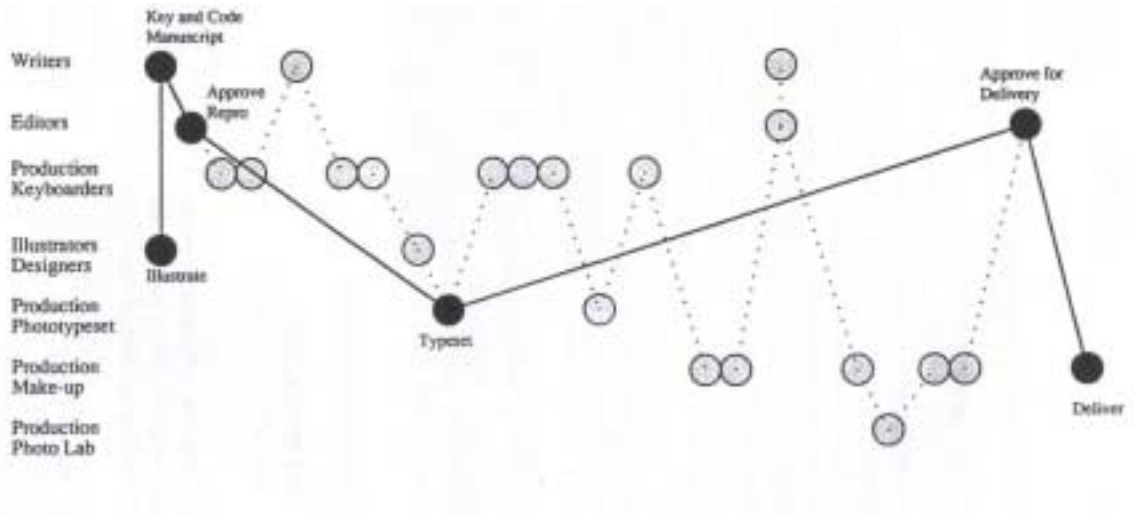

Figure 3: Process in Electronic Publishing

Source: Brian Cook (1992). The Electronic Journal: The future of Serials- Based Information, New York, Haworth Press Inc., pp. 13.

Electronic journals are offered to the public by either Publishers or Aggregators.

Publishers

Traditional publishers offer the journals through the World Wide Web directly by themselves. This offers the opportunity for total control, value-added features and no intermediaries. Some of the examples are:

Elsevier Press: All Elsevier journals – more than one thousand – are now available from their Science Direct [http://www.sciencedirect.com/] website, with full text in most cases back to 1995 (Hane, 2001).

Project Muse: Project Muse is a collaborative project of the Johns Hopkins University Press and the Milton S. Eisenhower Library, to offer worldwide electronic access to the full text of over 40 journals published by the press.

Third party Aggregators

A variety of companies have committed to aggregating, under a single umbrella, large numbers of electronic journals from a variety of publishers. In some cases (e.g. OCLC ECO, ISI), the journals are centrally loaded and offered through a common interface with consistent searching and archiving. In other cases (e.g. Blackwell's EJN), companies will load only abstract and citation information, but provide a common gateway to a wide variety of publishers (Machovec, 1997).

Freeing the Refereed Literature Online

"Articles freely available online are more highly cited. For greater impact and faster scientific progress, authors and publishers should aim to make research easy to access" (Lawrence, 2001). It is becoming imperative to free the referred literature online. To achieve this goal, the following can be done:

1. Established journal publishers should give away their journal contents online for free

2. Authors should submit preferentially to journals that give their contents away online for free
3. In place of established journals that do not give away their contents online for free, new journals should be established that do.

PubMedCentral, a digital archive of life sciences journal literature and not a publisher, accepts contents from publishers who are only willing to free them 6-12 months after publication (Harnad, 2001a).

Research on two on-line archives: arXiv, which started self-archiving ten years ago, and Cogprints, a three year old archive for cognitive scientists proved that the misconceptions, archiving is only suited to physicists and un-refereed pre-prints, will dissipate once authors realize the advantages of the on-line public dissemination complimenting the peer review journal (Hunt, 2001).

Electronic publishing is done more or less the same as traditional publishing. Prospective authors submit articles to an e-journal electronically. The electronic manuscripts are reviewed by an editorial board for appropriateness and scholarly content. Articles judged to be acceptable are edited and placed in the queue for publication. There may be some publication lag. Although the electronic review process does take less time than the traditional method of sending the manuscripts back and forth through the postal service, there are times when the authors and editors miss publication deadlines (Cartwright, and Diane, 1995).

Electronic publishing has eliminated the usual middlemen of publishing: marketing, subscription, accounting, and fulfillment functions are achieved by powerful listserv and distribution programs (Okerson, 1993). Table 3 explains the electronic publishing process.

Table 3: Electronic Publishing Process

Steps	Process	Procedure
I	Preparing manuscripts & Peer review	The author writes the article and ensures the scientific quality from his/ her colleagues. Some articles that are not peer-reviewed goes for conference proceedings and other are submitted to peer-reviewed journals.
II	Copyediting, typesetting, page makeup	Authors submit typed documents or files by email. Many authors do not adequately appreciate the importance of these steps in improving the accuracy and usefulness of the information transfer. Clarity of writing and readability of pages are important characteristics of a good journal.
III	Database preparation	The database is a crucial element of the electronic information dissemination system. Preparation includes the maintenance of effective search and retrieval tools.
IV	Production and Archiving	The final step in the delivery system is the provision of the information in a format suitable to the delivery medium and the user's needs. The articles are then archived according to the copyright policy.

Source: Boyce, B. P., & Dalterio, H. (1996, January). Electronic publishing of scientific journals. Physics Today, 42-47.

The problem with e-publishing concerns how the journal is diffused into the scientific world, and how the scientists throughout the world access it. Langer (2000) cites three major changes that are occurring:

1. Publication process must move towards a process that is entirely electronic, not just in providing access to the journal but also in creating them. To control costs and increase productivity, one should insist on electronic submission using a limited number of formats. One has to develop all-electronic means for getting articles to and from reviewers, for editing them, composing them, mounting them on the website.
2. Second concern is how publications are archived, an issue whose importance is often underestimated. The responsibility for archiving the scholarly literature has been in the hands of libraries.
3. The third trend is the decline in library journal subscriptions.

COST COMPARISON

The costs of producing and distributing an e-journal (around $30,000/ year) can be 28 to 45 percent lower than that of its paper-based (around $56,000/year) counterpart (Jog, 1995). The economic advantage of converting a paper-based journal to an e-journal is contingent on several assumptions. The potential revenue impact would depend on the support provided to the journal by the sponsoring association (if one exists), the culture of the member group that would affect their monetary support, the mix of members and non-members in subscribers and the dependence of the journal on institutional subscriptions.

Table 4 shows the potential 1994 impact on a typical paper-based journal of becoming an electronic based on three scenarios. In the 'worst case' scenario where subscriptions are eliminated and association support declines, the conversion of a traditional journal to an e-journal does not appear to have positive gains in a purely economic sense. In fact, if technical support must be paid for by the journal, there is, in effect, a 32 percent net loss. On the other

hand, the journal may experience a relatively neutral financial impact (the 'most likely' scenario) if 30% of current subscriptions are sustained and association support is maintained. The journal would decisively gain if associations (or other sources) could offset the funding lost by offering free access to the on-line journal. The 'best case' scenario is the one where there is no decrease in subscription revenues and association support; in this case, all savings associated with the reduced printing costs accrue to the journal. If, in addition, it can generate additional sources of funding for technical support or an increase in advertising revenues, it may gain even more. Assumptions: Figures presented in the table reflect, a traditional paper-based Social Sciences or Humanities journal in Canada assumed to have, an average of 121 pages per quarter and an average press run of 1700 copies (Jog, 1995).

For a brand new e-journal, potential cost savings could be in the range of 28 –48% (Jog, 1995). However, it should be noted that even with these savings, the e-journal would still have expenses in the range of $30,000 to $40,000 if it is a fairly middle size journal (Jog, 1995). Another study concludes that potential savings of converting a paper-based journal to e-journal is 24-32% (Woolfrey, 1993). Rosenzweig (2000) analyzed the cost of the online journals. Table 5 shows the analysis.

Table 4: Economic Impact of Switch to E-journal: Revenue and Expense Scenario

	Worst case	Most likely	Best case
Revenue scenarios	Subscriptions down 100%, Assn. Support down by 30%	Subscriptions down 70%, Assn. Support maintained	Subscriptions shift to Assn. Support, Assn. Support intact
Expense scenarios			
Systems Admin. & Conversion in cash cost	Rev Loss: 60% Cost Saving: 28% Net Loss: 32%	Rev Loss: 41% Cost Saving: 28% Net Loss: 13%	Rev Loss: 6% Cost Saving: 28% Net Gain: 22%
University Provides Systems Admin. & Conversion Support	Rev Loss: 60% Cost Saving: 48% Net Loss: 12%	Rev Loss: 41% Cost Saving: 48% Net Gain: 7%	Rev Loss: 6% Cost Saving: 48% Net Gain: 42%

Source: Jog, V. (1995, June). *Cost and revenue structure of academic journals: Paper based versus e-journals.* Retrieved December 21, 2001 from, http://www.schoolnet.ca/vp-pv/phoenix/e/vijayjog.html

Table 5: Cost of Online Journal

Subject	% of Change 96-97	Average Cost/Title 98	% of Change 97-98	Average Cost/Title 99	% of Change 98-99	Average Cost/Title 2000	% of Change 1999-2000	% of Change 1996-2000
Engineering	13.39	865.50	9.87	947.36	9.46	1,034.58	9.21	48.91
Health Sciences	11.86	567.13	8.82	621.34	9.56	672.35	8.21	44.31
Math & Computer Science	9.85	830.43	6.59	891.49	7.35	961.82	7.89	35.61

Source: Rosenzweig, L., M. (2000). Declaring Independence. Retrieved January 27, 2002, from http://www.arl.org/sparc/DI/appendixA.html

STATISTICS IN E-JOURNALS

The number of e-journals (which includes titles classified as "e-zines," or magazines) make up 72% of the total of 2,459 listings, while e-newsletters account for 955 entries. The lists section (electronic conferences, including discussion lists, news groups, interactive web chat groups, etc.) also grew, from 3,118 entries last year to 3,808 this year, a 22% increase. Table 6 shows the growth in the electronic serials.

Table 6: Trends in E-Serials

TRENDS IN E-SERIALS							
Electronic journals and electronic newsletters	1991	1992	1993	1994	1995	1996	1997
Total	110	133	240	443	675	1689	3414
Peer-Review	7	15	29	73	139	417	1049
Fee	2	2	6	29	72	168	912

Source: Mogge, D. (1998, February). *ARL directory tracks growth in e-publishing*. Retrieved January 10, 2002, from http://www.arl.org/newsltr/196/dej.html

McEldowney collected the growth of electronic journals from the *ARL directory of Electronic journals, Newsletters and academic discussion lists* from 1991 through 1995. Table 7 shows the figures collected.

Table 7: Growth of Scholarly Electronic Journals and Communication

	July 1991	Mar 1992	Apr 1993	May 1994	May 1995	May 1996	Dec 1997
Journals & Newsletters	110	133	240	443	675	1689	3414
Listservs & Discussions	517	769	1152	1784	2480	3118	3807
Total	627	902	1392	2227	3155	4807	7221

Source: McEldowney, P. (1997). *Scholarly electronic journals – Trends and academic attitudes: A research proposal*. Retrieved on January 27, 2002, from http://www.people.virginia.edu/~pm9k/libsci/ejs.html

The growth of e-journals were tracked by Mogge (1999). Figure 4 shows the growth. In 1994, 205 journals and newsletters used e-mail as a distribution method, 178 used gopher, and only 36 used the web. The figures are not exclusive, as many e-journal producers made their work available in more than one way. But, email distribution remained fairly constant through out the years. Gopher reached the height of popularity in 1995 and plummeted dramatically by 1997.

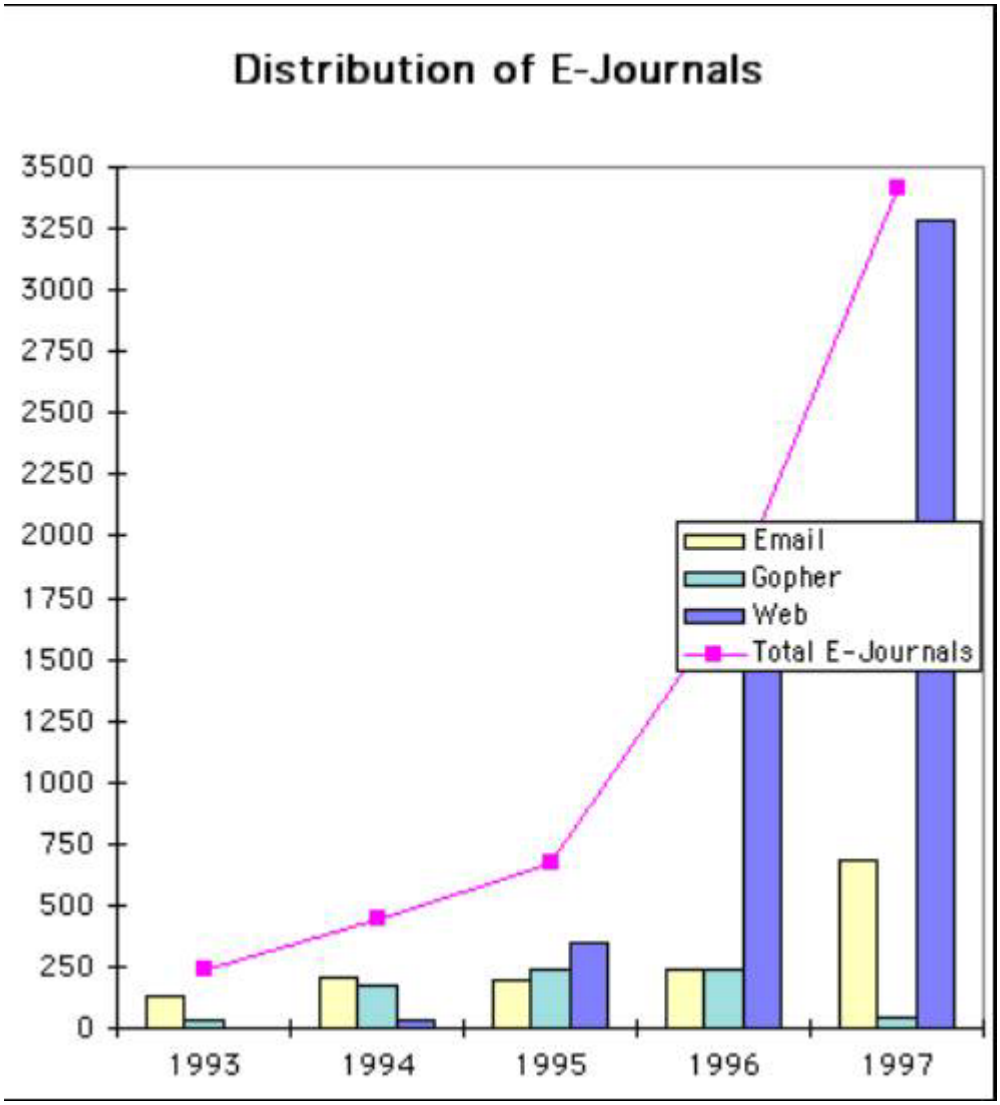

Figure 4: Growth of Electronic Journal

Source: Mogge, D. (1999). *Seven Years of Tracking Electronic Publishing: The ARL directory of electronic journals, newsletters and academic discussion lists*. Retrieved January 27, 2002, from http://dsej.arl.org/dsej/2000/mogge.html

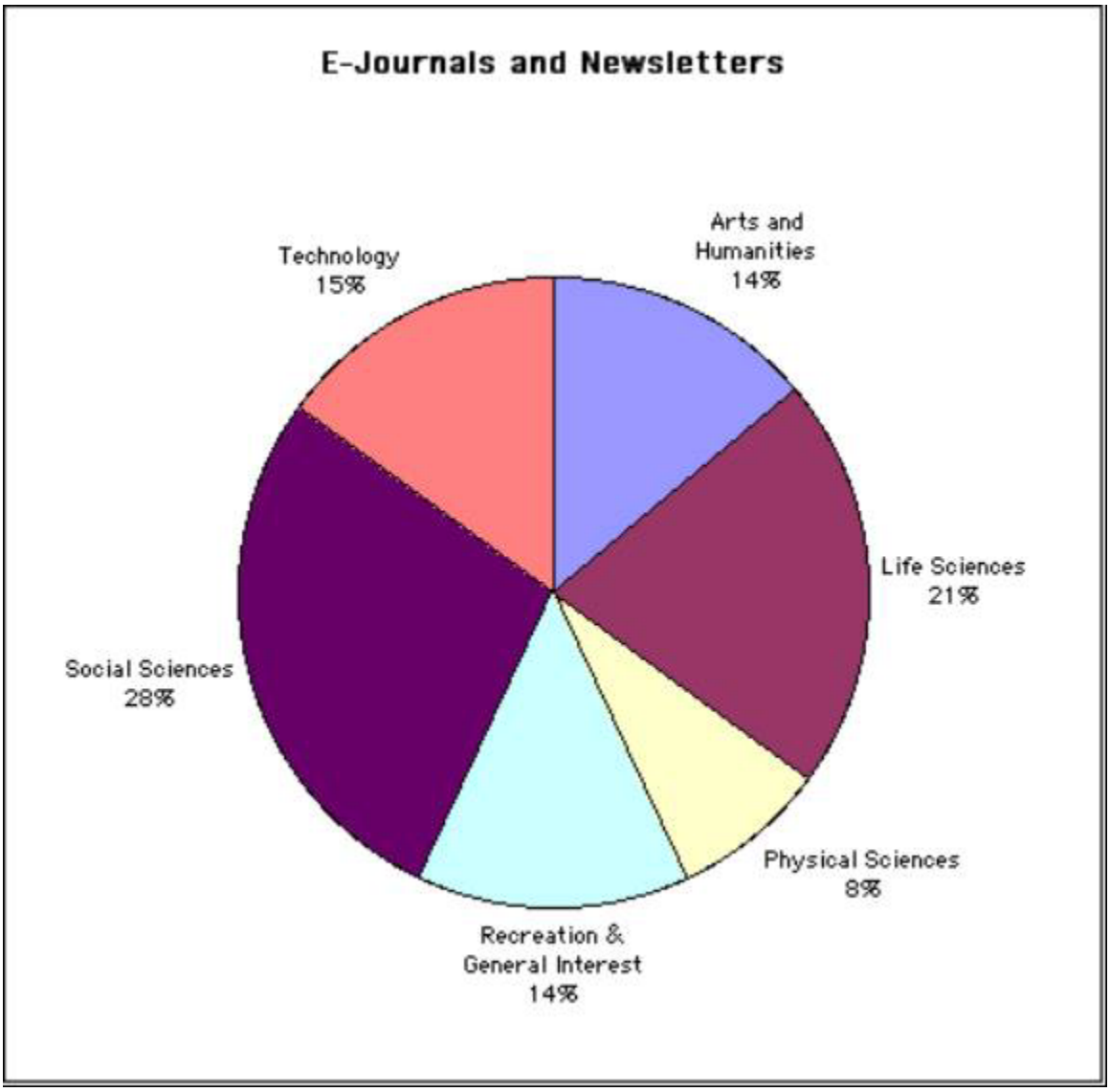

Figure 5: Subject Analysis of Electronic Journals

Source: Mogge, D. (1999). *Seven Years of Tracking Electronic Publishing: The ARL directory of electronic journals, newsletters and academic discussion lists*. Retrieved January 27, 2002, from http://dsej.arl.org/dsej/2000/mogge.html

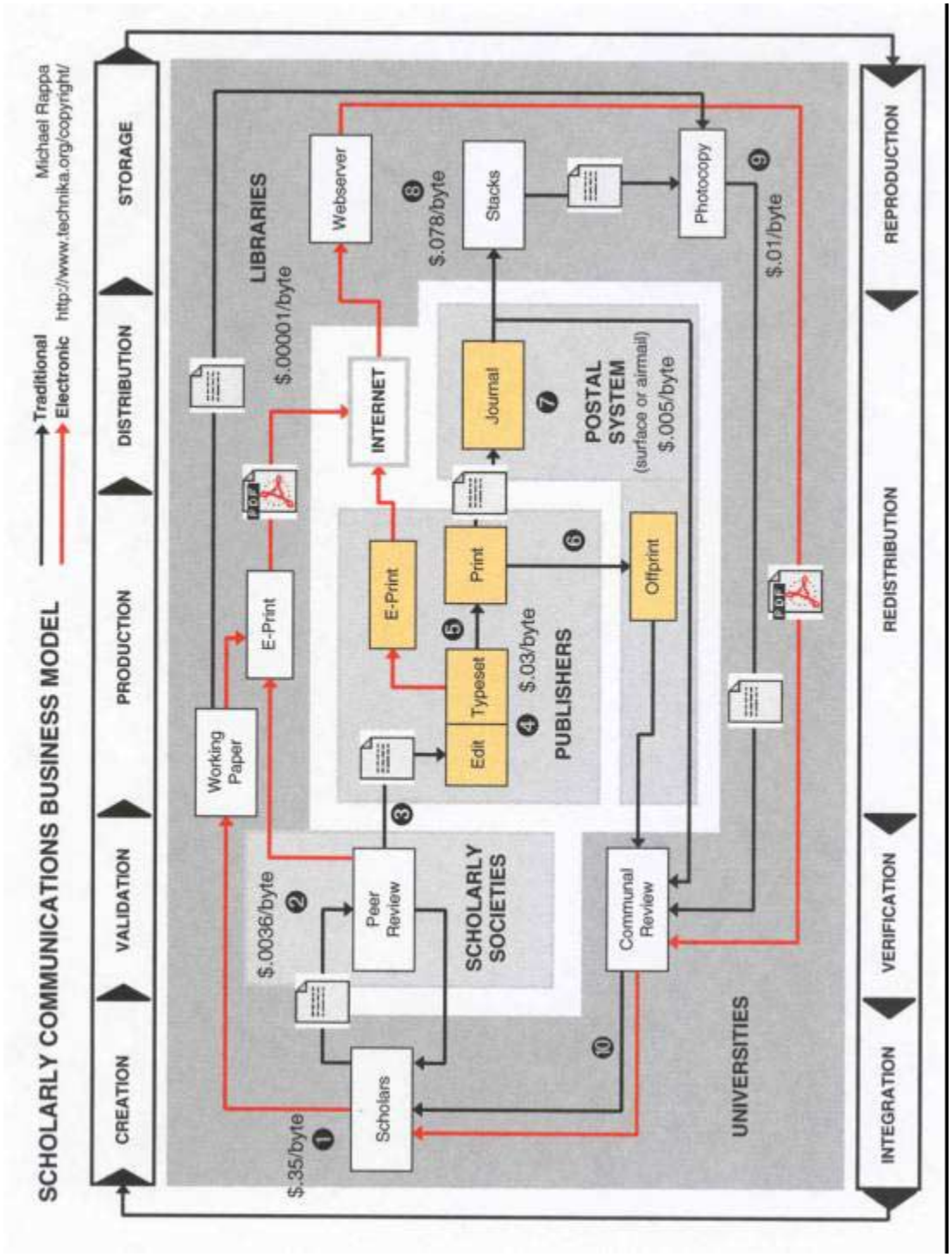

Figure 6: Dr. Rappa's Business Model of Scholarly Communication

Source: Dr. Michael Rappa, NCSU

The seventh edition of ARL Directory made a subject analysis (see Figure 5) on the e-journal and newsletter section (Mogge, 1999). Technical and computer-science titles made up the largest share at 40 percent. The social sciences were next, with 28 percent. Interestingly, social science titles also made up 28 percent of the total in 1997. Figure 6 shows the business model developed by Dr. Rappa.

Establishment and Implementation of E-Journals

The establishment and implementation can be dealt within two categories, technical and management. Like traditional print-based journals, the success of an electronic journal will neither be a function of purely market nor technological factors. Instead, the community will decide whether the electronic journal serves the same purpose as that of the paper counterpart and then decide whether it is a respected channel for communication and information dissemination (Harrison & Stephen, 1995).

Electronic journals have captured the interest of readers, authors, publishers and librarians for a number of reasons. From a readership standpoint, the ubiquity of the Internet enable easy access to articles around the globe and readers can obtain and print articles when needed. Similarly authors should be able to publish their work more quickly and disseminate that work to a broader audience. The publisher can produce a specific issue of an electronic journal whenever and however frequently they desire, getting information into reader's hands more quickly. Furthermore, highly specialized topical areas may be able to support a stand alone journal where interested authors can publish and readers can gain access at a lower cost than would be required from a traditional print journal. Finally, librarians no longer have to contend with the cost and availability of print journal storage (Speier, 1999).

Electronic journals distributed through a network can be initiated with relatively little capital expenditure, which means that scholars have been economically less constrained in creating new journals than some of the publications. An increase in speed is afforded by the network (Harrison & Timothey, 1995). Establishing an electronic journal needs support from both the management and the technical team to a successful journal.

Technical Issues

The technical part of the electronic journal deals with issues like security, storage, navigation & search ability, electronic page layout, technology and networking.

Security: One of the key issues that is faced by the publishers is how to offer full access to their electronic journals on the Internet and yet maintain proper security for authorized subscribers. The two most common methods, issuing a password to subscribers (easy for individuals, but difficult for organizations) or using domain restrictions on the internet (allows the users coming form a specified institutional Internet domain). In addition to IP filtering and server-based passwording models, many libraries and consortia are looking for additional options such as the ability for a web-based script to query a patron file in a library circulation system or campus registration system, which would then allow authorized users access (Machovec, 1997).

Storage: The OCLC Electronic Collections Online has made a commitment to provide perpetual archiving for the titles they offer. If they are not able to archive, OCLC has made arrangements with publishing partners to offer the archive to participating libraries in a format acceptable at that time. For example, publishers could place electronic copies of their e-journals in escrow at different places to ensure their continued availability if necessary.

Libraries or consortia could begin to selectively archive e-journals in a coordinated fashion with publisher approval. Periodical jobbers [e.g. EBSCO] could perform an archival role; national libraries could play an archival role; commercial third party companies such as UMI or others could do electronic archiving in addition to their traditional roles with microfilm or CD-ROMs (Machovec, 1997).

Harnad (2001b) suggests that researchers should self-archive all present, future and past papers, universities should install e-print archives and mandate them; libraries should maintain the university e-print archives. Universities and libraries should also help in author start-up. Publishers should concede graciously on self-archiving and be prepared to separate essential Quality Control/Certification (QC/C) service costs (to the author-institution) from optional add-on product costs (to the reader-institution). The QC/C cost is for implementing the peer-review and not for performing it. The government/society should mandate public archiving of public research worldwide.

Navigation & Search ability: Navigation and search are two of the most important functions that an online publication has to offer. For now, though, both features remain fairly primitive in most settings and are of limited value until the volume of publications grows significantly. Relatively few research journals are truly online in the sense of providing all of their material online rather than just abstracts and correspondence; most of these have been online only for a short period.

Providing access to print journals typically requires check-in, binding, shelving and reshelving issues after each use. It is relatively simple and straightforward, and it works most of the time. However, in the online environment there are a host of complex requirements

one must consider to ensure that the user has convenient and stable access. One should have dependable and consistent options for printing, downloading and e-mailing the full text of the articles, if needed (Curtis, Scheschy, & Tarango, 2000).

One of the disadvantages of online publishing is that most formats that lend themselves well to high-quality printing (mostly Postscript and PDF) do not lend themselves well to searching and navigation and cannot be downloaded incrementally. In contrast, a format such as HTML, which supports searching, navigation, and incremental downloading, offers only the most rudimentary support for formatting and nearly none for typesetting (Moret, 1997).

Electronic Page Layout: Most of the electronic journals are published using Portable Document Format (PDF) and the rest using Hypertext Markup Language (HTML). Appropriate plug-ins have to be provided if any additional download is needed. The most widely used plug-in or helper application is Adobe's Acrobat Reader, which is required to display and print PDF files. Adobe's Portable Document Format (PDF) is a universal file format that preserves all of the fonts, formatting and graphics of the source document. Documents are converted to PDF by using Adobe Acrobat software. The HTML format offers more options for linking, searching and supplementing the text, but is generally more labor-intensive to produce and proper security is not available. Standard General Markup Language (SGML) and Extensible Markup Language (XML) are even more powerful, but require technical expertise not widely available yet. As the market stabilizes, we can expect that the PDF-only publishers will develop more innovative formats that will be superior to the electronic facsimiles of print journals, and/or that of PDF capabilities will expand.

SGML-based projects, done by Elsevier and Springer-Verlag, are likely to become more common as publishers integrate the production of their journals to provide both online and print. The difficulty with most bit mapped images at this time is that they normally do not have embedded links or other special features possible with other solutions using SGML or HTML. Many other electronic journals are converted directly to HTML where the markup supports the text, images and other links. Some projects are using both techniques in tandem to support searching of the HTML text while providing an image in its original appearance (Machovec, 1997).

Technology: New technologies, like Java and cookies, enhance search ability and general usefulness of electronic journals. As many web resources incorporate a greater number of graphics, sufficient network bandwidth is required to downloading pages at a reasonable speed. An Internet Service Provider (ISP), such as AOL, Bluelight etc.. provides the internet connection. The most commonly used web browsers, Netscape Navigator and Internet Explorer are used. All the browsers should be able to support images, tables, frames, PDF viewer, cookies, security, JavaScript.

Networking: Critics of the academic networking have been concerned with dividing the disciplinary community into ‘haves’ and ‘have nots’ based upon members’ access to the network and the hardware and software required for using it (Harrison & Timothe, 1995). But, as the costs of technology continue to decline and networking diffuses throughout various industries, information is discoursed than has been possible through traditional communication media. When the electronic journals are complemented by other means for communication available on the network, such as dedicated listserv discussions and the

various virtual reality environments that are becoming available (eg. Mud Object Oriented (MOO) and Multi-user Dungeon (MUD)) then the opportunity for international participation increases (Harrison & Timothe, 1995).

Accessibility: With the advent of the World Wide Web, a dramatic change in the publication and communication is inevitable. The functions of the various players have shifted – for instance, authors started distributing their own literature via web. It becomes important that web search engines, developed by institutions outside the conventional academic publication process, provide an important service for exploring academic literature, and new electronic archives supported by institutions other than traditional libraries represent another new service and new kind of player (Wellman, 1998).

Management Issues

The issues that are discussed related to management process are: Copyright, pricing, social challenges and obstacles for electronic publishing.

Copyright: Copying in the digital age is faster, cheaper, and better than copying in the good old days of analog. The tools for illicit copying are more widely distributed. The question of ownership of material posted on the Internet is becoming more and more important. Users of the original computer networks developed a strong tradition of openly sharing material on the network. Most documents on the Internet and Web provide no clear indication as to how freely they may be copied and distributed. Authors who want to grant permission for free redistribution should add clear statements of intent to the documents (Boyce, and Dalterio, 1996).

Many scientists are not aware that posting a document on the Internet, where it becomes available to everyone, is equivalent to publication of the document, and that posting someone else's document without expressed permission violates the author's copyright. Anyone who develops a World Wide Web home page is, in effect, a publisher and is thus legally responsible for obtaining the permission of the copyright owner of everything published on that page. This is true not for manuscripts but also for e-mail messages, which also cannot legally be redistributed without the author's permission (Boyce, and Dalterio, 1996).

Issues surrounding intellectual property rights and electronic media are especially confusing when compared with the old copyright laws. As images are electronically forwarded around the Internet, it becomes very difficult to control and define what can and cannot be done. In the absence of clear law in this area, publishers will need to come to realistic expectations in this arena. Libraries have a tradition of sharing individual journal articles among themselves through interlibrary loan, under fair use rules. Thus, it is important to review contracts for electronic journals to understand how the contract may alter a library's ability to participate in ILL for those titles from a particular publisher (Machovec, 1997).

Recently, the self-archive concept is on the rise. Before the article has even been submitted to a journal, the intellectual property is the author's, and not bound by any future copyright transfer agreement. The author can archive the preprints. Submitting the preprint to the refereed journal of the author's choice, the author can revise it as usual in accordance with the directive of the Editor and the advice of the referees. At acceptance, the author could try to fix the copyright transfer agreement to allow self-archiving (Harnad, 2001b).

Moreover, copyright law throughout the world differs; hence a common platform is needed for a more organized copyright policy for becoming a standard.

Pricing Issues: Publishers are exploring a wide variety of pricing models. Differential pricing is suitable when an institution's needs are larger and hence can be charged higher. Harnad has suggested that charging authors (or their institutions) a 'page' fee when their paper is accepted for publication, as a way to help disseminate the work. Another study has found that the better accessibility of online journals increased the number of subscriptions. Some publishers charge an additional cost beyond that of the paper-version subscriptions for online access. For examples, ACM offers online access to a substantial proportion of the conferences and journals it sponsors. The charge is a reasonable fee to access to all online material in addition to the fee for a subscription to at least one paper journal (Hearst, 1998).

Some of the obstacles that the management of an e-journal should take into account for the transformation of the paper journal to electronic journal are:

1. The effort put by the author involved in publishing for the scholarly e-journal can be dissuaded by the investment and the continuing technological learning curves and updating of electronic skills,
2. Technical limitations are still very real concerns. Distributing the work in many formats will be tedious,
3. The inability to exercise enough ownership to be certain of capturing sufficient revenues to cover costs of publishing is an inhibitor,

4. The social system will have the impact of the new scholars who want to publish on the new electronic medium, who may decide on the experienced persons (Okerson, 1993).

One factor that retards the adoption of electronic publishing is the very nature of how organizations, even ones that become preeminent by introducing new technology in the first place, have difficulty continuing to do so. Another factor is sheer size. The production of pages in the electronic form will require a smooth and automated process (Okerson, 1993).

Social Challenge: The success of an electronic academic journal will depend on the extent to which members of a disciplinary community actually use it to take part in the routing discourse processes through which knowledge is distributed. Scholars who initiate electronic journals face the normal sociological challenges that derive from attempting to orient the disciplinary community to a new medium for communication. Another challenge to the developers may be to create an entirely new online disciplinary community (Harrison & Timothey, 1995).

Creating a credible channel for the dissemination of knowledge has to be taken care by the management team, so that there is no perceived difference in quality. This may imply that a new E-journal will incur higher marketing costs in order to convey to the academic community of its quality, the rigor of its review process and relevance (Jog, 1995).

In Textiles and Apparel

The Internet in the field of textile and apparel has grown in a rudimentary fashion. More information in this field has to be put online to join the online community. Although e-

commerce B2B marketplace is developing in the field of textiles, the revolution is not complete.

Electronic journals are very few in this field and those that exist are trade journals. Examples include Bobbin (http://www.bobbin.com), HomeTextilesToday (http://www.hometextilestoday.com), and Asian textile Journal (http://www.atjournal.com). Most of these trade journals are free, except one requires registration with the website.

Directories (provides many electronic deliveries) offer a variety of information from the buying and selling, job services, newsgroups, discussion forums, online community and customization to a certain level, by offering free tools that are used in this field. Some examples are TextileWeb, Apparel.net, and Apparel Exchange.

Databases are available, like Worldtextiles (Offered by http://www.silverplatter.com)

Trade organizations:

The American Association of Textile Chemists and Colorists: AATCC provides the textile wet processing industry with a communication center and a clearinghouse for new ideas and innovation in textile chemistry and color science.

American Fiber Manufacturers Association: The American Fiber Manufacturers Association, Inc. (AFMA), is a domestic trade organization representing U.S. producers of more than 90 percent of domestic production of manufactured fibers, filaments and yarns.

Cotton Incorporated: With headquarters in Cary, North Carolina and eight other offices throughout the world, Cotton Incorporated is a research and promotion

company funded by U.S. cotton producers and importers of cotton goods into the United States.

Newsgroups: Comparatively few newsgroups in this field have grown.

Conclusion

While online publication for now shows more promise than results, the promise is overwhelming: flexibility, ease of access, intelligent searches, portability, and ecological benefits -- the promise of the "paperless office". Many scholars will no doubt be attracted to the network and to electronic journals because the technology offers an opportunity to participate, to a greater degree and in more useful ways, in the discourse of their community through scholarly forms that are somewhat familiar. Designers of the electronic journals should bear in mind that the network can be used in many ways to facilitate the routine discourse process. But every new communication medium bears within it the seeds of change. Electronic journals are destined to the way the scholars read and write (Harrison, & Timothey, 1995). The way into the future for us all is through well-targeted, carefully planned e-journal projects in partnerships between editors, publishers, technical specialists, and librarians with the reader’s need as the goal.

Chapter III

Methodology

The methodology chapter includes Research Design, Data Collection, Data Analysis, and Operational Definitions.

Research Design

A case study approach was used for this study. This case study includes the documentation of the process to establish an electronic journal, as well as, a descriptive analysis of reader behavior of the journal.

Data Collection

Data collection for each of the three research objectives is presented in Table 8.

Table 8: Data Collection for Research Objectives

Step	Research Objective	Process	Results
1	1a) Identify technical and management components	• Literature research • Interviewing library personnel • Work closely with JTATM Managing Editor and JTATM Technical editor	• Technical: Security, Storage, Navigation, On-line search, Electronic page layout • Management: Review process, Copyright issues, Social challenges, Marketing
2	1b) Process of launching a journal	• Literature research • Work closely with JTATM Managing Editor and JTATM Technical editor	Identify relationships • Within Management • Within Technical • Between management and technical • Formulate model depiction of the process (See Appendix A)

Step	Research Objective	Process	Results
3	2a) Analyzing the behavior of readers/visitors	• Statistics collected on weekly basis from Sitestats (www.sitestats.com) and from College of Textiles • Data sent in .csv format opened in Microsoft Excel	• Data generated for unique visits, repetitive visits, hits, page visits, country domain, entry pages, exit pages, referring sites, referring phrases, domain names, browser details, operating system and monitor settings for Volume #1, Issue #1-4, Special issue, Volume #2, Issue #1. Note: a) No data available from November 26, 2001 to December 16, 2001 affecting valid statistics for Volume #1, Issue #4 b) Unique visitors cannot be tracked accurately at present
4	2b) Provide overall comparative analysis of 5 issues of JTATM	• Identify trends data	• Report on Trend activity
5	2c) Relate analysis results to Roger's Persuasion Stage (1995)	• Compare individual results to Rogers persuasion: Relative advantage, compatability, complexity, trialability, observability,	• Overall summary analysis for each issue
6	3) Feedback loop	• Use the results from Research objectives 1 and 2 to identify feedback loop	• Completed process model (See Appendix A)

Data Analysis

Research Objective 1

Analysis for documenting the technical and management components and launching the journal were based on the continued discussions with JTATM managing editor and JTATM technical editor to refine the process model. Also discussions with the librarian and NCSU College of Textiles Webmaster, Lee Altman, also helped in refining the process. See Appendix A for the process documentation process.

Research Objective 2

a) Analysis behavior of readers/visitors:

Data analysis were conducted for each issue. All the statistics were received from Sitestats on a weekly basis in *.csv format (Comma delimited format). These files were opened in Microsoft Excel and the data were set-up for putting graphs in Microsoft Excel. Sum and average were calculated for each parameter and graphs were plotted. Table 9 presents the analysis completed for each variable.

Issue analysis was conducted for each issue. See Appendices B-F for Issue analysis. After a new issue is launched, analysis is conducted on the previous issue and summarized. Beginning with issue #2, the most recent issue analysis is compared to preceding issues (e.g. issue #3 is compared to issues #1, #2).

Table 9: Variables in JTATM Issue Analysis

Variable	Data available	Nature of Data	Analysis
Unique Visits	Weekly	Number (eg. 256)	Graphical
Repetitive Visits	Weekly	Number	Graphical
Hits (page impressions)	Weekly	Number with html page	Graphical
First time visits	Weekly	Percentage	Numeric (Average)
Cookies enabled	Weekly	Percentage	Numeric (Average)
Java enabled	Weekly	Percentage	Numeric (Average)
Javascript enabled	Weekly	Percentage	Numeric (Average)
Geographic location	Weekly	Country	Graphical & Tabular
Entry page	Weekly	Number with html page	Numeric (Average)
Exit page	Weekly	Number with html page	Numeric (Average)
Referring search engine	Weekly	Number with name of search engine	
Referring phrases	Weekly	Number with phrases	Tabular analysis
Referring word	Weekly	Number with word	Numeric (Average)
Referring sites	Weekly	Number with site location	Numeric (Average)
Domains (Host)	Weekly	Number with organization name	Tabular analysis
Browser	Weekly	Number with browser type	Numeric (Average)
Operating System	Weekly	Number with operating system type	Numeric (Average)
Color Quality	Weekly	Number with color quality	Numeric (Average)
Monitor resolution	Weekly	Number with resolution	Numeric (Average)

b) Overall comparative analysis of five issues:

Due to the lack of advanced software from the very beginning, analysis for all the issues was conducted with the parameters and pages in Volume #1, Issue #1. For subsequent issues, data had to be manually formatted in Microsoft Excel, which was tedious and could lead to erroneous results.

c) Relate analysis results to Rogers Persuasion Stage (1995):

Table 10: JTATM to Roger's (1995) Persuasion Stage

Characteristics	JTATM	Proposal Plan
Relative	JTATM vs Traditional print	Cost analysis is planned
Advantage	Cost of publishing	
	Time	Comparative analysis
	Cost of subscription	
	Search capability	Database is being setup
Compatibility	With society	Analyzing the number of subscription increases
	With browsers	Analyze the browser data
	With computer use	Analyzing the operating system, monitor settings
Complexility	Access to articles	Analyzing the dead links (limitations are there)
	Reading habits	Discuss with JTATM editors (has anyone asked for a paper JTATM)
	Technology	Analyze data
		Discuss with JTATM editors
	Network	Analyze data
		Discuss with JTATM editors
	Trade/ Scholarly journals	
Trialability	Registration	Get e-mail for un-subscription
Observablity	Web metrics	Issue analysis
	Article preference	Hits on the PDF files should be tracked

Table 10 represents the process to analyze JTATM to Roger's (1995) persuasion stage. The results will be discussed in Chapter 4.

Research Objective 3

Feedback Loop: Results of research objective 1 and 2 are used to develop the feedback loop for future design issues and growth of the journal.

Operational Terms

Cookie	A message given to a Web browser by a Web server. The browser stores the message in a text file called *cookie.txt*. The message is then sent back to the server each time the browser requests a page from the server (cookie - Webopedia.com).
Compatibility	"It is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 1995, p. 224).
Complexity	"It is the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 1995, p. 242).
Domain Name	A unique name that identifies an Internet site. Parts of the name are separated by dots (Curtis, Scheschy, & Tarango, 2000).
Repetitive Visits	The number of people (same or different) who visit the web page.
Hits	An action on the Web server, such as when a user views a page or downloads a file (Webtrends, 1998).
Observability	It is the degree to which the results of an innovation are visible to others" (Rogers, 1995, p. 244).

Page View	Each request for a particular web page which is a means for selling advertising on a web site (Webtrends, 1998).
Plug-in	A plug-in is a software application that is integrated into the browser and is launched when a user clicks on a type of file that the plug-in was designed to interpret (Curtis, Scheschy, & Tarango, 2000).
Relative Advantage	"It is the degree to which an innovation is perceived as being better than the idea it supersedes" (Rogers, 1995, p. 212).
Traffic	The load on a communications device or system. One of the principal jobs of a system administrator is to monitor traffic levels and take appropriate actions when traffic becomes heavy (traffic - Webopedia.com).
Trialability	"It is the degree to which an innovation may be experimented with on a limited basis" (Rogers, 1995, p. 243).
Unique Visits	The number of different people who visit the web page. It excludes repeat visitors (Appelman, 2000).
User sessions	A session of activity (all hits) for one user of a web site. A unique user is determined by the IP address or cookie (Webtrends, 1998).
Web server	A computer that delivers (*serves up*) Web pages. Every Web server has an IP address and possibly a domain name (Web server - Webopedia.com).

Chapter IV

Results

Research Objective 1

1. Document the process of the electronic journal, including

a) Technical and management components

Figure 7 identifies the management and technical components of the electronic journal. The output of the figure is the result of the discussion with JTATM editors and working as a researcher on this project.

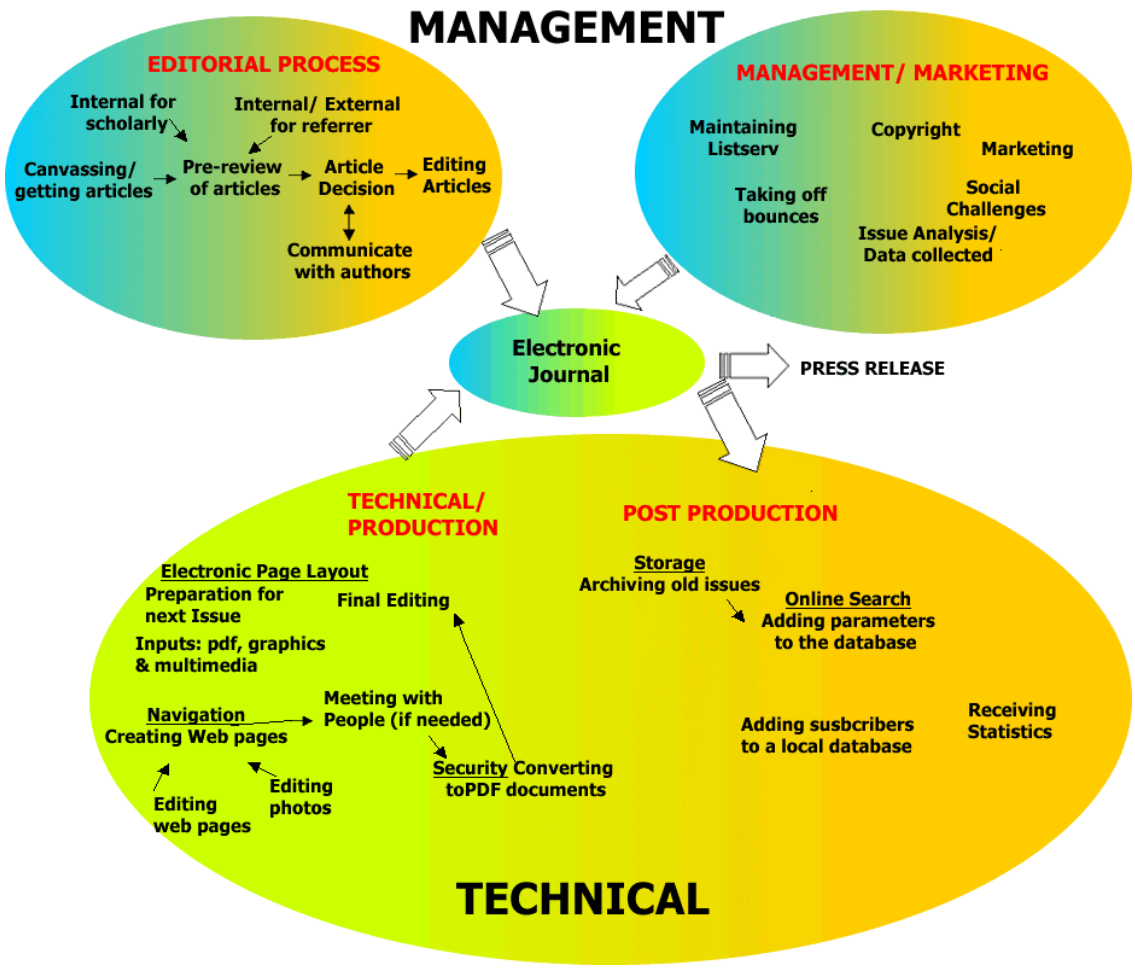

Figure 7: Management and Technical Components

1 b): Document the process of the electronic journal - Process for launching a journal and inter-relationships between components necessary to launch.

Management Process

The management process consists of the editorial process and managing/ marketing.

Editorial Process

Articles are obtained for each issue. Articles are selected based on the content and the latest update in theoretical and empirical research in the field of textiles and apparel, technology and management. The submitted articles are reviewed first by the JTATM managing editor. If articles are appropriate (content, format) articles are further reviewed. Scholarly articles are reviewed internally and referred articles are reviewed both internally and externally (external reviewers selected by JTATM committee members) and/or members of the International editorial board. The JTATM managing editor corresponds the decision (accept, revision, reject) with the author.

Managing/Marketing

The JTATM has two listservs, jtatmindustry and jtatmuniversity. Periodically in-correct e-mails (bounces) are unsubscribed from the listserv. A local database is also established with the contact information about the subscribers. The management handles copyright issues. The author owns the copyright of a paper published in JTATM. The management also handles issue analysis and social challenges. The issue analysis is generated for each previous issue after a new issue is launched. The analysis is made by accounting the number of hits and various other details such as country and browser details, and the growth is studied through comparative analysis. Marketing is done through (a) Press release, which are sent electronically to the two listservs when the journal is launched and (b) distributing JTATM CD's at professional conferences.

Technical Process

Production Stage

This phase of the technical component consists of developing the electronic page layout, navigational links and security. Setting electronic page layout involves creation of web pages with or without a template and links are provided for each page/article.

Steps in the electronic page layout include:

- Developing a design concept for cover page.
- Meeting with management editor to discuss/ identify the design and text requirements.
- Developing supporting pages for feature article. Information is added as received from committee and authors.
- Updating the announcement page as received by management editor.
- Updating remaining pages: editorial, registration, and author guidelines as needed.

Steps in the navigation include:

- Linking pages created above.
- Changing links from prior issue to go to an archive page.

Steps in article development include:

- Proofing the Word file submitted by author is reviewed for content by the managing editor.
- Converting the file into two columns and into Portable Document Format.

Steps in security include:

- The PDF file adds security to the document so that the reader/visitor can take print-out only (and cannot copy-paste).
- Privacy page gives an option for Opt –out policy for updating personal information in the database and receiving future press release.
- The database will not be sold to third party at any time.

Post-Production

- Corrections are made based on the feedback from viewers.
- Archiving old issues become an important step in the growth of the journal. A searchable database is being created. The database is updated with keywords for the 'search page'. Adding keywords, title of the paper and authors name to the database is done periodically.
- JTATM receives the web metrics on a weekly basis from SiteStats and recently from the College of Textiles webserver. The data is analyzed with the help of graphs and a report is prepared for each issue. Based on these data, modifications are done to the e-journal.

Research Objective 2

2. Analyze

a) The behavior of readers/visitors of the journal's issues

b) Provide overall comparative analysis of each of JTATM five issues

c) Relate analysis results to Roger's (1995) persuasion stage.

2 a) The behavior of readers/visitors are analyzed in each JTATM issues and is provided in Appendices.

Appendix B- Issue analysis for Volume #1, Issue #1

Appendix C- Issue analysis for Volume #1, Issue #2

Appendix D- Issue analysis for Volume #1, Issue #3

Appendix E- Issue analysis for Volume #1, Issue #4

Appendix F – Issue analysis for Volume #2, Issue #1

Comparative Analysis

This section will be discussed in two parts: First various profiles will be discussed comparing all the data for the five issues and Second, analysis for the period of October 19, 2000 to October 28, 2001 will be discussed.

Comparison of Issue Analysis

The issue analysis for volume #1, issue #1 were done with the help of statistics received from Sitestats. Subsequent analysis reflects data available from University and College of Textiles (COT) servers. The data generated, using Webtrends software, from these log files are more robust.

Analysis of Issue #1

Volume #1, issue #1 of the Journal of Textile Apparel & Technology Management, electronic journal was launched on October 19, 2000. The analysis is done for the time period of October 19, 2000 to February 8, 2001. The analysis from Sitestats, a third party vendor collecting statistics and reporting with the numbers, were some data was useful for meaningful analysis. Advanced analysis was made after the JTATM researcher received the log files from the server and analysis were done using Webtrends software. More analysis

(most active organization visiting the journal, the page not found (404) errors, most visiting city/ state) were tabulated with the help of log files.

The first issue received overall hits of 3058 (issue #2: 6474; issue #3: 7136) with unique hits being 843 (issue #2: 1493; issue #3: 1414) and repetitive hits being 1067 (issue #2: 2019; issue #3: 1781). The number of hits for each individual page in issue #1 is shown below in Table 11.

Table 11: Page Hit Details for Volume#1, Issue#1

	1 week	2 week	3 week	4 week	5 week	6 week	7 week	8 week	9 week	10 week	11 week	12 week	13 week	14 week	15 week
	19 Oct.	23 Oct.	30 Oct.	6 Nov.	13 Nov.	20 Nov.	27 Nov.	4 Dec.	18 Dec.	25 Dec.	1 Jan.	8 Jan.	15 Jan.	22 Jan.	29 Jan.
index	349	158	58	23	38	73	78	30	25	13	21	37	62	64	69
volumelists	161	51	25	13	24	40	36	15	18	6	12	20	25	39	23
current_abstracts	160	54	43	8	19	41	40	16	12	9	17	22	25	36	22
subscription	91	35	11	4	7	25	22	6	13	2	4	6	8	12	13
announcements	53	20	9	3	6	8	8	4	2	5	4	6	5	3	11
editorial_board	53	21	8	1	2	5	4	2	-		2	5	1	26	3
author_guidelines	48	13	9	3	4	2	6	3	-	3	2	7	-	3	5

Table 11 shows the index page receiving hits almost double (n=350 for week 1; n= 161 for volumelists) the number of times of the other pages. Next to the index page (39.5%), current_abstracts page (18.9%) received the most number of hits, followed by the volumelists page (18.3%), subscription page (9.3%) and announcements (5.3%) and editorial board (4.8%). Sitestats were not able to track the Portable Document Format (PDF) documents, and therefore data on the most downloaded article was not available. The most visited countries

include United States, United Kingdom, German, France, Italy. The top entry page was the index page (80%). It is assumed that most of the visitors enter the journal through the index page as the link is provided in the press release. The top exit page is index page (47.5%) followed by current_abstracts (22.8%) and subscription page (9.8%). The top-referring page is www.tx.ncsu.edu. Some of the keywords that were used to search in Google and Yahoo are 'nc state university' and '3d body scanning'. The most frequently used browser that was used to visit the journal was Netscape 4.0 (46.5%) followed by Internet Explorer 5.0 (38.32%). As the number of members in the listserv increased (as the journal grew), the most popular browser was Internet Explorer 5.0. Windows NT and Windows 98 were the most popular platforms for the journal throughout.

Analysis for Volume #1 Issue #2 to Volume #2 Issue #1

The following analysis was analyzed using Webtrends software with the log files from the server with the help of the College of Textiles Webmaster, Mr. Lee Altman. Volume #1, issue #2 includes dates from February 9, 2001 to May 15, 2001. Volume #1, issue #3 includes the time period of May 16, 2001 to August 22, 2001. A special issue, with the poster and presentation abstracts for the Fiber Society, was released on May 18, 2001. Hits for the special issue is also included in the analysis for volume #1, issue #3. Volume #1, issue #4 includes the time period of August 23, 2001 to December 16, 2001. Volume #2, issue #1 was released on December 17, 2001. The data for the analyses purposes for volume #1, issue #2 is restricted till February 26, 2002.

General statistics for the overall issue analysis from January 20, 2001 to February 26, 2002 is shown in Table 12. The journal received 180352 successful hits during this time

period with 15166 user sessions. More than half (52.28%) of the visitors are from United States. The average number of hits/ day was 448 with an average user session of 6:30 minutes.

Table 12: Overall Statistics for JTATM (Jan 20, 2001 to Feb 26, 2002)

General Statistics	
Timeframe	01/20/01 19:30:39 - 02/26/02 10:39:19
Number of Successful Hits for Entire Site	180352
Number of Page Views (Impressions)	34770
Number of User Sessions	15166
User Sessions from United States	52.28%
International User Sessions	16.84%
User Sessions of Unknown Origin	30.87%
Average Number of Hits per Day	448
Average Number of Page Views Per Day	86
Average Number of User Sessions per Day	37
Average User Session Length	00:06:29

Source: Table generated by Webtrends; Data from COT server

Note- Hit: An action on the Web server, such as when a user views a page/ downloads a file
Page view: Each request for a particular web page which is a means for selling advertising on a web site. Also referred as Impression
Usersessions: A session of activity (all hits) for one user of a web site. A unique user is determined by the IP address or cookie. By default, a user session is terminated when a user is inactive for more than 30 minutes

A comparative study in Table 13 shows that the total number of hits increased from issue #2 to issue #3 by 54.3% and from issue #3 to issue #4 by 45.8%. The increase from issue #2 to #3 was due to a special issue launched on May 18, 2001. A separate press release was sent to the listservs. Hence the page impressions were higher than the other issues. The user sessions of the international origin increases, which show that, the journal is being accepted throughout the world. The average number of user sessions per day also increases.

Table 13: Comparative Analysis Between Issues

General Statistics				
Issue #	V1 # 2	V1 # 3	V1 # 4	V2 I #1
Timeframe	feb/09/01-may/13/01	may/16/01-aug/22/01	Aug/23/01-dec/16/01	dec/17/01-feb/15/02
Number of Successful Hits for Entire Site	32589	50288	73296	24420
Number of Page Views (Impressions)	10241	13137	7162	4254
Number of User Sessions	3566	3785	4557	3150
User Sessions from United States	52.15%	56.3%	47.5%	52.22%
International User Sessions	13.93%	12.76%	22.44%	18.47%
User Sessions of Unknown Origin	33.9%	30.93%	30.04%	29.3%
Average Number of Hits per Day	346	507	631	400
Average Number of Page Views Per Day	108	132	61	69
Average Number of User Sessions per Day	37	38	39	51
Average User Session Length	00:06:05	00:06:22	00:07:04	00:06:44

Source: Table generated by Webtrends; Data from COT server

User Profile by Geographic Region

Figure 8 shows the user profile of the journal, where the United States user sessions are higher than the international readers in all the issues. Also, the international visitors are showing an increasing trend as seen in Table 13 (volume 1, issue #2 – 13.9%; volume 2, issue #1 – 18.5%).

Visit Profile

The visit profile discusses the unique visitors, repetitive visits and the hits JTATM received. Table 14 shows the number of visits for each issue. The overall analysis look similar for all the issues. The second week of issue #2 did not drop off very quickly, compared to Issue #1 and #2. Periodic ups and downs were clearly seen in all the three issues. The unique visits increased 77% for issue #2 and decreased by 5.3% for issue #3. Repetitive visits and the total hits also followed the same path. Figure 9 shows the graphical

pattern on unique visits and repetitive visits for JTATM from October 19, 2000 to October 28, 2001. The graph shows that the first week after a new issue is released, the number of hits decreases and periodic ups and downs are followed. Due to a problem in the Listserv during the press release of volume #1 issue #4, the hits are evenly distributed to the initial weeks of the launch.

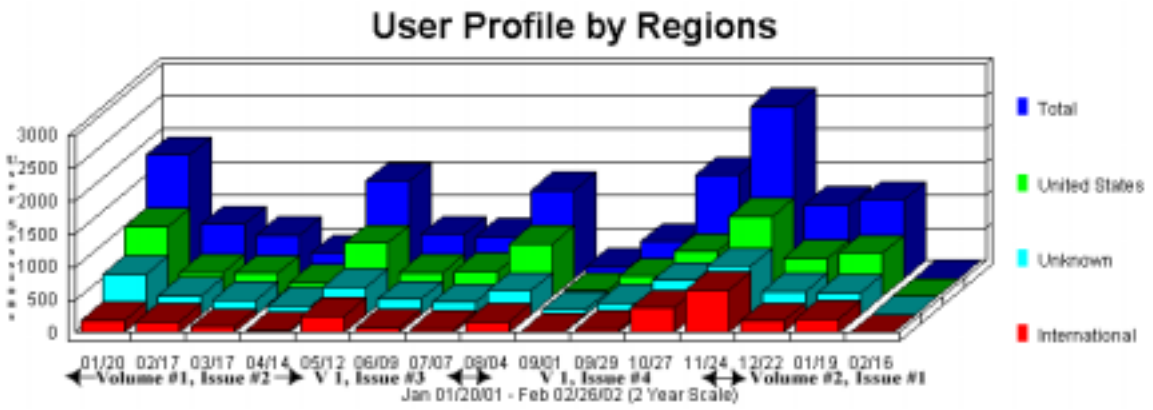

Figure 8: User profile by geographic region for JTATM

Source: Table generated by Webtrends; Data from COT server

Table 14: Number of Visits for Each Issue of JTATM

	Issue #1	Issue #2	Issue #3	Issue #4	V2, Issue#1
Unique visitors	843	1493	1414	1330 (10 weeks)	-
Repetitive visits	1067	2019	1781	1628 (10 weeks)	-
Hits (page impressions)	3058	6474	7136	6239	4254 [a]

Source: www.sitestats.com

Note: Numbers represent overall sum of each issue

[a] – Hits from December 17, 2001 to February 15, 2002

Hit Profile

Table 15 shows the comparative analysis for each issue on the number of hits for each page. The percentage reduction in the number of hits in subsequent issues in the table is due to the addition of new pages in the new issues, which take some part of the total percentage. Figure 10 shows the hits also followed the same pattern as unique visits or repetitive visits. The greatest number of hits for all the issues is index page. The number of hits received by the index page is double the time as that of other pages. Figure 10 shows the same kind of pattern as that of unique visits and repetitive visits. The number of hits are distributed evenly for the initial few weeks of volume #1 issue #4, as the press release were sent to the industry listserv and university listserv in separate weeks, due to a technical problem in the listserv.

Table 15: Comparative Analysis for Hit Profile

	Issue #1	Issue 2	Issue 3	Issue 4
jtatm/index	39.54%	37.081%	30.83%	25.85%
jtatm/volumelists	18.29%	13.151%	13.24%	12.01%
jtatm/subscribe_to_jtatm	3.32%	2.661%	2.03%	1.08%
jtatm/announcements	5.3%	6.440%	3.46%	4.18%
jtatm/editiorial_board	4.8%	2.333%	1.82%	1.71%
jtatm/author_guidelines	3.9%	3.953%	2.20%	1.96%
jtatm/volume1issue1/current_abstracts	-	7.829%	3.88%	4.59%
jtatm/volume1issue2/issue2_abstracts	-	-	5.17%	4.41%
jtatm/volume1issue3/issue3_abstracts	-	-	12.16%	2.78%
jtatm/volume1specialissue/ specialissue_abstracts	-	-	7.62%	5.79%
jtatm/volume1issue 4/issue4_abstracts	-	-	-	6.8%

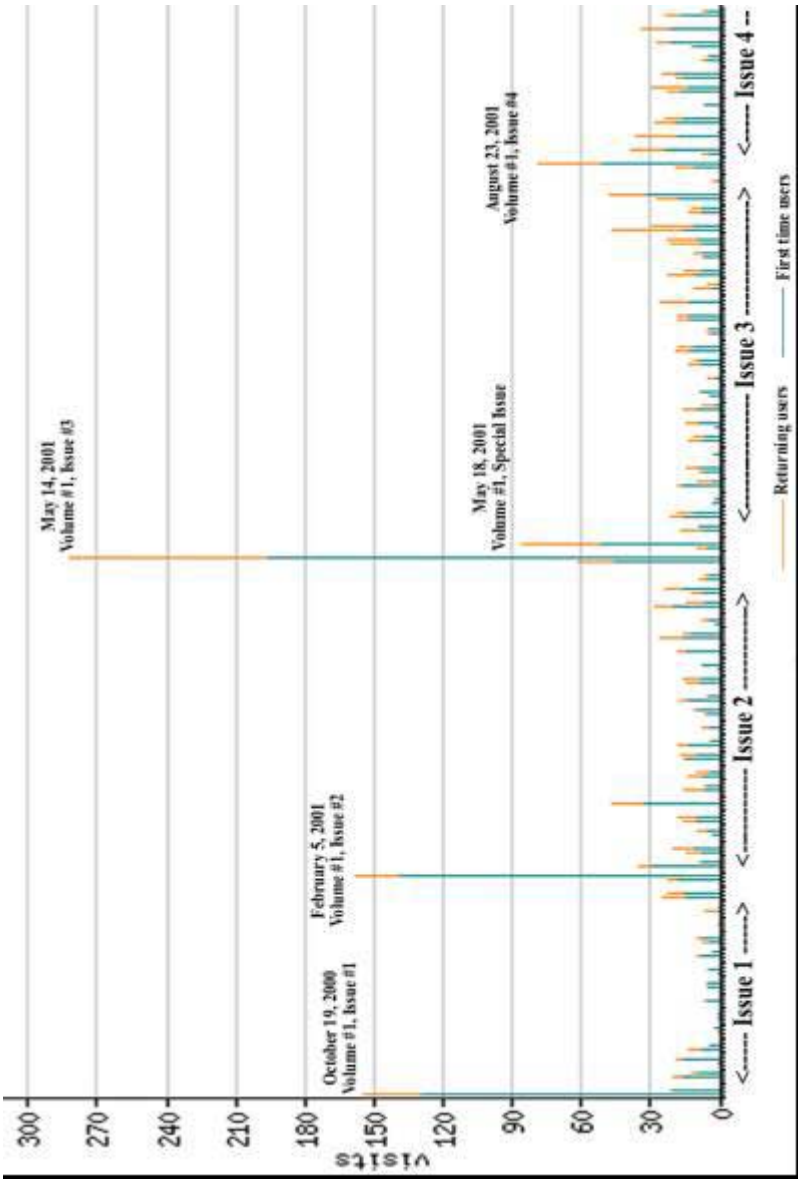

Figure 9: Unique Visits and Repetitive Visits for JTATM from October 19, 2000 to October 28, 2001

Source: www.sitestats.com

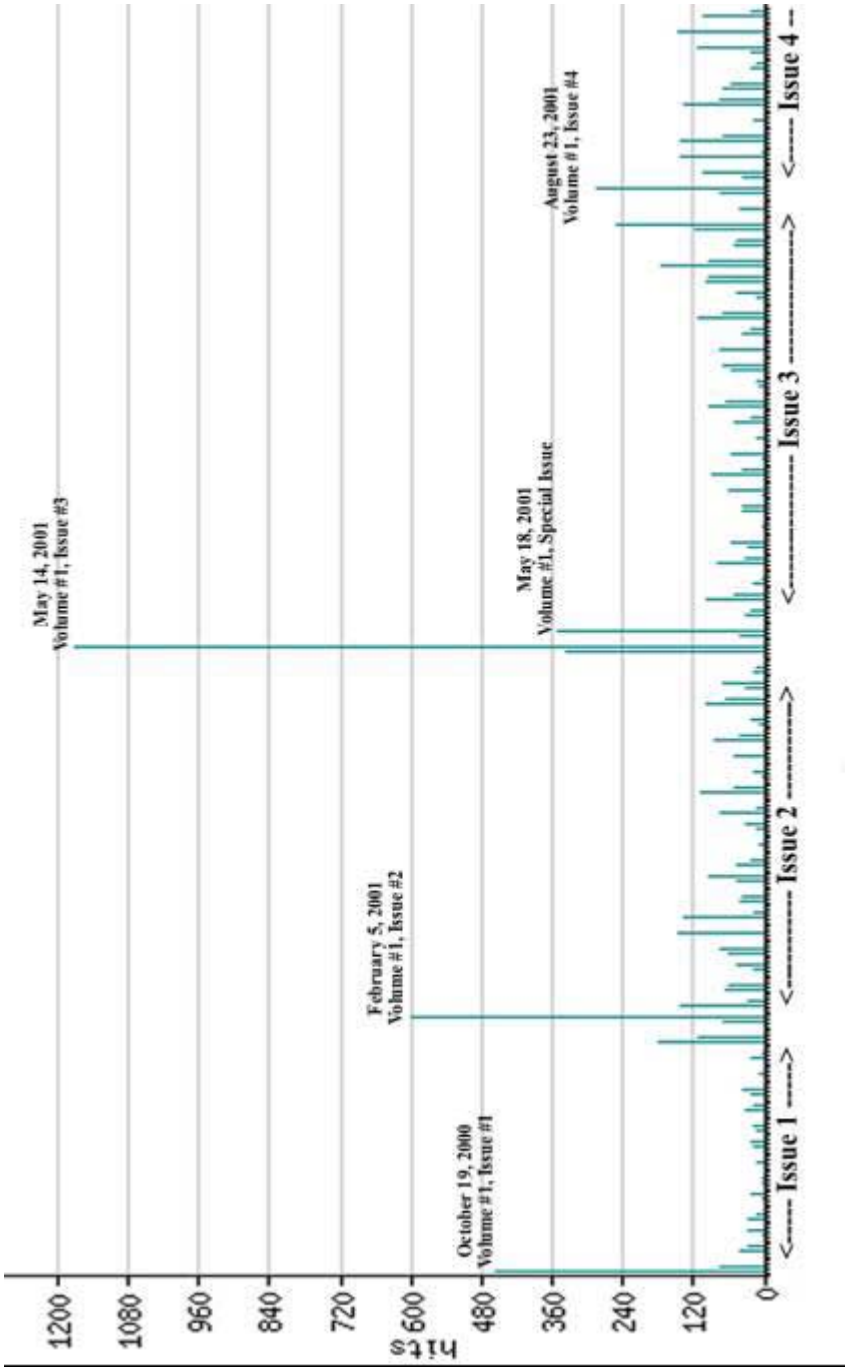

Figure 10: Hits for JTATM from October 19, 2000 to October 28, 2001

Source: www.sitestats.com

Most Requested Pages

The most requested pages are the pages which get the most request from the readers/visitors. For the time period of January 20, 2001 to February 26, 2002 the most requested pages was the index page of the journal (28.13%) (Rows 1 and 2 in Table 16 represent the index page views) followed by volumelists.html (5.52%). The average time to view the abstracts page is higher than the other pages, thus concluding that the journal reaches the targeted audience (volume #1 issue #1 – 00:02:20min; volume #1 issue #2 – 00:02:35; volume #1 issue #3 – 00:02:26; volume #1 special issue – 00:02:42; volume #1 issue #4 – 00:02:18; volume #2 issue #1 – 00:03:21).

Table 16: Most Requested Pages for JTATM

Most Requested Pages					
	Pages	Views	% of Total Views	User Sessions	Avg. Time
1	http://www.tx.ncsu.edu/jtatm/	6064	17.44%	4604	00:01:12
2	http://www.tx.ncsu.edu/jtatm	3720	10.69%	3089	00:00:57
3	http://www.tx.ncsu.edu/jtatm/volumelists.html	1920	5.52%	1484	00:00:42
4	http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	1538	4.42%	1261	00:02:35
5	http://www.tx.ncsu.edu/jtatm/announcements.html	1226	3.52%	903	00:01:31
6	http://www.tx.ncsu.edu/jtatm/volume1issue3/specialissue.html	1070	3.07%	345	00:00:39
7	http://webserv1.tx.ncsu.edu/jtatm/	1050	3.01%	483	00:00:59
8	http://www.tx.ncsu.edu/jtatm/volume1issue3/issue3_abstracts.htm	924	2.65%	781	00:02:26
9	http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	904	2.59%	522	00:01:32
10	http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	901	2.59%	702	00:02:20
11	http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	774	2.22%	644	00:01:51
12	http://www.tx.ncsu.edu/jtatm/author_guidelines.html	736	2.11%	581	00:01:14
13	http://www.tx.ncsu.edu/jtatm/editiorial_board.html	701	2.01%	563	00:00:56
14	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstracts.htm	628	1.8%	419	00:02:41
15	http://www.tx.ncsu.edu/jtatm/volume1issue3/internationalboard.html	468	1.34%	346	00:00:58
16	http://www.tx.ncsu.edu/jtatm/volume1issue3/academiatoursindustry.html	453	1.3%	367	00:01:16
17	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	433	1.24%	363	00:02:42
18	http://webserv1.tx.ncsu.edu/jtatm/volumelists.html	415	1.19%	164	00:00:12

19	http://www.tx.ncsu.edu/jtatm/volume2issue1/vo2_issue1_abstracts.htm	394	1.13%	346	00:03:21
20	http://www.tx.ncsu.edu/jtatm/privacy.html	382	1.09%	285	00:01:37
21	http://www.tx.ncsu.edu/jtatm/Working_Site/	342	0.98%	200	00:00:57
22	http://www.tx.ncsu.edu/jtatm/Working_Site/volume1issue3/specialissue.html	297	0.85%	38	00:00:17
23	http://www.tx.ncsu.edu/jtatm/volume1specialissue/indexforspecissue.html	280	0.8%	200	00:01:18
24	http://www.tx.ncsu.edu/jtatm/volume1issue 4/issue4_abstracts.htm	266	0.76%	233	00:02:18
25	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	258	0.74%	229	00:02:58
	Sub Total For the Page Views Above	**26144**	**75.19%**	**N/A**	**N/A**
	Total For the Log File	**34770**	**100%**	**N/A**	**N/A**

Source: Table generated by Webtrends; Data from COT server

Top Entry Page

The top entry page is the first page that a reader visits on entering a website. For JTATM journal, the top entry page was the index page (58.87%). It is assumed that most of the visitors enter the journal from the press release, where a link to the index page is given. The reason for the other pages that are shown as entry page may be of a search result in a search engine or book marking the specific page. Table 17 shows the top entry page for the time period of January 20, 2001 to February 26, 2002. Thumbnail_bio page of Issue #2, which had the faculty members of the TATM department, has been one of the top entry page (3.02%) throughout the year (volume #1 issue #2 – 5.3%; volume #1 issue #3 – 3.7%).

Table 17: Top Entry Page for JTATM (January 20, 2000 to February 26, 2002)

Top Entry Pages			
	Pages	**% of Total**	**User Sessions**
1	http://www.tx.ncsu.edu/jtatm/	28.04%	2672
2	http://www.tx.ncsu.edu/jtatm	25.98%	2476
3	http://webserv1.tx.ncsu.edu/jtatm/	4.85%	463
4	http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	3.02%	288
5	http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	2.69%	257
6	http://www.tx.ncsu.edu/jtatm/volumelists.html	2.52%	241
7	http://www.tx.ncsu.edu/jtatm/announcements.html	2.25%	215

8	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	2.02%	193
9	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstracts.htm	1.79%	171
10	http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	1.67%	160
	Total For the Pages Above (only sessions starting on a valid document type are included)	**74.88%**	**7136**

Source: Table generated by Webtrends; Data from COT server

Top Exit Page

The top exit pages refers to the last page the reader visited before leaving the website. During the time period of January 20, 2000 to February 26, 2002, the index page (30.52%) itself was the top exit page followed by issue2_abstracts (7.05%) and announcements (4.52%) page. The announcements page was one of the top exit pages for all the issues (4.52%) (volume #1 Issue #2 – 6.26%; volume #1 issue #3 – 4.35%; volume #1 issue#4 – 3.41; volume #2 issue #1 – 3.77).

Table 18: Top Exit Pages (January 20, 2000 to February 26, 2002)

Top Exit Pages			
	Pages	**% of Total**	**User Sessions**
1	http://www.tx.ncsu.edu/jtatm/	20.74%	1977
2	http://www.tx.ncsu.edu/jtatm	9.77%	931
3	http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	7.05%	672
4	http://www.tx.ncsu.edu/jtatm/announcements.html	4.52%	431
5	http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	3.47%	331
6	http://www.tx.ncsu.edu/jtatm/volumelists.html	3.46%	330
7	http://www.tx.ncsu.edu/jtatm/volume1issue3/issue3_abstracts.htm	3.3%	315
8	http://webserv1.tx.ncsu.edu/jtatm/	3.26%	311
9	http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	3.05%	291
10	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstracts.htm	2.93%	280
	Total For the Pages Above (only sessions starting on a valid document type are included)	**61.59%**	**5869**

Source: Table generated by Webtrends; Data from COT server

Most Downloaded Articles

Table 19 gives an idea of the number of the most downloads for the article from January 20, 2001 to February 15, 2002. In volume #1 issue #2, Dr. Istook's article "Rapid prototyping in the textile & apparel industry: a pilot project" (4.34%) had the most number of downloads followed by the special issue presentation (4.19%) abstracts in the Special issue of volume #1. The most downloaded files for volume #1 issue #1 was not recorded by Sitestats. Log files from the COT server recorded for the remaining issues. Volume #1 issue #2 had Dr. Kilduff's (11.83%) article as the top downloaded file followed by Mr.Fralix article (10.8%), Dr.Istook's article (9.58%) and Dr. Cassill's article (6.78%). Volume #1 issue #3 had Mr.Muditha's (11.65%), poster_part1 (7.28%), Dr.Istook's article (5.92%) as the most downloaded articles. Volume #1 issue #4 had Dr. Pourdeyhimi's (6.24%), pres_part3 of the special issue (4.61%), pres_part4 (4.26%) and pres_part2 (4.1%) as the most downloaded articles. Volume #2 issue #1 had pres_part3 (7.39%), pres_part2 (5.97%), posters_part1 (5.1%) as the top downloads.

Table 19: Most Downloaded Files for JTATM (January 20, 2000 to February 26, 2002)

Most Downloaded Files				
	File	No. of Downloads	% of Total Downloads	User Sessions
1	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Istook/fulleditistook.pdf	1458	4.34%	267
2	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part3.pdf	1409	4.19%	301
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf	1396	4.15%	264
4	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_full.pdf	1351	4.02%	366
5	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part2.pdf	1286	3.83%	312
6	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/senanayake/muditha_full.pdf	1187	3.53%	212

7	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part4.pdf	1180	3.51%	287
8	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Kilduff/fulleditkilduffa.pdf	1168	3.48%	333
9	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Pourdeyhimi/fulleditpourdeyhimi wip.pdf	1048	3.12%	145
10	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part1.pdf	1024	3.05%	253
11	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part2.pdf	1023	3.04%	258
12	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_full.pdf	957	2.85%	316
13	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_full.pdf	941	2.8%	262
14	http://www.tx.ncsu.edu/jtatm/Working_Site/volume1issue 4/articles/andrea/andrea_full.pdf	888	2.64%	8
15	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/martinking/king_full.pdf	872	2.59%	194
16	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part3.pdf	805	2.39%	225
17	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/tracimayplumlee/plumee_full.pdf	755	2.24%	212
18	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/oxenham/oxenham_full.pdf	689	2.05%	191
19	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/cassill/cassill_full.pdf	647	1.92%	182
20	http://www.tx.ncsu.edu/jtatm/volume1issue 4/articles/andrea/andrea_full.pdf	559	1.66%	192
21	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Suh/fulleditsuh.pdf	425	1.26%	141
22	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/seyam/seyam_full.pdf	425	1.26%	146
23	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Ghosh/fulleditghosh.pdf	421	1.25%	94
24	http://www.tx.ncsu.edu/jtatm/volume2issue1/articles/gereffi/gerefficomplete.pdf	380	1.13%	106
25	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/oxenham/oxenham_full.pdf	312	0.92%	105
	Total For the Files Above	**22606**	**67.35%**	**N/A**

Source: Table generated by Webtrends; Data from COT server

Most Active Organization

Most active organization is the most popular company or organization that accessed the website frequently. North Carolina State University had the most number of hits (19.4%) following by 152.1.40.242 (10.56%) – this is an Internet Protocol address, Road runner service (1.86%) and AOL (1.86%) were the top organizations that visited JTATM (See Table 20).

Table 20: Most Active Organization (January 20, 2000 to February 26, 2002)

Most Active Organizations				
	Organizations	**Hits**	**% of Total Hits**	**User Sessions**
1	**North Carolina State University** ncsu.edu	34992	19.4%	1589
2	152.1.40.242	19055	10.56%	165
3	**EXCALIBUR Group A Time Warner Company** rr.com	3364	1.86%	193
4	**America Online** aol.com	3356	1.86%	1820
5	**Inktomi Corp.** inktomi.com	2894	1.6%	159
6	152.1.40.210	2496	1.38%	16
7	152.1.40.254	1982	1.09%	71
8	army.mil	1790	0.99%	102
9	googlebot.com	1417	0.78%	921
10	**MindSpring Enterprises Inc.** mindspring.com	1376	0.76%	102
	Subtotal For Companies Above	**72722**	**40.32%**	**5138**
	Total For the Log File	**180352**	**100%**	**15166**

Source: Table generated by Webtrends; Data from COT server

Table 21 shows a comparative analysis between the active organizations for the issues of the journal. North Carolina State University, AOL, Road Runner were some of the active organizations that visited JTATM from the start-up of the journal. Googlebot, the spider of the Google search engine, one of the best search engines, has recently started visiting the

journal. Kansas State University (1.1% - volume #1 issue #4), University of Mississippi (0.88% - volume #2 issue #1) are some of the universities that come regularly.

Table 21: Comparison of Active Organization for JTATM (January 20, 2000 to February 26, 2002)

	Organizations	V1 Issue #2	V1 Issue #3	V1 Issue #4	V2 Issue #1
1	ncsu.edu	18.84%	21.01%	21.43%	10.69%
2	Aol.com	2.19%	1.94%	0.95%	3.41%
3	Road Runner (rr.com)	1.79%	2.21%	1.26%	2.04%
4	googlebot.com	-	-	0.66%	1.69%
5	tft.csiro.au	-	0.83%	-	1.31%
6	army.mil	-	0.91%	1.55%	-

Source: Table generated by Webtrends; Data from COT server

Most Active Countries

The most active country is the country from where many users visit the website. The country of the user is determined by the suffix of their domain name. This is not an accurate identification of the geographic location of the visitor. The top most active country is United States (7930 sessions) followed by United Kingdom (700 sessions). Table 22 shows that there has been a constant visit from US, UK, Canada, Germany and Australia.

Table 22: Most Active Countries (January 20, 2000 to February 26, 2002)

Most Active Countries						
	Countries	V1 Issue #2	V1 Issue #3	V1 Issue #4	V2 Issue #1	Overall [a]
1	**United States**	**1851**	**2131**	**2165**	**1645**	**7930**
2	**UK**	86	**137**	**340**	**153**	**700**
3	**Canada**		27	**74**	**40**	**169**
4	**Germany**	39	34	**64**	25	**162**
5	**Australia**			37	26	**133**
6	**France**		19	45	28	**115**
7	**Hong Kong**	37	9	32	26	**105**
8	**Italy**	24	27	31		**91**
9	**Netherlands**	13			30	**72**
10	**Japan**		10	29	16	**67**
11	**Taiwan**			23	26	**59**

12	**Portugal**	39	9			**52**
13	**Singapore**			24		**49**
14	**Greece**	21				**49**
15	**Slovenia**	14		19		**42**
	Total					**9795**

[a] – January 20, 2001 – 26 February 2002
Source: Table generated by Webtrends; Data from COT server

Only the top 15 countries (of the overall analysis) are entered in the Table 22. It can be noted that the journal reaches all over the world evenly distributed from European countries to the East. The top active countries being the industrialized countries, it can be concluded that the journal reaches the target audiences in the textile field. There has been an increase in the Hong Kong and Taiwan countries after the TATM faculty members visited the country during conferences.

Summary of Activity by Day

Table 23 provides the server activity and the level of activity on the weekdays and the weekends.

Table 23: Summary of Activity by Day (January 20, 2000 to February 26, 2002)

Summary of Activity by Day					
	V1 Issue #2	**V1 Issue #3**	**V1 Issue #4**	**V2 Issue #1**	**Overall**
Average Number of ***Users*** per day on Weekdays	53	63	52	89	59
Average Number of ***Hits*** per day on Weekdays	577	849	942	757	778
Average Number of ***Users*** for the entire Weekend	239	90	55	109	103
Average Number of ***Hits*** for the entire Weekend	1765	1153	389	492	834
Most Active Day of the Week	Mon	Thu	Tue	Mon	Thu
Least Active Day of the Week	Sun	Sun	Sat	Sat	Sun
Most Active Day Ever	Mar 31 2001	May 31 2001	Nov 06 2001	Dec 18 2001	May 31 2001
Number of Hits on Most Active Day	6826	23051	7152	3374	23051
Least Active Day Ever	Apr 15	Aug 26	Sep 29	Jan 17	Sep 29

	2001	2001	2001	2002	2001
Number of Hits on Least Active Day	69	1	3	69	3

Source: Table generated by Webtrends; Data from COT server

It is common to have least number of hits on the weekends, which is shown up in the issues in the 'Least active day of the week'. The most active day of the week for the issues were: Monday for volume #1, issue #2 as the press release was sent out on Friday (February 9, 2001); Thursday for volume #1, issue #3 as the press release was sent on Wednesday (May 16, 2001); Tuesday for volume #1, issue #4, the press release was sent many times (first time on August 23, 2001) to the listserv due to a technical problem; Monday for volume #2, issue #1 as the press release was sent on Monday (December 17, 2001).

Activity Level by Day of the Week

Activity level by day of the week shows the activity for each day of the week. The activity for the journal has been mostly on Monday (See Figure 11; legend 2) by the number of user sessions during the time period of January 20, 2001 to February 26, 2002. For volume #1, issue #2, the most active day was Monday -> Friday ->Wednesday. Since the press release was sent out to the listserv on Friday, Friday and Monday was the most active day during that period. For volume #1, issue #3, the most active day was Thursday followed by Wednesday. The press release was sent on Wednesday (May 16, 2001) and the special issue was sent on Friday (May 18, 2001). The most active day for volume #1, issue #4 was Tuesday followed by Thursday and Friday. This may be due to the subsequent press release sent during that period of time, as there was a problem in the listserv.

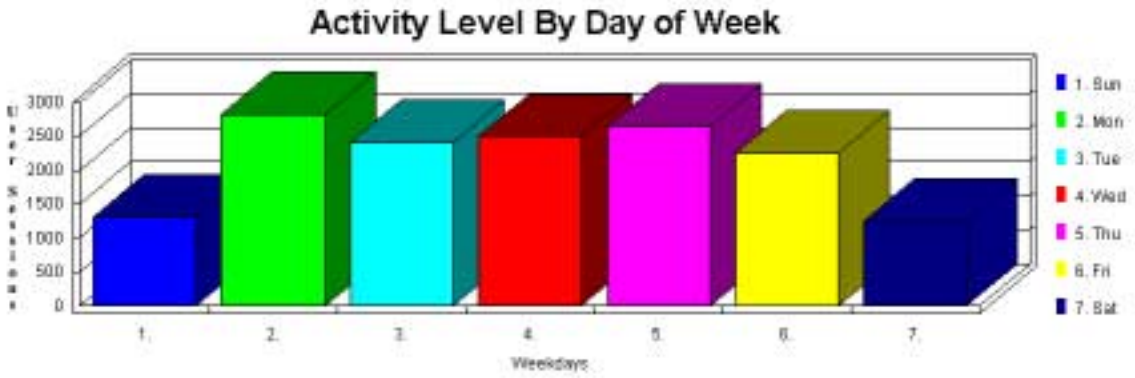

Figure 11: Activity Level by Day of the Week (January 20, 2000 to February 26, 2002)

Source: Table generated by Webtrends; Data from COT server

Activity Level by Hour of the Day

Activity level by hour of the day shows the activity on a hourly basis. The most active hour has been from 15:00 to 15:59 EST for the journal during the time period of January 20, 2001 to February 26, 2002. The active hour for volume #1, issue #2 was 15:00 – 15:59 and the least active was 21:00-21:59; volume #1, issue #3 most active was 09:00-09:59 and least active was 23:00 – 23:59; volume #1, issue #4 most active was 14:00-14:59 and least active 23:00- 23:59; volume #2, issue #1 most active was 16:00-16:59 and least active was 06:06:59. Server shutdown for maintenance can be done at the least active hour.

Figure 12: Activity Level by Hour of Day (January 20, 2000 to February 26, 2002)

Source: Table generated by Webtrends; Data from COT server

Technical Statistics and Analysis

This section identifies the total number of hits for the site and how many were successful and unsuccessful. The number of failed hits is around 7% for each issue because of a missing graphic image – missiongraphic.gif. The same image is copied in different directories; hence the number of hits is increased to a larger percent. Overall failed hits are 5.24% (See table 24).

Table 24: Technical Statistics and Analysis (January 20, 2000 to February 26, 2002)

Technical Statistics and Analysis					
	V1 issue #2	V1 issue #3	V1 issue #4	V2 issue #1	Overall
Total Hits	35399	54454	74349	26386	190339
Successful Hits	32589	50288	73296	24420	180352
Failed Hits	2810	4166	1053	1966	9987
Failed Hits as Percent	7.93%	7.65%	1.41%	7.45%	5.24%
Cached Hits	3517	7681	30915	2566	44947
Cached Hits as Percent	9.93%	14.1%	41.58%	9.72%	23.61%

Source: Table generated by Webtrends; Data from COT server

Page Not Found Errors

Page not found errors (404) is one of the most common error messages a user may get on requesting a specific page and the server not able to find it. On JTATM analysis of the page not found (404) errors, it is found that the missiongraphic.gif image is the only image that took many bad requests. Also, some of the referrers are in the WorkingSite of the journal (which will not be online and is set-up for designing process of the next issue).

Table 25: Page Not Found (404) Errors (January 20, 2000 to February 26, 2002)

Page Not Found (404) Errors		
Target URL and Referrer	**Hits**	**% of Total**
/jtatm/missiongraphic.gif *http://www.tx.ncsu.edu:8190/jtatm/*	**4252**	**42.76%**
/jtatm/Templates/missiongraphic.gif *(no referrer)*	**1517**	**15.25%**
/jtatm/missiongraphic.gif *http://www.tx.ncsu.edu/jtatm/*	**437**	**4.39%**
/jtatm/Working_Site/missiongraphic.gif *http://www.tx.ncsu.edu:8190/jtatm/Working_Site/*	**423**	**4.25%**
/jtatm/missiongraphic.gif *http://www.tx.ncsu.edu:8190/jtatm/index.html*	**348**	**3.5%**
/jtatm/volume1specialissue/missiongraphic.gif *http://www.tx.ncsu.edu:8190/jtatm/volume1specialissue/indexforspecissue.html*	**191**	**1.92%**
/jtatm/missiongraphic.gif *(no referrer)*	**153**	**1.53%**
/jtatm/missiongraphic.gif *http://www.tx.ncsu.edu/jtatm/index.html*	**126**	**1.26%**
/jtatm/Working_Site/missiongraphic.gif *http://www.tx.ncsu.edu:8190/jtatm/Working_Site/index.html*	**112**	**1.12%**
/jtatm/volume1issue1/current_abstracts.html *http://www.tx.ncsu.edu:8190/jtatm/volumelists.html*	**92**	**0.92%**
Total	**7651**	**76.95%**

Source: Table generated by Webtrends; Data from COT server

Most Downloaded File Types

The most downloaded file type is the graphic files with .gif and .jpg extensions. The .html pages also gets hits followed by PDF documents. The increase in the number of PDF documents may be due to the increased number of PDF documents linked in the announcements page of the fiber society link when compared to other issues where only articles have PDF documents.

Table 26: Most Downloaded File Types (January 20, 2000 to February 26, 2002)

Most downloaded File Types					
	File type	V1 issue #2	V1 issue #3	V1 issue #4	V2 issue #1
1	**gif**	7000	14066	11525	5113
2	**jpg**	6677	6879	11592	4321
3	**htm**	6423	6721	3051	2725
4	**pdf**	4187	7746	12588	8523
5	**html**	3817	6416	3578	1143

Source: Table generated by Webtrends; Data from COT server

The total kilobytes downloaded for each specific file type is shown in Figure 13. Portable Document format (PDF) has the most downloaded Kbytes as most of the articles are in PDF (See legend 2 in the Figure 13). The time period includes January 20, 2001 to February 26, 2002.

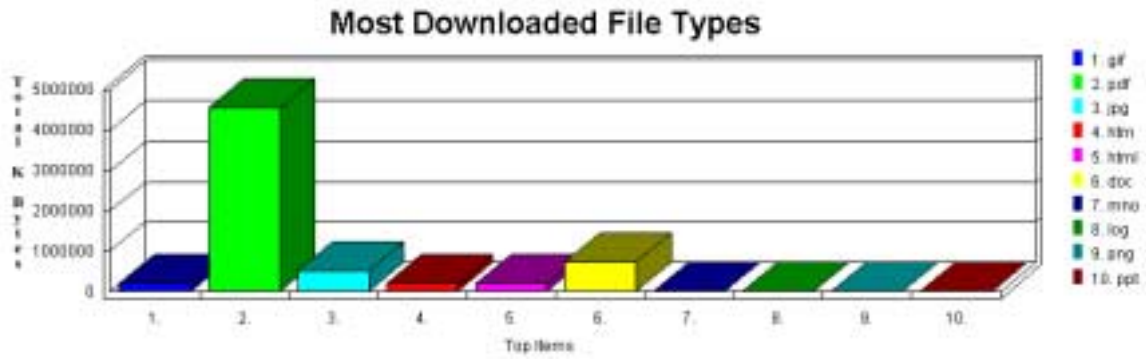

Figure 13: Most Downloaded File Type with Kbytes (January 20, 2000 to February 26, 2002)

Source: Table generated by Webtrends; Data from COT server

Organization Breakdown

Organization breakdown provides a breakdown by the type of organization (.com, .net, .edu, .org, .mil, and .gov). Table 26 shows that the educational sites have been the most visited to the e-journal. The .com visitors are also constant. One interesting thing that can be noted is that the user sessions for the .com visitors are more and the hits are less compared to the .edu visitors. This can conclude that research articles published are more specifically towards research oriented and hence more hits are done/ user session from a .edu visitor even though the number of user sessions is higher for the .com visitor.

Table 27: Organization Breakdown (January 20, 2000 to February 26, 2002)

Organization Breakdown								
	Organization	V1 issue #2	V1 issue #3	V1 issue #4	V2 issue #1	Overall Hits	% of Total Overall Hits	User Sessions for Overall
1	**Education**	50.04%	51%	65.26%	40.66%	48277	54.65%	2558

2	**Company**	36.74%	33.17%	18.44%	34.44%	25462	28.82%	4505
3	**Network**	10.5%	13.44%	11.85%	21.81%	11796	13.35%	1500
4	**Military**	1.19%	1.9%	3.58%	1.31%	1895	2.14%	124
5	**Organization**	1.5%	0.37%	0.68%	1.73%	811	0.91%	79
6	**Government**	-	0.1%	0.15%	0.01%	95	0.1%	15
	Total	**100%**	**100%**	**100%**	**100%**	**88336**	**100%**	**8781**

Note: percentage respective to that issue

Source: Table generated by Webtrends; Data from COT server

North American States and Provinces

This section shows which of the North American State and Province were the most active on the website. JTATM has the most visitors from the states of Virginia and North Carolina.

Table 28: North American States and Provinces (January 20, 2000 to February 26, 2002)

North American States & Provinces						
	State - (User Sessions)	**V1 issue #2**	**V1 issue #3**	**V1 issue #4**	**V2 issue #1**	**Overall**
1	**Virginia**	511	575	358	518	1921
2	**North Carolina**	537	466	387	121	1695
3	**California**	94	79	70	62	310
4	**Connecticut**	30	46	70	44	200
5	**New York**	-	-	44	9	71
6	**South Carolina**	20	17	19	11	68
7	**Texas**	10	22	21	-	60
8	**Alabama**	19	13	17	-	54
9	**Massachusetts**	-	19	18	-	50
10	**Michigan**	12	28	-	-	48

Source: Table generated by Webtrends; Data from COT server

Most Active Cities

Most active cities further breaks down the website activity to shows which city was the most active on the website. Table 29 shows that Reston and Raleigh are the most popular

cities that visit JTATM. Some of the reasons for Reston to be on the top is that AOL or Road runner which is one of the most active organization (See Table 20) may be located in Reston, Virginia. Also the reason for North Carolina to be one of the active city is that many textile mills are located in North Carolina and NCSU is in also in North Carolina. When analysis was done on the top users, it was noted that Road Runner of Time Warner had a hub in Reston, Virginia and hence the activity was too high in Virginia (Table 28) and Reston (Table 29). Hence many subscribers are visiting the journal through Road Runner.

Table 29: Activity by City (January 20, 2000 to February 26, 2002)

Activity by City		
	City, State	**User Sessions**
1	**Reston, Virginia, United States**	1829
2	**Raleigh, North Carolina, United States**	1618
3	**Stamford, Connecticut, United States**	193
4	**San Mateo, California, United States**	160
5	**Redwood City, California, United States**	68
6	**Fairfax, Virginia, United States**	57
7	**Auburn University, Alabama, United States**	50
8	**New York, New York, United States**	38
9	**East Lansing, Michigan, United States**	36
10	**Greensboro, North Carolina, United States**	25
	Total For the Cities Above	**4074**

Source: Table generated by Webtrends; Data from COT server

Bandwidth

The bandwidth gives an analysis of the total kilobytes transferred in a certain time period. The Kbytes downloaded on the first weeks is usually more than the subsequent weeks. This problem will be encountered until the e-journal is almost established on a long-run basis. Another way to eliminate this kind of trend is to put papers each month or

whenever the paper is reached from the author. Sending frequent press releases to the listserv should also be considered as privacy settings.

Table 30: Kbytes Transferred in Each Issue (January 20, 2000 to February 26, 2002)

Time Interval	KBytes Transferred			
	V1 issue #2	V1 issue #3	V1 issue #4	V2 issue #1 Overall
Week 1	274,978	704,312	209,574	317,077
Week 2	173,357	327,635	17,594	152,618
Week 3	46,228	640,013	56,297	127,113
Week 4	104,045	405,982	72,457	66,017
Week 5	54,188	200,250	134,657	60,641
Week 6	56,286	90,545	394,932	209,150
Week 7	50,422	112,237	315,588	169,450
Week 8	42,824	38,641	419,764	1,719
Week 9	53,958	0	74,906	0
Week 10	41,004	79,122	0	0
Week 11	216	91,426	0	0
Week 12	56,767	0	0	0
Week 13	73,335			
Week 14	19,081			

Source: Table generated by Webtrends; Data from COT server

Top Referring Sites

Top referring site are the websites which has links to the JTATM. Table 31 illustrates that the top referring sites for JTATM during the time period of January 20, 2001 to February 26, 2002. As the top referring site shows ‘no referrer’ in Table 31, it is assumed that most of the visitors to JTATM come after clicking the link to the current index page issue from the press release. The table also shows the number of user sessions who enter the journal from the search engine like Google and Yahoo.

Table 31: Top Referring Sites (January 20, 2000 to February 26, 2002)

Top Referring Sites		
	Site	User Sessions
1	No Referrer	10169
2	http://www.tx.ncsu.edu/	3316
3	http://www.google.com/	526
4	http://google.yahoo.com/	290
5	http://search.ncsu.edu/	162
6	[unknown origin]	67
7	http://webserv1.tx.ncsu.edu/	63
8	http://www.cgibin.ncsu.edu/	45
9	http://www.lib.ncsu.edu/	35
10	http://www.ita.rwth-aachen.de/	26
11	https://secure-imho.ncsu.edu/	25
12	[unknown+origin]	23
13	http://www.google.de/	19
14	http://search.msn.com/	17
15	www.paperonweb.com/	16
16	http://www2.ncsu.edu/	15
17	http://www.textiles.umist.ac.uk/	14
18	bookmarks	13
19	http://www.law9.hotmail.com/	13
20	http://www.google.co.uk/	11
	Sub Total for the Referring Sites Above	**14865**
	Total for the Log File	**15166**

Source: Table generated by Webtrends; Data from COT server

Top Referring URL's

The top referring URL's show the list of websites, which has a permanent link of the JTATM index page link. It can be noted that some links are from within the journal. This is for the time period of January 20, 2001 to February 26, 2001.

Table 32: Top Referring URL (January 20, 2000 to February 26, 2002)

Top Referring URLs		
	URL	User Sessions
1	No Referrer	10169
2	http://www.tx.ncsu.edu:8190/jtatm/	1362
3	http://www.tx.ncsu.edu/jtatm	383
4	http://www.tx.ncsu.edu/tam/aboutdept/reserach/research.htm	204
5	http://www.tx.ncsu.edu/jtatm/	179
6	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/thumbnail_bio.html	172
7	http://search.ncsu.edu/s97is.vts?action=View&VdkVgwKey=http://www.tx	159
8	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/issue2_abstracts.htm	95
9	http://www.tx.ncsu.edu/tam/indept/news/jtatm_press_release.htm	83
10	http://www.tx.ncsu.edu:8190/jtatm/volumelists.html	78
11	http://www.tx.ncsu.edu:8190/jtatm/volume1specialissue/specialissue_abstracts.htm	74
12	[unknown origin]	67
13	http://www.tx.ncsu.edu:8190/jtatm/announcements.html	50
14	http://www.cgibin.ncsu.edu/tx-bin/jtatmform.pl	45
15	http://www.tx.ncsu.edu:8190/jtatm/volume1issue3/issue3_abstracts.htm	38
16	http://www.tx.ncsu.edu:8190/jtatm/index.html	38
17	http://www.tx.ncsu.edu:8190/jtatm/Working_Site/	36
18	http://www.tx.ncsu.edu/jtatm/volume1issue%204/graduate_bio.html	33
19	http://www.tx.ncsu.edu/jtatm/volumelists.html	31
20	http://www.tx.ncsu.edu/verity/VSearchResult.cfm	31
	Sub Total for the Referrers Above	**13327**
	Total for the Log File	**15166**

Source: Table generated by Webtrends; Data from COT server

Top Search Keywords

Some of the top search keywords that led most of the visitors to the journal from a search engine are listed in Table 33. ‘electrospinning’ is found in the poster/ presentation abstracts in the Special issue that was launched on May 18, 2001.

Table 33: Top Search Keywords (January 20, 2000 to February 26, 2002)

Top Search Keywords			
	Keywords	Keywords found	% of Total
1	**electrospinning**	66	4.02%
2	**of**	54	3.29%
3	**textile**	38	2.31%
4	**apparel**	30	1.83%
5	**in**	29	1.77%
6	**fiber**	29	1.77%
7	**clothing**	27	1.64%
8	**jtatm**	25	1.52%
9	**journal**	22	1.34%
10	**nano**	22	1.34%
	Total Found for the Keywords Above	**342**	**20.87%**
	Total of Keywords Found in the Log File	**1638**	**100%**

Source: Table generated by Webtrends; Data from COT server

Browser Details

Browser details shows the different type of browsers that are used by the visitors. Table 34 show that most users use Internet Explorer 5.0 for viewing JTATM. Hence future designs issues will be targeted mainly to Internet Explorer 5.0. Internet Explorer 6.0 is growing slowly.

Table 34: Comparative Analysis of Browser Details

	Issue #1	Issue #2	Issue #3	Issue 4
Netscape Navigator 4	46.520%	40.4%	33.16%	23.76%
Internet Explorer 5	38.322%	46.63%	53.01%	63.19%
Internet Explorer 4	14.681%	8.7%	8.83%	5.57%
Netscape Navigator 3	0.477%	0.18%	0.11%	0.14%
unknown	0.572%	1.33%	3.77&	0.90%
Netscape Navigator 5	-	2.7%	0.39%	0.81%
Internet Explorer 6	-	-	0.73%	5.62%

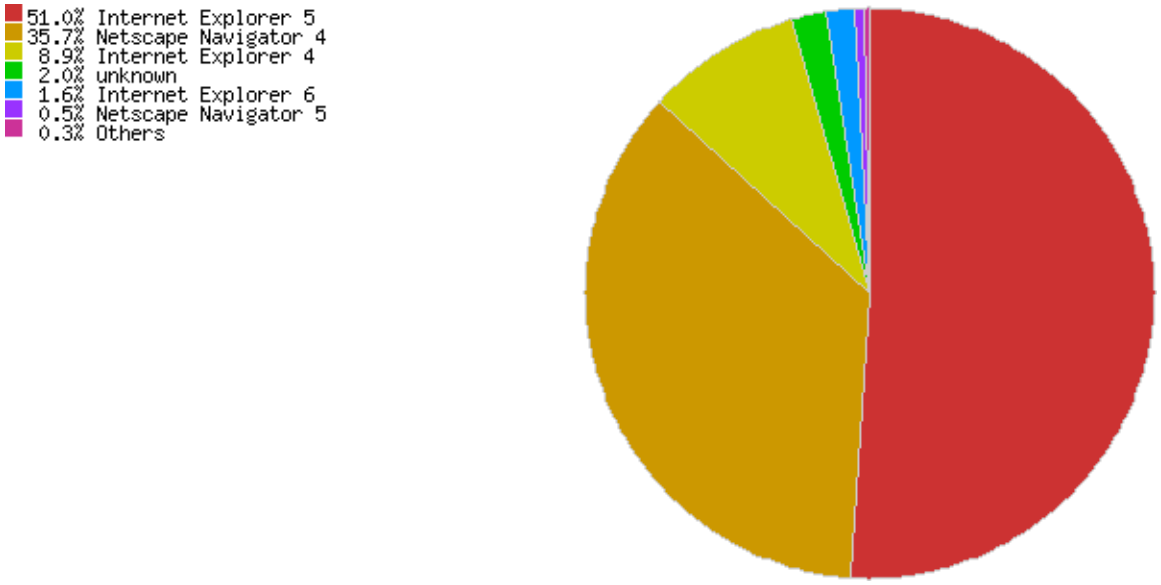

Figure 14: Popular Browser for JTATM (October 19, 2000 to October 28, 2001)

Source: www.sitestats.com

Figure 14 shows that Internet Explorer 5.0 was the most popular (51%) browser during the time frame. Netscape Navigator 4.0 (35.7%) is followed by Internet Explorer 4.0 (8.9%) and Internet Explorer 6.0 (1.6%).

Operating System

Table 35 shows that Windows 98 seems to the major player followed by Windows NT and by Windows 2000. Readers/visitors using Windows 95 is decreasing. There has been a constant visit from Macintosh and Unix users for the journal.

Table 35: Comparative Analysis of Operating System

Operating system	Issue #1	Issue #2	Issue #3	Issue #4
Windows NT	38.140%	34.350%	31.39%	27.98%
Windows 98	36.433%	36.669%	37.39%	44.92%
Windows 95	18.880%	16.840%	11.15%	8.03%

Macintosh	3.985%	4.881%	4.32%	3.78%
Windows 2000	1.708%	5.491%	11.66%	13.55%
Unix (or Linux)	0.569%	0.610%	0.34%	0.77%
Windows 16 bit	0.285%	0.061%	0.00%	0.00%
Unknown		1.098%	3.76%	0.97%

Figure 15 shows that Windows 98 is the most popular (38.5%) operating system during October 19, 2000 to October 28, 2001. Windows NT (30.5%) is followed by Windows 95 (12.9%) and Windows 2000 (10.9%).

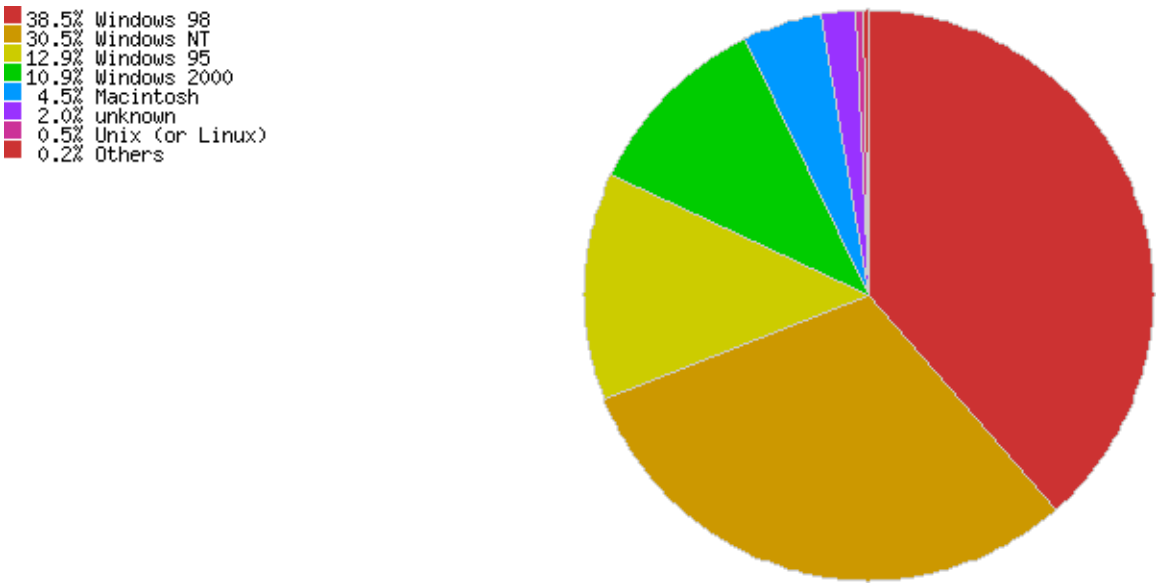

Figure 15: Operating System used by JTATM Readers (October 19, 2000 to October 28, 2001)

Source: www.sitestats.com

Monitor Settings

Color quality: Table 36 shows that 16 bits color quality is the most popular color quality followed by 32 bits by JTATM visitors.

Table 36: Comparative Analysis of Monitor Settings

Monitor settings	Issue #1	Issue #2	Issue #3	Issue #4
16 bits (good color quality)	49.198%	38.390%	44.32%	45.31%
32 bits (very high color quality)	40.749%	40.000%	36.83%	37.49%
24 bits (high color quality)	8.984%	11.827%	7.95%	9.99%
8 bits (low color quality)	0.321%	5.882%	5.59%	4.53%
unknown	0.749%	3.901%	5.30%	2.67%

Figure 16 shows that 16 bits color quality was the color quality that was viewed by most (41.8%) visitors/readers of JTATM, followed by 32 bits (37.5%) and 24 bits (9.4%) during the time period of October 19, 2000 to October 28, 2001.

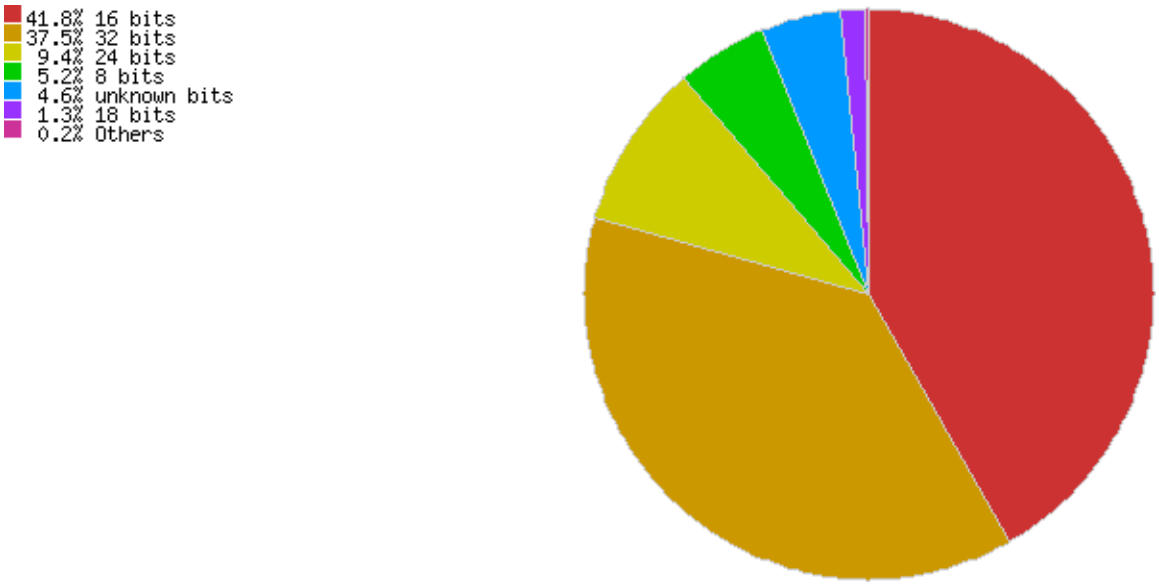

Figure 16: Color Quality of JTATM Users (October 19, 2000 to October 28, 2001)

Source: www.sitestats.com

Monitor Resolution: Table 37 shows that 1024x768 as the popular resolution to view JTATM by the readers/ visitors.

Table 37: Comparative Analysis of Monitor Resolution

Monitor resoultion	Issue #1	Issue #2	Issue #3	Issue #4
1024x768	50.154%	43.523%	47.72%	46.94%
800x600	41.607%	45.565%	37.08%	42.58%
1152x864	1.957%	1.213%	2.28%	3.39%
1280x1024	1.751%	1.340%	1.99%	1.24%
640x480	4.325%	3.638%	3.45%	2.86%
unknown	0.206%	3.893%	6.43%	2.80%
832x624		0.830%	1.05%	0.20%

Figure 17 shows that visitors/readers of JTATM had the most popular monitor resolution as 1024x768 (43.9%) followed by 800x600 (39.4%) during the time period of October 19, 2000 to October 28, 2001.

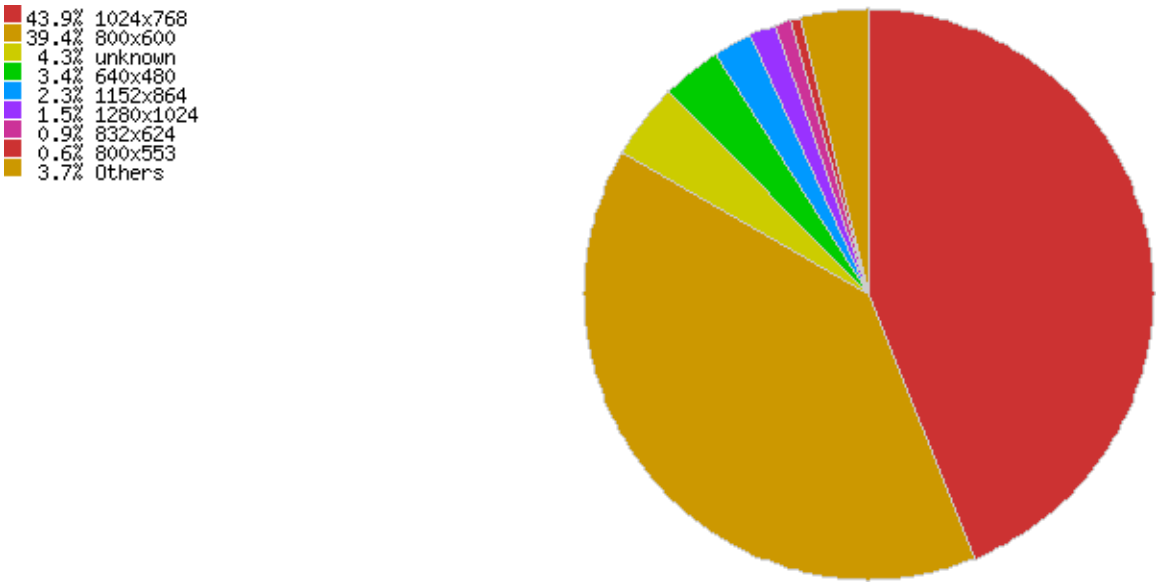

Figure 17: Monitor Resolution of JTATM Users (October 19, 2000 to October 28, 2001)

Source: www.sitestats.com

2 c) JTATM to Roger's (1995) Persuasion Stage

Characteristics	JTATM	Proposal Plan	Results
Relative Advantage	JTATM vs Traditional print Cost of publishing	Cost analysis is planned	Usually e-journals has a cost savings of 28-45%
	Time	Comparative analysis	Time is reduced from 2-4 years in traditional publishing to 1-12 months (See Appendix G)
	Cost of subscription	Complementary subscription	Complementary subscription
	Search capability	Database is being setup	Robust database is being set-up
Compatibility	With society	Analyzing the number of subscription increases	Subscription increased over time
	With browsers	Analyze the browser data	More visitors from IE, JTATM designed with IE as the main browser
	With computer use	Analyzing the operating system, monitor settings	Windows operating system is used most
Complexity	Access to articles	Analyzing the dead links (limitations are there)	Page not found (404) errors are corrected (See Table 25)
	Reading habits	Discuss with JTATM editors (has anyone asked for a paper JTATM)	Print permission is given to the articles
	Technology	Analyze data Discuss with JTATM editors	
	Network	Analyze data Discuss with JTATM editors	Download time has been tracked
	Trade/ Scholarly journals		

Trialability	Registration	Get e-mail for un-subscription	Registration is complementary
Observability	Web metrics	Issue analysis	Web metrics provides analysis by issue and overall analyses
	Article preference	Hits on the PDF files should be tracked	Most downloaded article for each month is tracked

Relative Advantage:

Cost:

Research studies (Jog, 1995) shows that the cost of implementing an electronic journal will be 28 to 45 percent cost saving than the counter-part of paper-journal. For a brand-new e-journal, potential cost savings will be 28-45%, in comparison to print journals (See Appendix G).

Time:

Time is difficult to measure as a concrete value, but the time difference will be much reduced in the electronic environment. Time taken for an article from the author to publish in a traditional process is 2 - 4 years when compared to 1 month to 12 months on an electronic journal depending on the nature of journal.

Subscription cost:

JTATM is a complementary subscription; hence it falls under relative advantage

Search capability:

The search page is being created for JTATM. The electronic journal can be searched at any time of the hour through out the world. There is no time limitation such as library open hours. Figure 12 shows that JTATM gets hits through out the day, so it is easily accessible from anywhere of the world.

Compatibility:

Society:

Table 13 shows the increase in the number of hits for the first three issues of the journal. Table 27 shows the visits from diverse (.edu, .com, .net and .org) domains to JTATM, which shows that it has been accepted by the society.

Browser:

The JTATM is compatible with the major browsers, namely Internet Explorer and Netscape Navigator. Since most visitors use Internet Explorer 5.0 (See Figure 14) to view the journal, the journal is compatible with the existing standards.

Computer usage:

The JTATM is designed with 1024x768 monitor resolution and the results (See Figure 16) show that most users use this resolution to view the journal.

Complexity

Network

The download time for an article may be more on a 36/56k modem in some parts of the world where cable modem is not available.

Dead links

There have been 7.45% failed hits during the time period of December 17, 2001 to February 15, 2002 (Refer Appendix F - Successful and failed hits).

Technology

Use of latest technology is used to access files (FTP, PDF files).

Reading habits

Topics of future articles can be selected based on readership behavior.

Trialability:

Registration: One can subscribe and unsubscribe from JTATM anytime.

Observability:

Web metrics track the growth of JTATM (hits, referring sites, search engine).

Article preference: PDF file downloads (most popular article) are tracked and the author can get an idea of the number of hits.

Research Objective 3

Establish the feedback loop to the process for future design and development of the e-journal

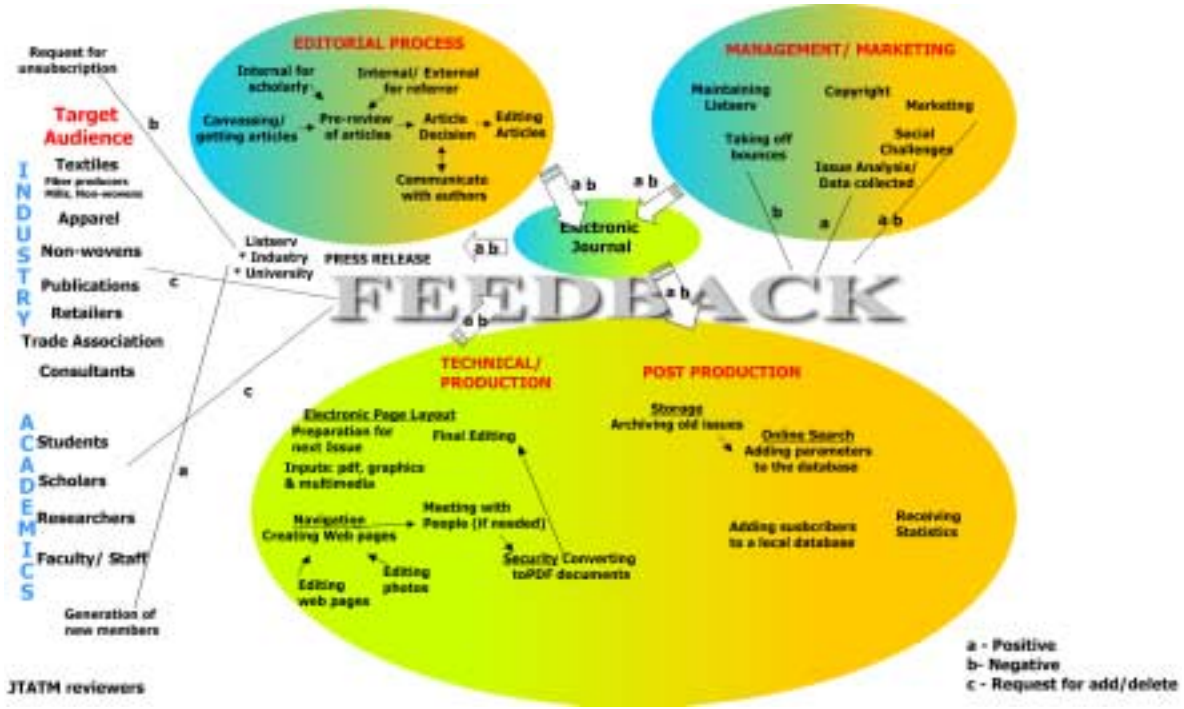

Figure 18: Feedback Loop of JTATM

Figure 20 gives the details of the feedback loop. There are three types of responses: positive (a), negative (b) and request for add/delete (c). Usually the feedback from the target audience will be of type (c) and (a). Positive/ negative feedback (a/b) is also being established in the loop. There are transactions through-out the year between the technical and managerial components.

Chapter V

Summary, Conclusions, Implications, And Recommendations

Summary

The purpose of this study was to report how an electronic journal can be established and implemented in the textile and apparel field. This study considers an electronic journal, Journal of Textile & Apparel Technology & Management, as an innovation in the textile and apparel field, and examines the electronic media as a way of disseminating information to scholarly and industrial communities in a better way. The study documented the process of establishing the electronic journal, JTATM, and analyzing the behavior of readers/visitors, comparing analysis of every issue, and using Rogers (1995) Persuasion stage to relate the results for considering this process an innovation. The Rogers Model of the Innovation Diffusion Process (Rogers, 1995) was the conceptual framework for this study. Understanding the previous business model of disseminating information, which is mainly traditional publishing, provides an insight to the benefits of electronic dissemination.

A case study approach was used for this study, which includes the documentation of the process to establish an electronic journal, as well as, a descriptive analysis of reader behavior of the journal. The models for establishing the e-journal were the results of discussions with the JTATM editors and NCSU College of Textiles staff. Data were collected from www.sitestats.com, a UK based company, on a weekly basis from October 19, 2000 to October 28, 2001, and then log files are retrieved from College of Textiles web server from January 20, 2001 to February 26, 2002. Data were generated analyzing the log files and it was analyzed for each issue and reader/visitor behavior was studied and documented. After

the each issue, the data were compared with the previous issues and studied. Analysis was done for the following parameters: unique visits, repetitive visits, hits (page impressions), geographic location of the readers/visitors, entry page, exit page, referring sites, referring phrase, domain name, browser details, operating system and monitor settings including color quality and monitor resolution.

After new personnel were hired to manage the COT servers, the committee elected to move the JTATM site to the COT server. This move provided an opportunity to gain more robust data from the site. Thus data were collected from College of Textiles webserver after September 2001 and improved analysis was done from that point onwards. In addition to the data obtained from sitestats, the new data analysis consisted of the most read article, authenticated user details, activity by day, hour, and week, successful/ unsuccessful hits, downloaded file types, organization breakdown and most active states in USA and cities.

Roger's (1995) persuasion stage was related to the thesis as this e-journal, JTATM, is considered as an innovation in the textile & apparel industry. The five characteristics, namely, relative advantage, compatibility, complexity, trialability and observability were verified with the results of the journal to ensure that the e-journal is in the diffusion process.

Conclusion

There are six conclusions from this study.

1. The process of establishing the journal is documented with the technical and management components. Both components are necessary for the establishment and successful launch of an electronic journal.

2. The diffusion of Internet into the society has helped in the success of the electronic dissemination of research material. Rogers model of innovation decision process is an effective framework to explore electronic journals in textile and apparel.
3. Analysis of readers/ visitors provide results that assist the editors to improve the journal. The results have indicated that
    - Most visitors visit JTATM from the press release and enter through the index page
    - The international visitors have increased overtime
    - Readership is highest immediately following a launch and then decline
    - Download articles indicate the target audiences have an interest in both technology and management aspects.
4. Analyses using Rogers persuasion stage found that JTATM has:
    - relative advantage with time, cost and search ability.
    - Compatible with the society, browser and computer usage
    - Complex issues like Networking, reading habits are still existing
    - A user can try using this innovation on a trial basis by trying a subscription
    - It is observed that the journal is growing with the help of analysis.
5. The feedback loop has been established, incorporating technical and management/marketing components. This feedback loop will play a major role in continued improvement of the journal.

Recommendations

1. Web analyses should be conducted with the extended log files to further track the specific audience – The visit of a search engine spider should be distinguishable from a visitor/reader. Also the visit from industry personnel and academic personnel can be tracked separately. Mapping the average time of a user session to the top users should be examined.
2. Expansion of research questions regarding innovation and adoption can provide information about how pervasive electronic journals are in textiles and apparel.
3. Making registration compulsory to track the foot-prints of each visitor in the journal through each page and serve the readers more efficiently- tracking which kind of visitor has more interest in research articles/ industrial articles.
4. Adding more technical features like forwarding the articles (either specific/ all) through e-mail. Making the subscription/ un-subscription process automatic.
5. Tracking the researchers from the search page using the search words they use and increasing the Customer Relationship Management in a better way – and add more research topics based on the results.

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Appendix A - Model Depiction Illustration of Research Objective #1a and #1b

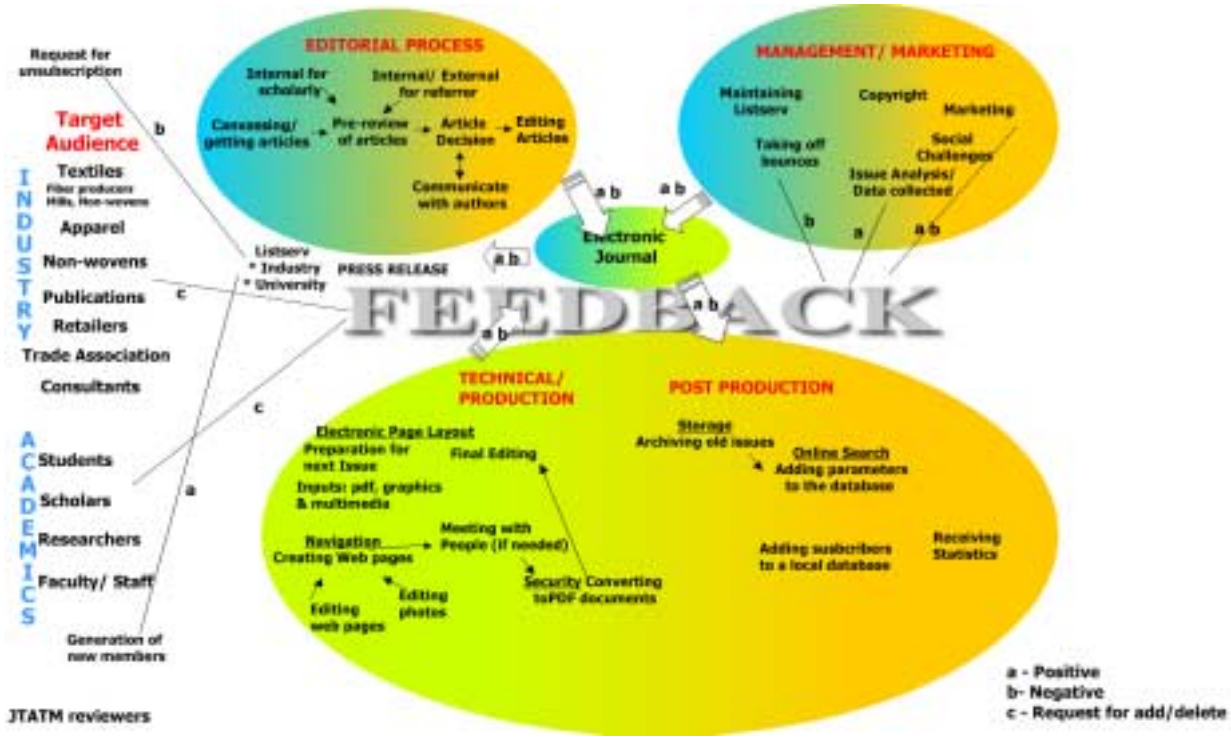


Figure A -1: Model Depiction of Research Objective #1a and #b

Appendix B – Issue Analysis Volume #1, Issue #1

Summary Analysis of

Journal of Textile & Apparel Technology & Management - Issue #1

(http://www.tx.ncsu.edu/jtatm)

(October 19, 2000 – February 4, 2001)

TABLE OF CONTENTS

Introduction

Journal of Textile & Apparel Technology & Management (JTATM) (http://www.tx.ncsu.edu/jtatm) is a quarterly electronic journal published by the Department of Textile & Apparel, Technology & Management of College of Textiles, North Carolina State University. The first issue was launched on October 19, 2000. This report is prepared by analyzing the data from October 19, 2000 to February 4, 2001. Data regarding each issue is sent in an Excel file from www.sitestats.com.

Visit Profile

The number of unique visits, repetitive visits and the total number of hits are analyzed in this section.

Unique Visits

Unique visits is defined as the count of individual visitors who visited JTATM per week. This is tracked by the IP address on the visitors' computer (See Figure B-1). The number of "unique visits" for the first week (October 19, 2000 – October 22, 2000) of JTATM issue #1 was 291. In week 2, the number of unique visits was 124 (57% decline from week 1). Decline continued in weeks 3 and 4. (Week 3: n=55; week 4: n=23) However, an increase in unique visits began in week 5 (n = 34), week 6 (n = 58) and week 7 (n = 62). This increase in the unique visitors could be attributed to TATM faculty members' attendance at conferences (ITAA, conference in India). Unique visitors declined in week 8 (n = 27), week 9 (n = 15) and week 10 (n = 8). There was an increase in the month of January 2001: weeks 11 and 12 (n = 21 unique visits each; week 13 (n = 34); week 14 (n=38) and week 15 (n=32).

Repetitive Visits

A repetitive visit is defined as the total number of all the visits (first time and repetitive visitors) who visited JTATM per week (see Table B-1). The pattern for "repetitive visits" paralleled the pattern of "unique visits". Week 1 had the highest number of visits for issue #1 (n= 344) and declined for the next three weeks (week 2: n = 149; week 3: n = 66; week 4: n=31). Visits increased in weeks 5-7 (possibly due to TATM faculty members conference attendance) and then declined in weeks 8-10 (possibly due to end of semester, Christmas holidays). During the last 5 weeks, there was an increase in the visits, potentially due to the beginning of the year 2001 and beginning of the semester.

Hits (page impressions)

Hits are defined as the total number of hits (for all the pages) that were made for the entire week. This pattern was similar to the "unique visits" and "repetitive visits"; the total number of hits per week was higher than unique visits and repetitive visits, as it counts all the page hits (page accessed) by the visitor (See Figure B-2). The first week recorded 950 hits and then declined to 59 hits in week 4; an increase occurred in week 5 (which is possibly due

to TATM faculty conference attendance) followed by decline in weeks 8-10 (likely due to the end of the semester and Christmas holidays). An increase occurred in the last five weeks (week 11-15); in the last week, JTATM volume #1, issue#1 registered 215 hits.

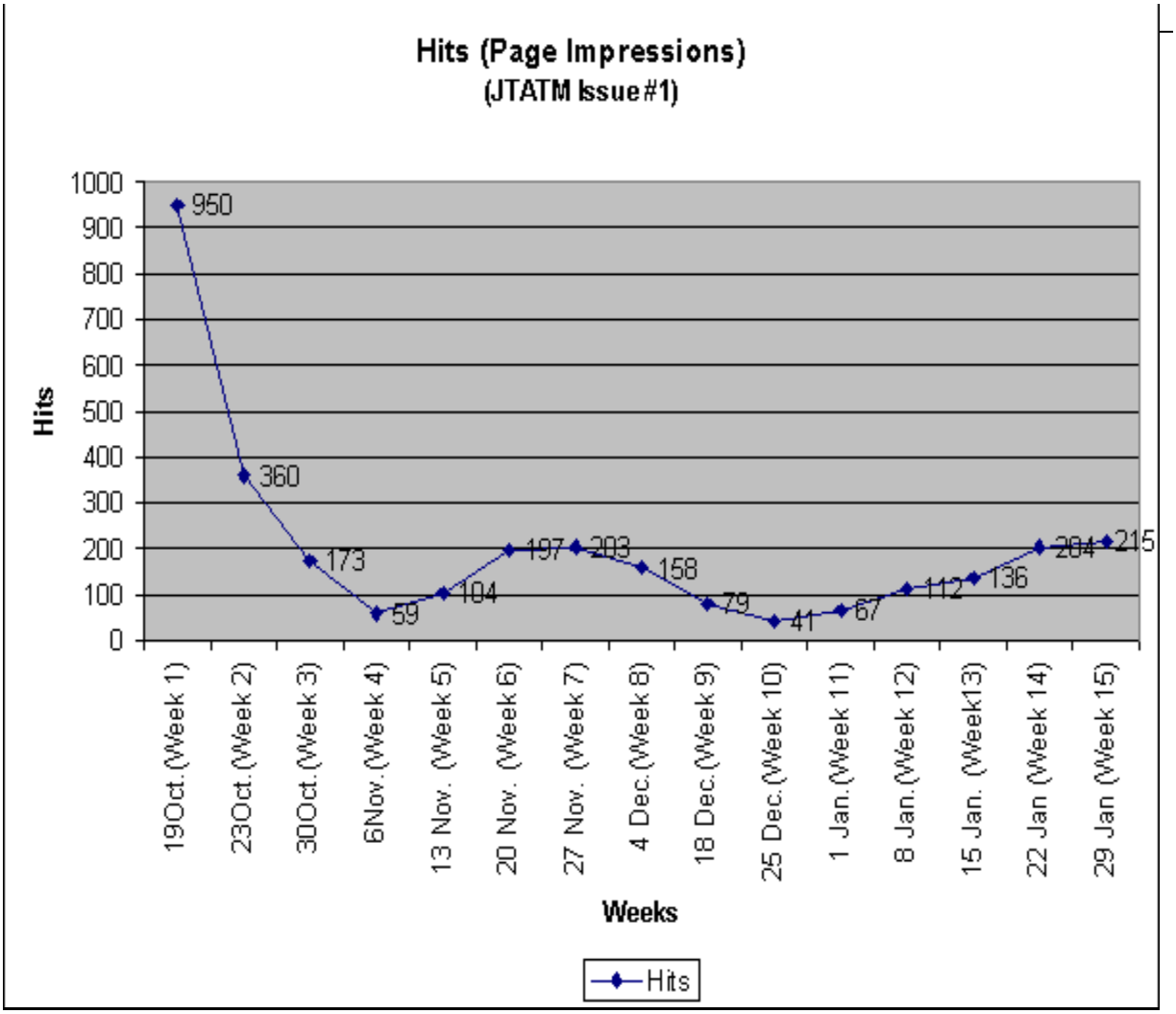


Figure B –1: Visit Profile for Volume#1, Issue #1

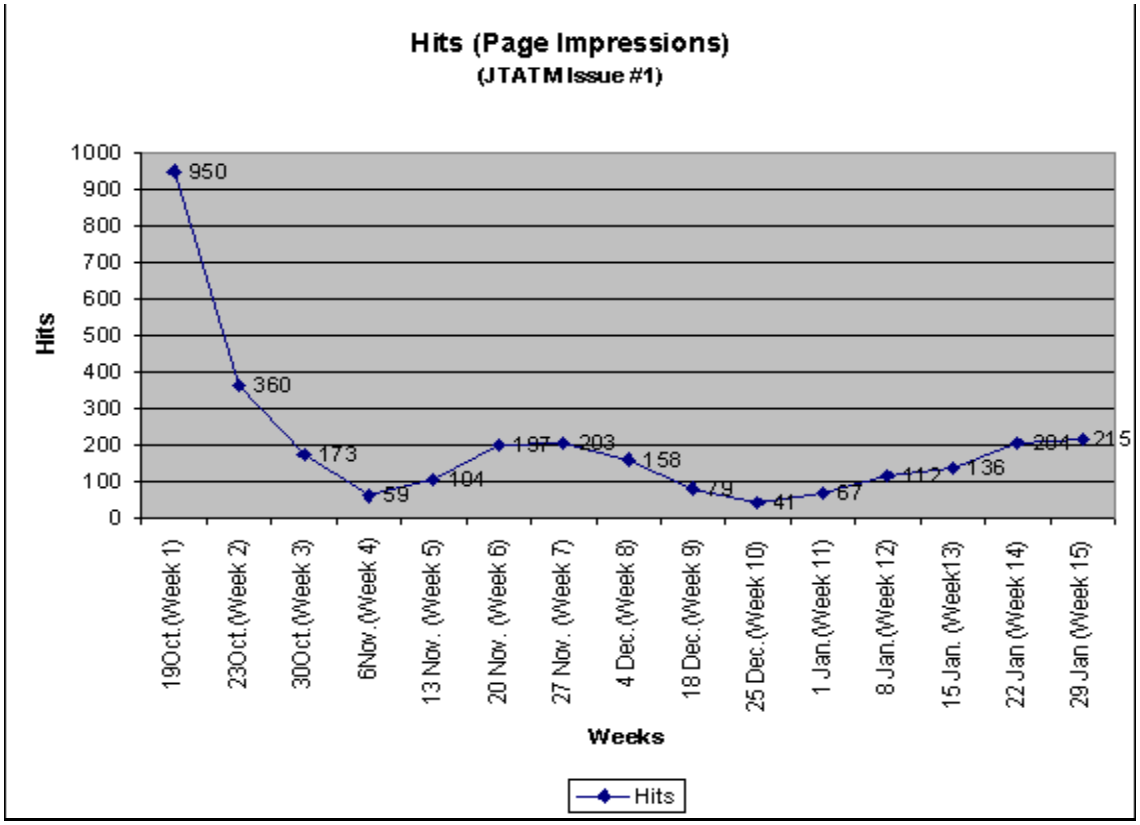


Figure B-2: Hit profile for Volume #1, Issue #1

Hit Profile

When considering the number of hits per page, the 'index' page – opening page - ranks the top (39.5%) followed by the 'volume lists' (18.3%) and the 'current abstracts' (18.9%) pages (See Table 3). There has been a constant visit to the 'subscription' (9.3%) and 'announcement' page (5.3%). The 'author guidelines' (3.9%) and 'editorial board' page were also accessed regularly (4.8%).

The 'index' page of the journal has the most number of hits when compared to other pages, and every week the index page hits were almost double the hits of the other pages (Figure B- 3). A total of 349 index page hits was recorded for the first week, following a decline through the weeks 2 to week 4 and increase in weeks 5, 6, and 7 and decreasing for 3 weeks and increasing till the 15 week. Figure B-5 shows a similar graphical pattern for other pages.

Table B-1 illustrates the page visit details other than the 'index' page. Pattern for other JTATM Issue #1 pages was similar to index page. There was a minimum subscription during the 4th week (n=4) and the 10th week (n=2).

Table B-1: Data for the page hits for Volume #1, issue #1

	1 week	2 week	3 week	4 week	5 week	6 week	7 week	8 week	9 week	10 week	11 week	12 week	13 week	14 week	15 week
	19 Oct.	23 Oct.	30 Oct.	6 Nov.	13 Nov.	20 Nov.	27 Nov.	4 Dec.	18 Dec.	25 Dec.	1 Jan.	8 Jan.	15 Jan.	22 Jan.	29 Jan.
index	349	158	58	23	38	73	78	30	25	13	21	37	62	64	69
volumelists	161	51	25	13	24	40	36	15	18	6	12	20	25	39	23
current_abstracts	160	54	43	8	19	41	40	16	12	9	17	22	25	36	22
subscription	91	35	11	4	7	25	22	6	13	2	4	6	8	12	13
announcements	53	20	9	3	6	8	8	4	2	5	4	6	5	3	11
editorial_board	53	21	8	1	2	5	4	2	-		2	5	1	26	3
author_guidelines	48	13	9	3	4	2	6	3	-	3	2	7	-	3	5

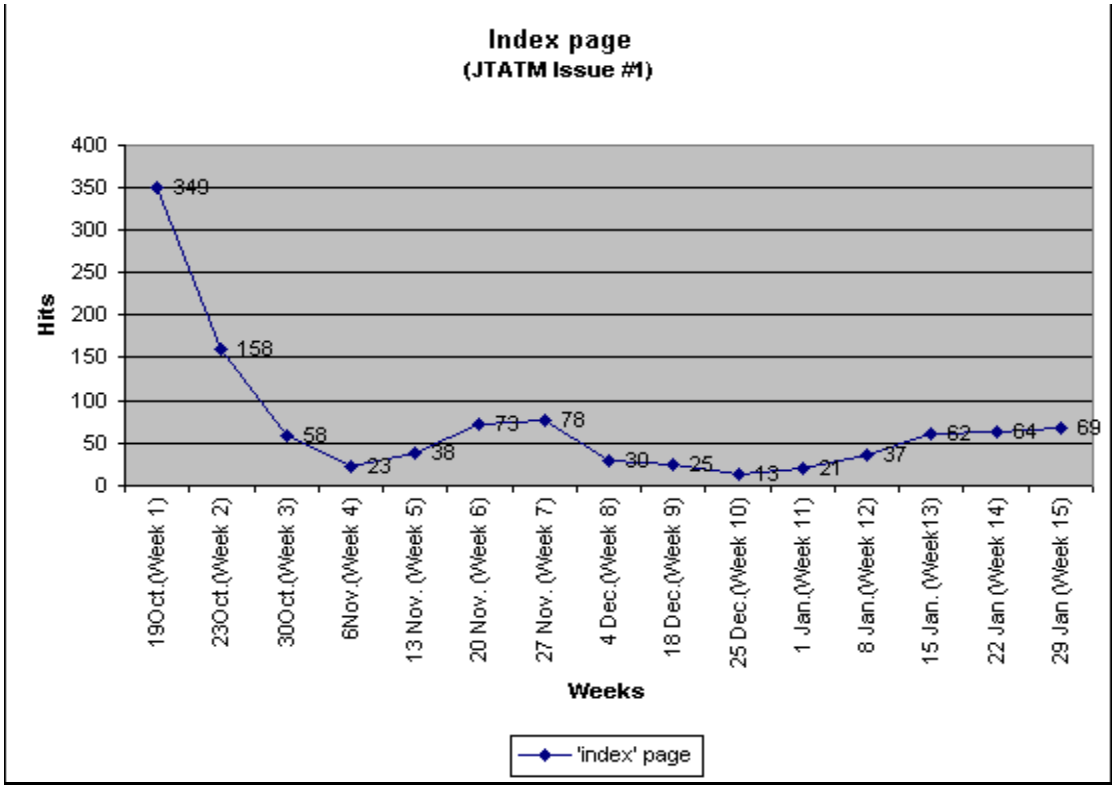


Figure B-3: Index page for Volume #1, Issue #1

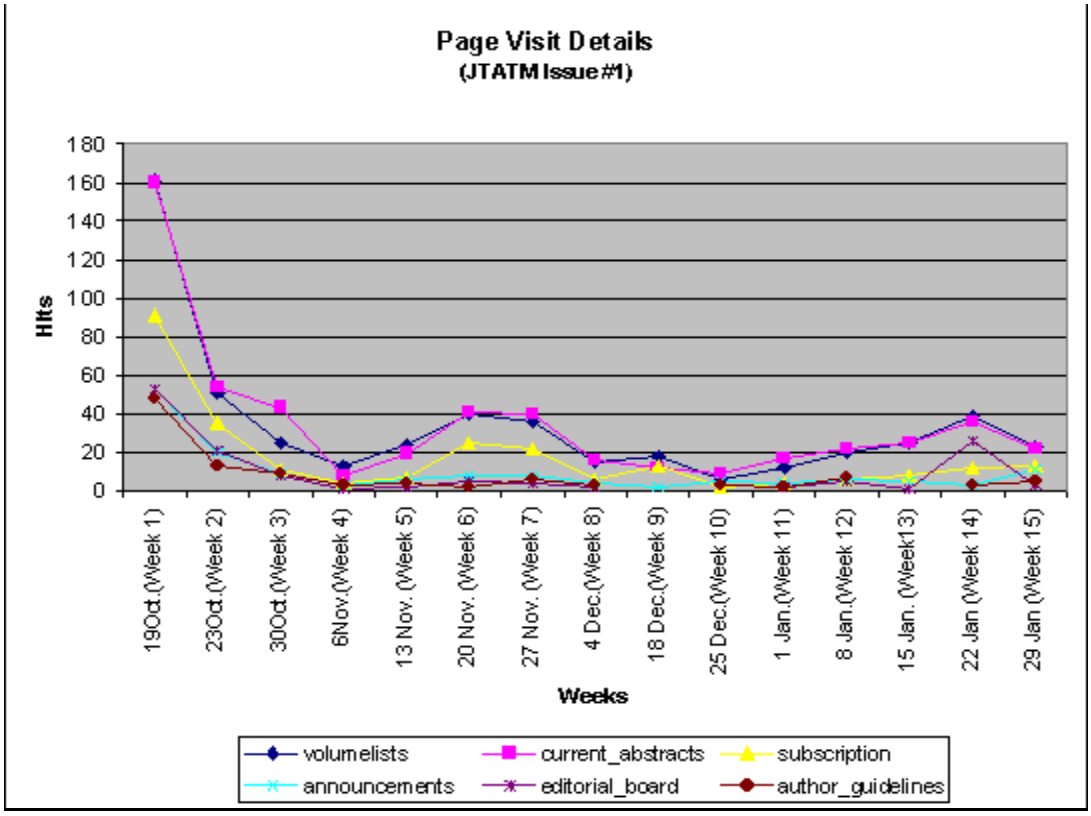


Figure B- 5: Page visit details for Volume #1, Issue #1

Country Profile

Respondents from 32 countries have visited the journal, "unknown" includes unidentifiable countries by www.sitestats.com. Responses from United States top the list, followed by United Kingdom, Germany, France and Italy (Figure B-5). See Table B-2 for a list of all the countries.

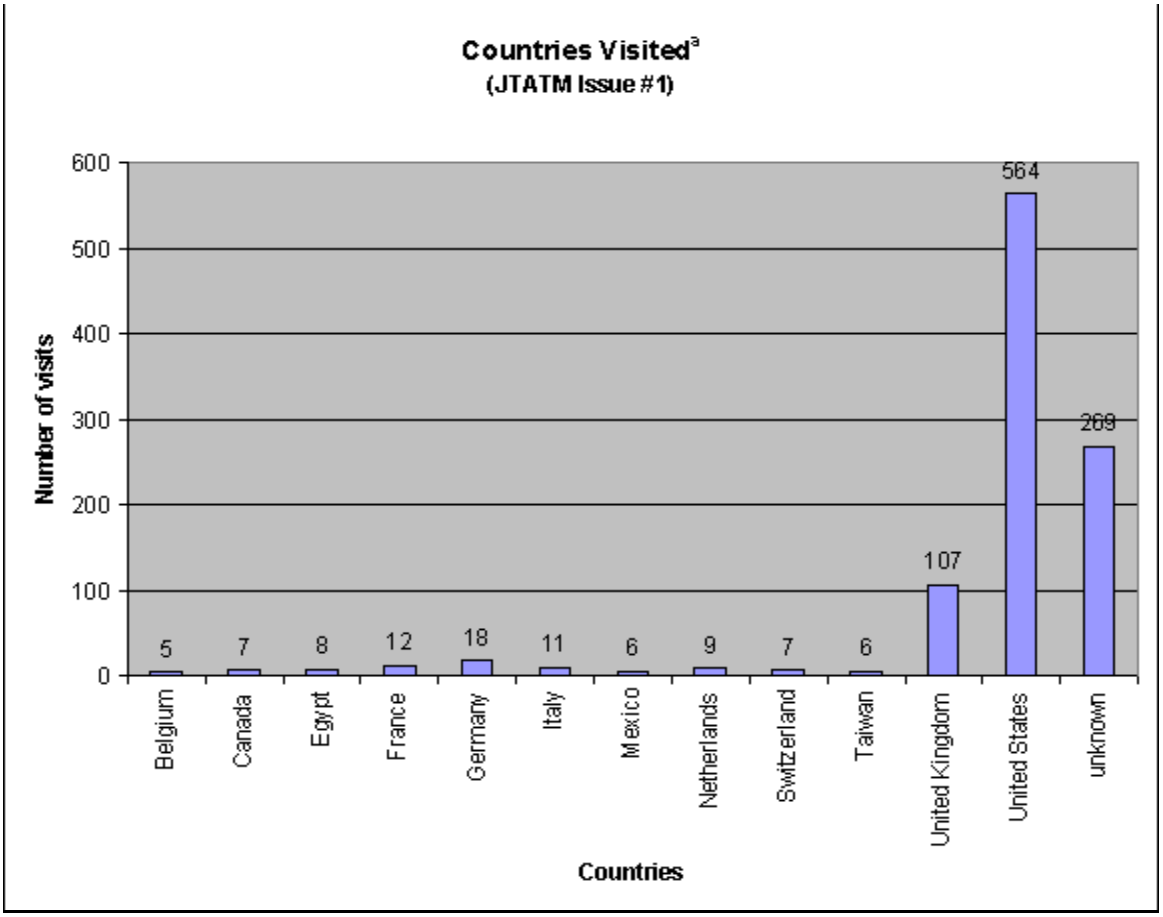


Figure B-5: Countries visited for Volume #1, Issue #1

[a] Countries who have visited 5+ times in JTATM Issue #1

Table B-2: Country Profile for Volume #1, Issue #1

Countries	Number of visits	Percentage visits
Argentina	1	0.094%
Australia	4	0.376%
Austria	2	0.188%
Belgium	5	0.469%
Brazil	2	0.188%
Canada	7	0.657%
Colombia	1	0.094%
Czech Republic	2	0.188%
Egypt	8	0.751%
France	12	1.127%
Germany	18	1.690%
Greece	3	0.282%
India	1	0.094%
Ireland	1	0.094%
Italy	11	1.033%
Malaysia	1	0.094%
Mexico	6	0.563%
Netherlands	9	0.845%
New Zealand	1	0.094%
Poland	1	0.094%
Portugal	2	0.188%
Romania	4	0.376%
Russian Federation	3	0.282%
Slovenia	1	0.094%
South Africa	1	0.094%
Spain	1	0.094%
Sweden	1	0.094%
Switzerland	7	0.657%
Taiwan	6	0.563%
Thailand	2	0.188%
Turkey	1	0.094%
United Kingdom	107	10.047%
United States	564	52.958%
unknown	269	25.258%
Total	1065	100.000%

Access profile

Entry pages

The entry page for the majority of the visitors was through the index page (79.4%) followed by the current abstracts (6.5%) and volumelists (5.9%).

Exit pages

For most of the users the exit page was the index page (47.5%) followed by the current abstracts page (22.8%), subscription page (9.8%) and volumelists (8.7%) respectively.

Referrer Profile

Referring Sites

The main referring sites (sites that referred respondent to the journal) are www.tx.ncsu.edu (7.1%), www.google.com (1.4%), www.msu.edu (1.3%), www.yahoo.google.com (0.64%) and courses.telr.ohio-state.edu (0.53%). Table B-3 shows the top referring sites.

Table B-3: Referring sites for Volume #1, Issue #1

Referring sites	Hits	Percentage
none	818	87.957%[a]
www.tx.ncsu.edu	67	7.204%
www.google.com	14	1.505%
google.yahoo.com	6	0.645%
www.msu.edu	12	1.290%[b]
courses.telr.ohio-state.edu	5	0.538%
catalog.lib.ncsu.edu	2	0.215%
webmail.utk.edu	2	0.215%
rediffmail.com	1	0.108%
search.ncsu.edu	1	0.108%
www.alltheweb.com	1	0.108%
www.itaasite.org	1	0.108%
Total	930	100.000%

[a] It is speculated that 88.78% ('none') are accessing via press release. Inserting web bugs in the e-mail, which track the hits from the press release. Will confirm this in future JTATM issues.

[b] The following website has a permanent link to JTATM

Referring Phrase

Phrases used in search engines to locate JTATM issue #1 were:

- nc state university
- t. ghosh north carolina state university
- computational fabrics
- \3d body scanning\
- design areas textile fashion apparel
- stock habit model
- 3d body scanning
- jtatm

Visitor Profile

Domain Name

Domain names of the server are listed in Table B-4.

Table B-4: Domain names for Volume #1, Issue #1

16 Oct 2000 to 22 Oct 2000		23 Oct 2000 to 29 Oct 2000	
Visits	Host (organisation)	42	unknown
82	unknown	29	tx.ncsu.edu
74	tx.ncsu.edu	4	proxy.aol.com
15	dhcp.ttu.edu	4	tnt6.dial.tor2.uunet.ca
7	mcbone.net	4	ifm-paris.org
6	unity.ncsu.edu	4	tex.tuiasi.ro
5	sdc.org.uk	3	mcc.wwwcache.ja.net
5	leeds.ac.uk	3	charterpa.net
5	proxy.aol.com	3	com
4	cottoninc.com	3	music.olemiss.edu
4	taunton.com	2	triad.rr.com
4	pg.com	2	russellcorp.com
4	mcc.wwwcache.ja.net	2	hec.ohio-state.edu
4	te.eng.auburn.edu	2	unity.ncsu.edu
		2	telemar.it

30 Oct 2000 to 5 Nov 2000 51 unknown 3 www.tx.ncsu.edu/tam/aboutdept/reserach/research.htm 2 www.tx.ncsu.edu/tam/indept/news/jtatm_press_release.htm 2 www.msu.edu/course/hed/431/linkjournals.html	6 Nov 2000 to 12 Nov 2000 10 tx.ncsu.edu 9 proxy.aol.com 3 unknown 2 univ-mulhouse.fr
13 Nov 2000 to 19 Nov 2000 10 tx.ncsu.edu 9 unknown 3 future.com.eg 2 tme.rosnet.ru 2 tnt1.baltimore.md.da.uu.net 2 cottoninc.com 2 rh.ncsu.edu	20 Nov 2000 to 26 Nov 2000 28 unknown 7 prvo.splitrock.net 6 tx.ncsu.edu 4 yazbek.com.mx 4 perigee.net 3 i2.com 2 carolina.net
27 Nov 2000 to 3 Dec 2000 21 unknown 16 tx.ncsu.edu 7 btinternet.com 4 rug.ac.be 3 proxy.aol.com 3 bayerclothing.com 2 dmu.ac.uk 2 saralee.net 2 cache.pol.co.uk	4 Dec 2000 to 10 Dec 2000 23 tx.ncsu.edu 11 unknown 4 dialinx.net
18 Dec 2000 to 24 Dec 2000 12 unknown 4 triad.rr.com 1 te.eng.auburn.edu 1 mts.net	25 Dec 2000 to 31 Dec 2000 4 unknown 1 triad.rr.com 1 unity.ncsu.edu 1 btitelecom.net 1 sulzer.ch
1 Jan 2001 to 7 Jan 2001 7 unknown 4 tx.ncsu.edu 3 proxy.aol.com 2 loc.gov	8 Jan 2001 to 14 Jan 2001 6 unknown 4 tx.ncsu.edu 3 proxy.aol.com 2 tnt26.chi5.da.uu.net 2 cl-tex.umanitoba.ca
15 Jan 2001 to 21 Jan 2001 11 tx.ncsu.edu 8 lib.ncsu.edu 7 unknown 2 kscable.com 2 proxy.aol.com	22 Jan 2001 to 28 Jan 2001 21 tx.ncsu.edu 10 unknown 2 hec.ohio-state.edu 2 unity.ncsu.edu 2 saralee.net 2 cygnuspub.com
29 Jan 2001 to 4 Feb 2001 22 tx.ncsu.edu 12 unknown	

8wib.hva.nl 2columbus.rr.com 1homenet.ohio-state.edu 1sysplan.com 1textilemuseum.org 1wave-net.net 1sdc.org.uk 1seed.net.tw 1kscable.com	

Browser Details

Most of the visitors were using Netscape Navigator 4 (46.5%) followed by Internet Explorer 5 (38.3%) and small portion were using Internet Explorer 4 (14.7%) and Netscape Navigator 3 (0.47%) and unknown (0.57%).

Operating System

Windows NT (38.1%) and Windows 98 (36.4%) were the most commonly used operating systems to view JTATM, followed by Windows 95 (18.8%). A small percentage were using Macintosh (3.9%), Windows 2000 (1.7%), Unix (or Linux) (0.57%)and Windows 16 bit (0.28%).

Monitor Settings

Color Quality

Most of the visitors had the monitor set to 16 bits (good color quality; 49.2%) followed by 32 bits (very high color quality; 40.7%), 24 bits (high color quality; 8.9%), 8 bits (low color quality; 0.3%) and unknown (0.75%).

Monitor Resolution

A large amount of visitors had the monitor resolution at 1024x768 (50.1%) followed by 800x600 (41.6%), 640x480 (4.3%), 1152x864 (1.96%), 1280x1024 (1.75%), 1152x864 (1.9%) and unknown (0.2%).

Listserv profile

We have two listservs for JTATM:

Industry Listserv : 3007 members
University Listserv : 726 members

Table B- 5: Countries in Listserv in Volume #1, Issue #1

Countries	Industry	University
Argentina		1
Australia	1	7
Belgrade		1
Belgium		1
Brazil		2
Bulgaria		1
Canada	5	10
Croatia		1
China	2	2
Colombia	1	
Czech Republic	1	1
Denmark	2	1
Egypt		1
Europe	2	
Finland		3
France	2	9
Germany	6	6
Greece		1
Goteborg		2
Guatemala	3	
Guimaraes		1
Holland		1
Hong Kong	2	10
Hungary	1	1
India	1	10
Indonesia	1	1
Iran	2	4
Israel		1
Italy	2	3
Japan	3	15
Korea	6	2

Lithuania		1
Malaysia	2	
Mexico	10	
Netherlands	3	3
New Zealand		4
Nigeria		1
Portugal		2
Poland		1
Philippines	1	
Romania		1
Saudi Arabia		1
Singapore		1
Spain		2
Slovak Republic		1
Slovenia		2
South Africa		3
South Korea		30
Sweden		1
Sri Lanka	1	
Switzerland	4	
Taiwan	1	1
Thailand	4	2
Turkey		2
UAE		1
UK	9	23
USA	609	463
Unknown	2320[c]	81
Total	3007	726

[c] 1035 entries is from the alumni list for which only the e-mail address is available

Appendix C - Issue Analysis Volume #1, Issue #2

Summary Analysis of
Journal of Textile & Apparel Technology & Management - Issue #2

(http://www.tx.ncsu.edu/jtatm)

(February 5, 2001– 13 May 2001)

TABLE OF CONTENTS

Introduction

Journal of Textile & Apparel Technology & Management (JTATM) (http://www.tx.ncsu.edu/jtatm) is a quarterly electronic journal published by the Department of Textile & Apparel, Technology & Management of College of Textiles, North Carolina State University. This report is prepared by analyzing the data from February 5, 2001 to May 13 2001. Data regarding each issue is sent in an Excel file from www.sitestats.com.

Table C-1 gives the general statistics for Volume #1, Issue #2 for the time period of February 9, 2001 to May 13, 2001.

Table C-1: General Statistics for volume #1, issue #2

General Statistics	
Date & Time This Report was Generated	Thursday April 18, 2002 - 16:52:17
Timeframe	02/09/01 00:00:00 - 05/13/01 23:59:00
Number of Hits for Home Page	N/A
Number of Successful Hits for Entire Site	32589
Number of Page Views (Impressions)	10241
Number of User Sessions	3566
User Sessions from United States	52.15%
International User Sessions	13.93%
User Sessions of Unknown Origin	33.9%
Average Number of Hits per Day	346
Average Number of Page Views Per Day	108
Average Number of User Sessions per Day	37
Average User Session Length	00:06:05

Source: Table generated by Webtrends; Data from COT server

Visit Profile

The visit profile analyzes the number of unique visits, repetitive visits and the total number of hits with graphs. The graphs generated are from the results of the data from www.sitestats.com

Unique Visits

Unique visits is defined as the count of individual visitors who visited JTATM per week. This is tracked by the IP address on the visitors' computer (See Table 1). The number of "unique visits" for the first week (5 Feb 2001 to 11 Feb 2001) of JTATM issue #2 was 276

(compared to 291– Issue #1). In week 2, the number of unique visits was 285 (3% increase from week 1). There was a decline in week 3 (n=66). There was an increase in Week 4 and 5. (Week 4: n=89; week 5: n=101) Alternate increases and declines occurred in weeks 6, 7, 8, 9, 10, 11(Week 6: n=39; week 7: n=58; week 8: n=47; week 9: n=56; week 10: n=51; week 11: n=79). Weeks 12 and 13 showed a marginal increase of 1% and week 14 declined by 33% (n=55).

Repetitive Visits:

A repetitive visit is defined as the total number of all the visits (first time and repetitive visitors) who visited JTATM per week (see Figure C-1). The pattern for "repetitive visits" paralleled the pattern of "unique visits". Week 1 had the highest number of visits for issue #2 (n= 337) (Issue #1 Week 1– 344) and declined for the next two weeks (week 2: n = 328; week 3: n = 83). Repetitive visits increased in weeks 4, 5 and 7 declined in week 6. Visits maintained a steady posture in weeks 8, 9 and 10 (n=63) and increased in weeks 11, 12 and 13. Visits declined in week 14 (n=69).

Hits (page impressions):

Hits are defined as the total number of hits (for all the pages) that were made for the entire week. This pattern was similar to the "unique visits" and "repetitive visits"; the total number of hits per week was higher than unique visits and repetitive visits, as it counts all the page hits (page accessed) by the visitor (See Figure C-2). The first week recorded 1741 (compared to Issue #1- 950 hits) and then declined to 320 hits in week 3. An increase occurred in week 4 and 5 followed by decline in weeks 6. An alternate increase and decrease occurred in 7, 8 and 9 followed by increase till week 13. Week 14 registered 190 hits.

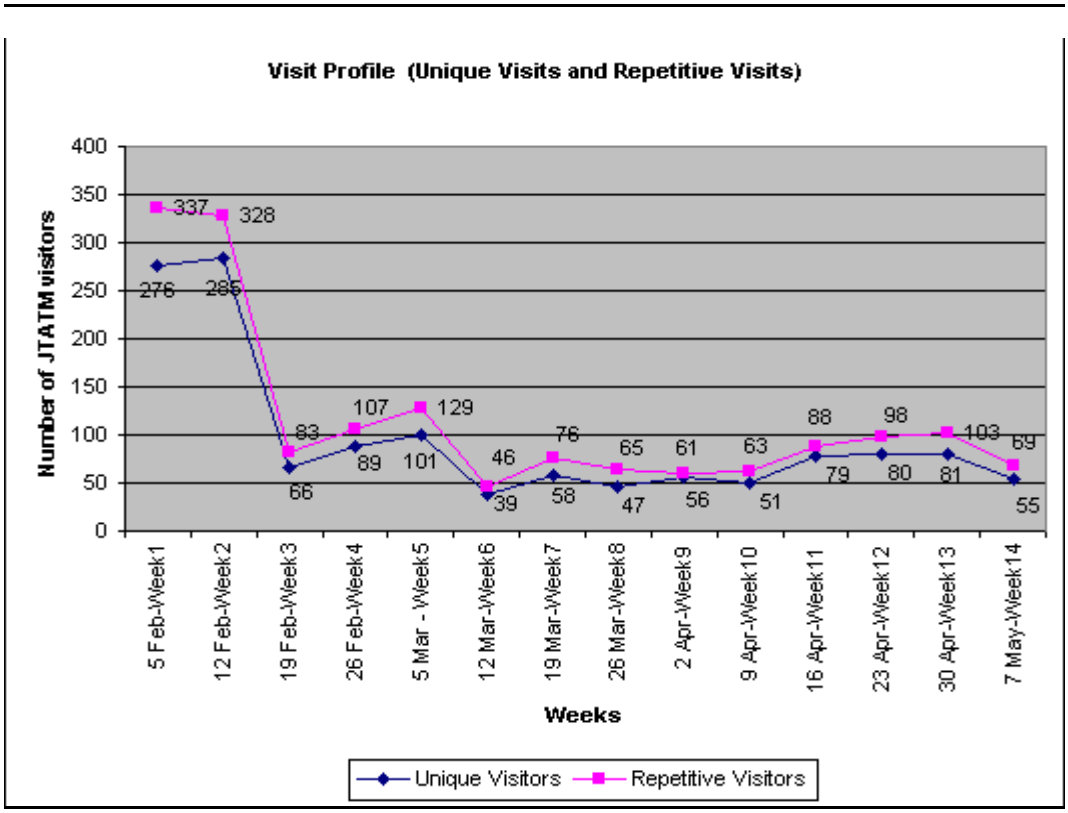


Figure C-1: Visit Profile for Volume #1, Issue #2

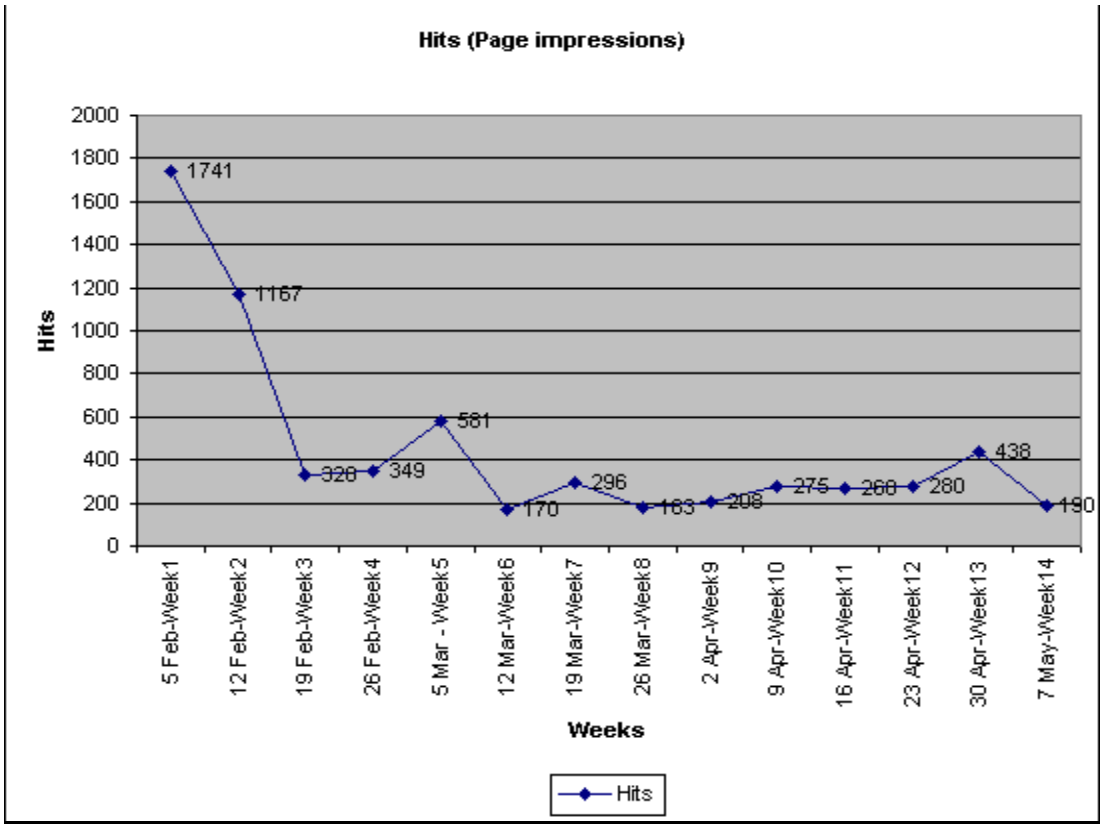


Figure C-2: Hit profile for Volume #1 Issue #2

Hit Profile

When considering the number of hits per page, the 'index' page – opening page - ranks the top (37.08%) (compared to Issue #1 – 39%)followed by the 'Abstracts page' (23.3%) and the 'volumelists' (13.2%) pages (See Table 3). There has been a constant visit to the 'subscription' (2.7%) and 'announcement' page (6.4%). The 'author guidelines' (3.9%) and 'editorial board' page were also accessed regularly (2.3%).

The 'index' page of the journal has the most number of hits when compared to other pages, and every week the index page hits were almost double the hits of the other pages (See Figure C-3). A total of 431 (compared to Issue #1-349) index page hits was recorded for the first week, following a decline in the week 3, 6, 8, 10, 12 and 14.

Table C-2 illustrates the page visit details other than the 'index' page. Pattern for other JTATM Issue #2 pages were similar to index page. The pattern for these pages were similar to index page (See Figure C-4).

Table C-2: Data for page hits for Volume #1, Issue #2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
	5 Feb	12 Feb	19 Feb	26 Feb	5 Mar	12 Mar	19 Mar	26 Mar	2 Apr	9 Apr	16 Apr	23 Apr	30 Apr	7 May
Index	431	447	108	131	132	63	89	60	61	58	95	83	103	62
Volumelists	125	113	54	50	71	23	29	25	30	30	23	39	46	24
Subscription	48	30	11	11	9	3	1	4	5	3	-	2	8	3
Announcements	91	71	23	10	34	5	12	8	13	14	19	11	17	6
Editorial Board	40	24	13	4	9	2	9	4	2		-	5	5	4
Author guidelines	50	56	11	10	9	6	9	10	7	12	8	4	6	7
Faculty bio	39	30	6	3	2	2	12	1	8	12	12	11	15	9
Issue2_abstracts	220	289	53	89	106	43	58	36	37	40	50	53	89	45
Issue1_abstracts	45	84	31	36	42	12	13	19	19	19	14	30	31	11

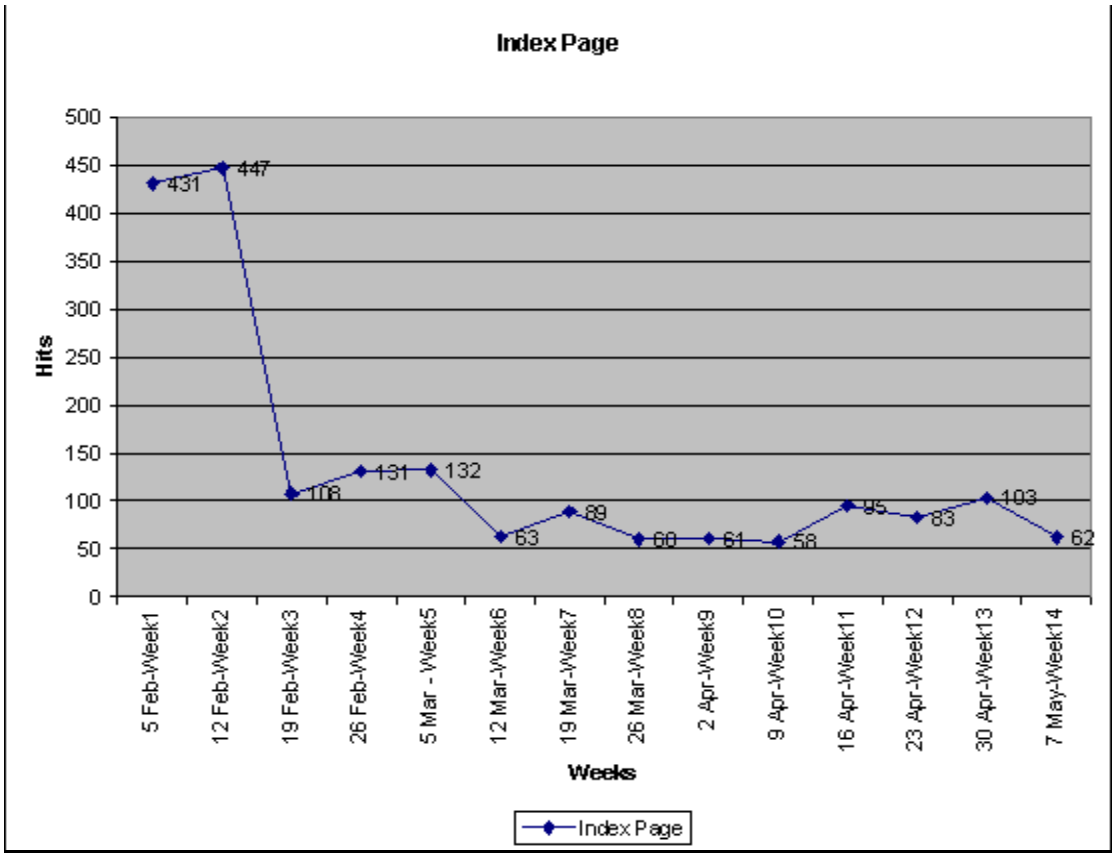


Figure C- 3: Index page for Volume #1, Issue #2

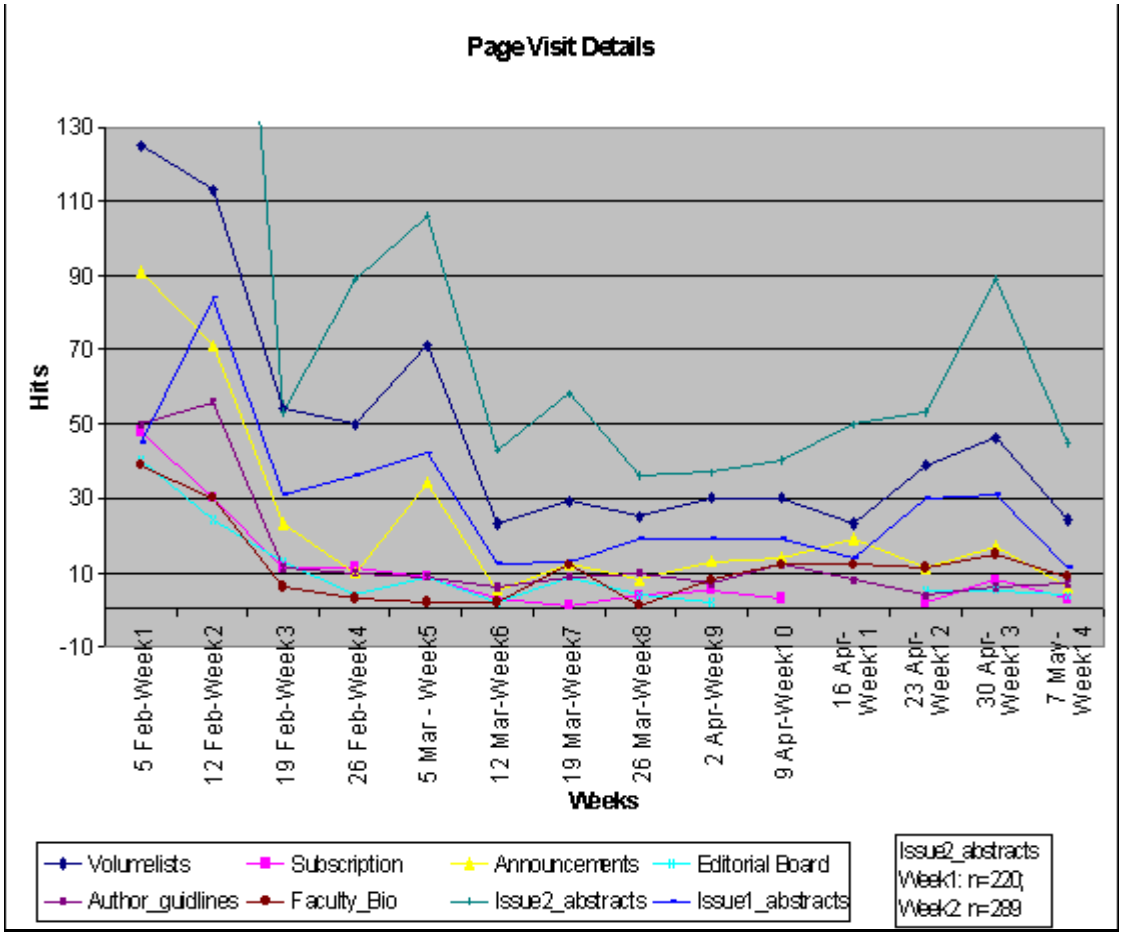


Figure C- 4: Page visit details for Volume #1, Issue #2

Country Profile:

Respondents from 46 countries (compared with 32 in Issue #1) have visited the journal, "unknown" includes unidentifiable countries by www.sitestats.com. Responses from United States top the list, followed by United Kingdom, Canada, Australia, Portugal, Germany, France and Greece (See Figure C- 2). See Table C-3 for a list of all the countries. New countries where the journal has reached for Issue #2 (and not for Issue #1) are Lithuania, Japan, Denmark, Yogoslavia, Bulgaria, Hong Kong, Norway, Indonesia, Korea, Singapore, Guatemala, Saudia Arabia.

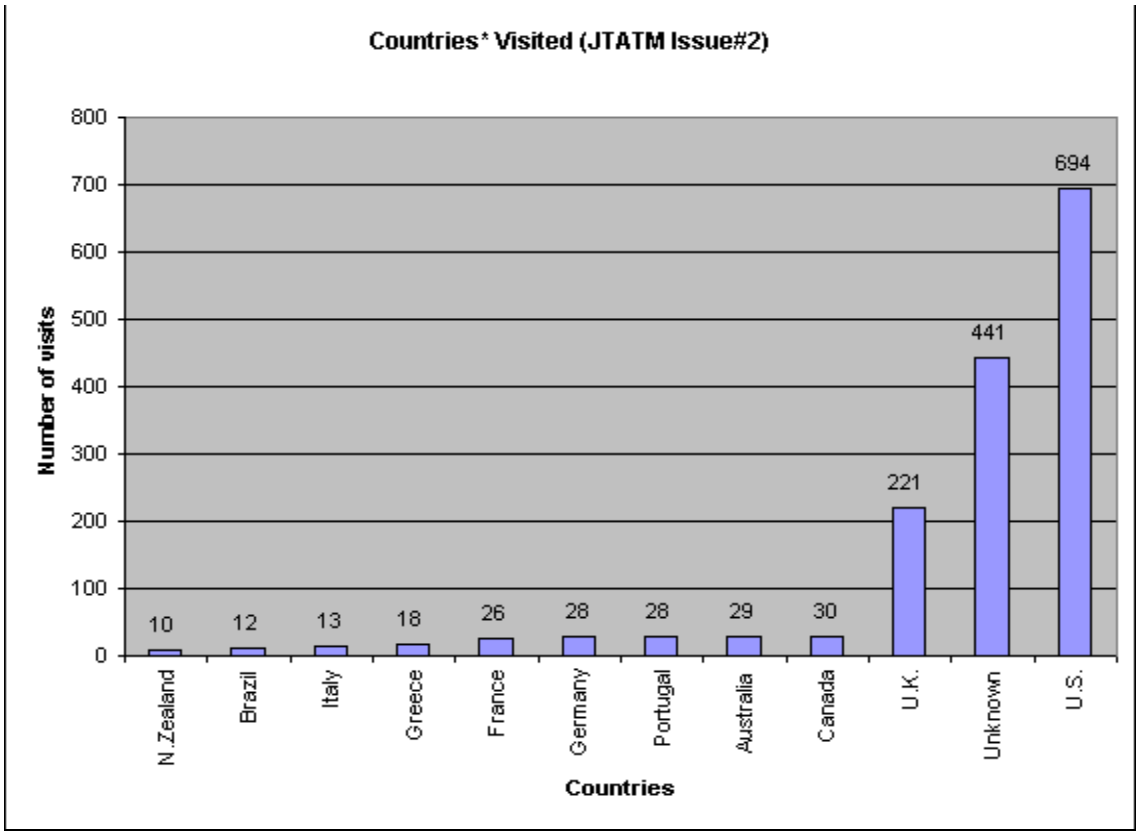


Figure C-5: Countries visited for Volume #1, Issue #2

* Countries who have visited 10+ times in JTATM Issue #2

Table C-3: Countries visited for Volume #1, Issue #2

Countries	Number of Visits	Percentage visits
Argentina	4	0.244%
Australia	29	1.767%
Austria	1	0.061%
Belgium	3	0.183%
Brazil	12	0.731%
Bulgaria	3	0.183%
Canada	30	1.828%
Czech Republic	1	0.061%
Denmark	3	0.183%
Egypt	3	0.183%
France	26	1.584%
Guatemala	1	0.061%
Germany	28	1.706%
Greece	18	1.097%
Hong Kong	2	0.122%
India	3	0.183%
Indonesia	2	0.122%
Italy	13	0.792%
Japan	8	0.488%
Korea	2	0.122%
Lithuania	1	0.061%
Malaysia	2	0.122%
Mexico	1	0.061%
Netherlands	6	0.366%
New Zealand	10	0.609%
Norway	1	0.061%
Poland	2	0.122%
Portugal	28	1.706%
Romania	6	0.366%
Saudi Arabia	1	0.061%
Slovenia	6	0.366%
Singapore	2	0.122%
South Africa	6	0.366%
Spain	2	0.122%
Sweden	1	0.061%
Switzerland	5	0.305%
Taiwan	5	0.305%
Thailand	1	0.061%
Turkey	4	0.244%
United Kingdom	221	13.467%
United States	694	42.291%
unknown	441	26.874%

Yugoslavia	3	0.183%

Access profile

Most Requested Pages

Table C-4 shows the most requested pages for Volume #1, Issue #2

Table C-4: Most requested pages for volume #1, issue #2

Most Requested Pages					
	Pages	Views	% of Total Views	User Sessions	Avg. Time
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	1914	18.68%	1481	00:01:31
2	http://www.tx.ncsu.edu/jtatm	1496	14.6%	1246	00:01:05
3	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	963	9.4%	785	00:03:32
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	596	5.81%	463	00:00:44
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	484	4.72%	376	00:01:29
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	436	4.25%	297	00:02:17
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	421	4.11%	317	00:02:39
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/author_guidelines.html	308	3%	244	00:00:57
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	260	2.53%	219	00:01:54
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/editiorial_board.html	257	2.5%	209	00:00:51
11	http://www.tx.ncsu.edu/jtatm/Working_Site/volume1issue3/specialissue.html	181	1.76%	33	00:00:22
12	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/privacy.html	146	1.42%	103	00:00:38
13	**Index of /jtatm/volume1issue1** http://www.tx.ncsu.edu/jtatm/volume1issue1/	137	1.33%	77	00:00:50
14	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/Working_Site/	119	1.16%	71	00:00:56

Source: Table generated by Webtrends; Data from COT server

Entry pages

Table C- 5 shows that the entry page for the majority of the visitors was through the index page (66.13%) followed by the thumbnail bio (5.27%) and current abstracts (5.06%).

Table C-5: Top Entry pages for volume #1, issue#2

Top Entry Pages			
	Pages	**% of Total**	**User Sessions**
1	http://www.tx.ncsu.edu/jtatm	35.37%	1005
2	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	30.76%	874
3	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	5.27%	150
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	5.06%	144
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	3.09%	88
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	2.63%	75
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	1.72%	49
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	1.68%	48
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/author_guidelines.html	1.58%	45
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/editiorial_board.html	1.12%	32
	Total For the Pages Above (only sessions starting on a valid document type are included)	**88.34%**	**2510**

Source: Table generated by Webtrends; Data from COT server

Exit pages

For most users, the exit page (Table C-6) was the index page (22.66%) followed by the issue2_abstracts page (17%).

Table C-6: Top Exit pages for volume #1, issue#2

Top Exit Pages			
	Pages	% of Total	User Sessions
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	22.66%	644
2	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	17%	483
3	http://www.tx.ncsu.edu/jtatm	16.64%	473
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	6.4%	182
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	6.26%	178
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	5.56%	158
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	4.11%	117
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	2.74%	78
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/author_guidelines.html	2.74%	78
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/editiorial_board.html	1.9%	54
	Total For the Pages Above (only sessions starting on a valid document type are included)	**86.06%**	**2445**

Source: Table generated by Webtrends; Data from COT server

Most Downloaded Articles

Table C-7 shows the top downloaded files for volume#1, issue #2. Dr.Kilduff's article on "Evolving strategies, structures…" was the most downloaded in Issue #2 and Dr. Istook's article "Rapid prototyping…" was the most popular download in Issue #1.

Table C- 7: Most downloaded files in volume #1, issue #2

Most Downloaded Files				
	File	No. of Downloads	% of Total Downloads	User Sessions
1	**http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_full.pdf**	499	11.83%	122
2	**http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_full.pdf**	455	10.79%	126

3	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_full.pdf	404	9.58%	133
4	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/oxenham/oxenham_full.pdf	393	9.32%	106
5	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/cassill/cassill_full.pdf	286	6.78%	81
6	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/seyam/seyam_full.pdf	286	6.78%	78
7	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Istook/fulleditistook.pdf	241	5.71%	56
8	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Kilduff/fulleditkilduffa.pdf	189	4.48%	70
9	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Ghosh/fulleditghosh.pdf	100	2.37%	34
10	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Suh/fulleditsuh.pdf	97	2.3%	42
11	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_abstract.pdf	86	2.04%	54
12	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Pourdeyhimi/fulleditpourdeyhimi wip.pdf	84	1.99%	47
13	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_firstpg.pdf	60	1.42%	35
14	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_firstpg.pdf	57	1.35%	45
15	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/seyam/seyam_abstract.pdf	56	1.32%	36
16	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/oxenham/oxenham_firstpg.pdf	54	1.28%	36
17	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Pourdeyhimi/abstractpourdeyhimi.pdf	50	1.18%	32
18	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_abstract.pdf	44	1.04%	31
19	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf	43	1.02%	7
20	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_abstract.pdf	42	0.99%	31
21	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/oxenham/oxenham_abstract.pdf	40	0.94%	32
22	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/cassill/cassill_firstpg.pdf	39	0.92%	32
23	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_firstpg.pdf	38	0.9%	28
24	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/tracimayplumlee/plumee_full.pdf	34	0.8%	9
25	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/seyam/seyam_firstpg.pdf	33	0.78%	28
	Total For the Files Above	**3710**	**88.01%**	**N/A**

Source: Table generated by Webtrends; Data from COT server

Visiting Spiders

Table C – 8 identifies all robots, spiders, crawlers and search services (i.e. Alta Vista, Lycos, and Excite) visiting your site.

Table C-8: Visiting spiders for volume #1, issue #2

Visiting Spiders				
	Spider	Hits	% of Total Hits	User Sessions
1	vspider	1780	45.13%	47
2	Slurp	1748	44.32%	50
3	FAST-WebCrawler	140	3.54%	80
4	Mozilla/4.0 (compatible; MSIE 5.5; MSNIA; Windows 98; Win 9x 4.90; MSIECrawler)	101	2.56%	1
5	Mozilla/4.0 (compatible; MSIE 4.0; Windows NT; Site Server 3.0 Robot) CUHK CSE	80	2.02%	28
6	Gulliver	51	1.29%	8
7	Spider	18	0.45%	15
8	Mozilla/3.0 (Slurp/cat; slurp@inktomi.com; http://www.inktomi.com/slurp.html)	14	0.35%	9
9	Mozilla/3.0 (Slurp.so/1.0; slurp@inktomi.com; http://www.inktomi.com/slurp.html)	4	0.1%	2
10	tivraSpider	4	0.1%	4
	Total For Spiders Above	**3940**	**99.89%**	**244**

Source: Table generated by Webtrends; Data from COT server

Referrer Profile

Referring Sites

The main referring sites (sites that referred respondent to the journal) are www.tx.ncsu.edu (7.1%), www.google.com (4.9%), google.yahoo.com (2.1%), www.ita.rwth-aachen.de (0.98%) and www.itaasite.org (0.35%). See Table C-9.

Table C-9: Referring sites for Volume #1, Issue #2

Referring sites	Visits	Percentage

none	1179	82.448[a]%
www.tx.ncsu.edu	101	7.063%
www.google.com	70	4.895%
google.yahoo.com	29	2.028%
asia.google.yahoo.com	1	0.070%
www.lib.ncsu.edu	4	0.280%
catalog.lib.ncsu.edu	4	0.280%
www.google.de	1	0.070%
www.msu.edu	4	0.280%
webmail.utk.edu	0	0.000%
rediffmail.com	1	0.070%
search.ncsu.edu	1	0.070%
search.netscape.com	2	0.140%
courses.telr.ohio-state.edu	0	0.000%
www.alltheweb.com	0	0.000%
www.itaaonline.org	4	0.280%
www.itaasite.org	5	0.350%
www.indiatimes.com	1	0.070%
home.hollings.mmu.ac.uk	1	0.070%
chancellor.ncsu.edu	3	0.210%
alltheweb.com	1	0.070%
www.ita.rwth-aachen.de	14	0.979%
enterprise.twu.edu	1	0.070%
web.tft.csiro.au	1	0.070%
newfirstsearch.oclc.org	1	0.070%
www.unifi-inc.com	1	0.070%
	1430	100.000%

[a] It is speculated that 82.448% ('none') are accessing via press release.

Table C- 10, generated by Webtrends software shows the user sessions for each referrer.

Table C-10: Top referring sites for volume #1, issue#2

Top Referring Sites		
	Site	User Sessions
1	No Referrer	1835
2	http://www.tx.ncsu.edu/	1403
3	http://www.google.com/	48
4	http://search.ncsu.edu/	46
5	http://google.yahoo.com/	27
6	http://www.cgibin.ncsu.edu/	25
7	[unknown origin]	20

8	https://secure-imho.ncsu.edu/	13
9	http://www.ita.rwth-aachen.de/	13
10	http://www.law9.hotmail.com/	8
11	http://www.itaasite.org/	7
12	http://www.itaaonline.org/	5
13	http://us.f18.mail.yahoo.com/	4
14	http://www.paperonweb.com/	4
15	http://us.f36.mail.yahoo.com/	4
16	bookmarks	4
17	http://www.law14.hotmail.com/	3
18	http://member2.dwp.net/	3
19	http://www.law7.hotmail.com/	3
20	http://law2-www.hotmail.com/	3
	Sub Total for the Referring Sites Above	**3478**
	Total for the Log File	**3566**

Source: Table generated by Webtrends; Data from COT server

Referring Keyword

The top referring keywords that were used to find the journal, JTATM, from a search engine are listed in Table C-11.

Table C-11: Top referring keywords for volume #1, issue #2

Top Search Keywords			
	Keywords	**Keywords found**	**% of Total**
1	**jtatm**	14	5.73%
2	**of**	12	4.91%
3	**site:www.tx.ncsu.edu**	10	4.09%
4	**apparel**	8	3.27%
5	**journal**	7	2.86%
6	**textile**	7	2.86%
7	**pourdeyhimi**	5	2.04%
8	**body**	4	1.63%
9	**fiber**	4	1.63%
10	**fabric**	4	1.63%
	Total Found for the Keywords Above	**75**	**30.73%**
	Total of Keywords Found in the Log File	**244**	**100%**

Source: Table generated by Webtrends; Data from COT server

Referring URL

The top referring URL's that referred the journal are listed in Table C-12.

Table C-12: Top referring URL's for volume #1, issue #2

Top Referring URLs		
	URL	User Sessions
1	No Referrer	1835
2	http://www.tx.ncsu.edu:8190/jtatm/	593
3	http://www.tx.ncsu.edu/jtatm	201
4	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/thumbnail_bio.html	124
5	http://www.tx.ncsu.edu/tam/aboutdept/reserach/research.htm	82
6	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/issue2_abstracts.htm	73
7	http://www.tx.ncsu.edu/jtatm/	66
8	http://search.ncsu.edu/s97is.vts?action=View&VdkVgwKey=http://www.tx	45
9	http://www.tx.ncsu.edu:8190/jtatm/volumelists.html	41
10	http://www.tx.ncsu.edu:8190/jtatm/announcements.html	32
11	http://www.tx.ncsu.edu:8190/jtatm/Working_Site/	29
12	http://www.tx.ncsu.edu/tam/indept/news/jtatm_press_release.htm	27
13	http://www.cgibin.ncsu.edu/tx-bin/jtatmform.pl	25
14	[unknown origin]	20
15	http://www.tx.ncsu.edu:8190/jtatm/author_guidelines.html	19
16	http://www.tx.ncsu.edu:8190/jtatm/volume1issue1/current_abstracts.html	14
17	http://www.tx.ncsu.edu/jtatm/volumelists.html	11
18	http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	10
19	http://www.tx.ncsu.edu:8190/jtatm/index.html	10
20	http://www.itaasite.org/ITAAnew/NN0101/availresources.html	7
	Sub Total for the Referrers Above	**3264**
	Total for the Log File	**3566**

Source: Table generated by Webtrends; Data from COT server

Visitor Profile

Most Active Organization

The frequently visited organizations for the journal are listed in Table C-13.

Table C-13: Most active organizations for volume #1, issue #2

Most Active Organizations				
	Organizations	Hits	% of Total Hits	User Sessions
1	**North Carolina State University** ncsu.edu	6142	18.84%	493
2	**Inktomi Corp.** inktomi.com	1756	5.38%	56
3	152.1.40.254	808	2.47%	36
4	**America Online** aol.com	716	2.19%	483
5	**EXCALIBUR Group A Time Warner Company** rr.com	586	1.79%	30
6	fupl.asso.fr	568	1.74%	12
7	152.1.40.242	566	1.73%	41
8	**MindSpring Enterprises Inc.** mindspring.com	425	1.3%	41
9	206.25.198.214	261	0.8%	15
10	208.194.6.14	257	0.78%	7
	Subtotal For Companies Above	**12085**	**37.08%**	**1214**
	Total For the Log File	**32589**	**100%**	**3566**

Source: Table generated by Webtrends; Data from COT server

Activity level by day of the week

Table C-14 shows the activity for each day of the week. The Total Weekdays line indicates the number of hits occurring Monday through Friday of the report period. The Total Weekends line indicates the number of hits occurring Saturday and Sunday of the report period. Values in the table do not include erred hits.

Table C-14: Activity level by day of the week for volume #1, issue #2

Activity Level by Day of the Week				
	Day	Hits	% of Total Hits	User Sessions
1	Sun	2360	7.24%	343
2	Mon	6557	20.12%	802
3	Tue	5190	15.92%	579
4	Wed	5311	16.29%	462
5	Thu	4060	12.45%	395
6	Fri	6255	19.19%	664
7	Sat	2856	8.76%	321
	Total Weekdays	**27373**	**83.99%**	**2902**
	Total Weekend	**5216**	**16%**	**664**

Source: Table generated by Webtrends; Data from COT server

Activity level by Hour of the Day

This table (C-15) shows the most and the least active hour of the day and also splits up the hits for each hour for the Volume #1, Issue #2 of the journal.

Table C-15: Activity level by hours for volume #1, issue #2

Activity Level by Hour of the Day	
Most Active Hour of the Day	15:00-15:59
Least Active Hour of the Day	21:00-21:59

Activity Level by Hours Details			
Hour	# of Hits	% of Total Hits	# of User Sessions
00:00-00:59	510	1.56%	98
01:00-01:59	816	2.5%	76
02:00-02:59	1093	3.35%	100
03:00-03:59	2731	8.38%	128
04:00-04:59	1732	5.31%	133
05:00-05:59	1298	3.98%	119
06:00-06:59	661	2.02%	113
07:00-07:59	1204	3.69%	134
08:00-08:59	1550	4.75%	178

09:00-09:59	2153	6.6%	220
10:00-10:59	1369	4.2%	189
11:00-11:59	2127	6.52%	241
12:00-12:59	1402	4.3%	170
13:00-13:59	1606	4.92%	193
14:00-14:59	2049	6.28%	180
15:00-15:59	3045	9.34%	294
16:00-16:59	2213	6.79%	240
17:00-17:59	1255	3.85%	158
18:00-18:59	906	2.78%	133
19:00-19:59	528	1.62%	83
20:00-20:59	589	1.8%	92
21:00-21:59	494	1.51%	62
22:00-22:59	710	2.17%	146
23:00-23:59	548	1.68%	86
Total Users during Work Hours (8:00am-5:00pm)	**17514**	**53.74%**	**1905**
Total Users during After Hours (5:01pm-7:59am)	**15075**	**46.25%**	**1661**

Source: Table generated by Webtrends; Data from COT server

Technical Statistics and Analysis

Table C-16 gives info about how many hits were successful and how many were unsuccessful for Volume #2, Issue #2.

Table C-16: Technical statistics for volume #1, issue #2

Technical Statistics and Analysis	
Total Hits	35399
Successful Hits	32589
Failed Hits	2810
Failed Hits as Percent	7.93%
Cached Hits	3517
Cached Hits as Percent	9.93%

Source: Table generated by Webtrends; Data from COT server

Most downloaded files types

Table C-17 shows the different types of file types and sizes that were downloaded for volume #1, issue #2

Table C-17: Most downloaded file types for volume #1, issue #2

Most downloaded File Types			
	File type	No. of Files	K Bytes Transferred
1	gif	7000	28,595K
2	jpg	6677	96,762K
3	htm	6423	46,316K
4	pdf	4187	681,138K
5	html	3817	53,092K
6	mno	357	44K
7	doc	277	134,041K
8	log	272	43K
9	png	60	1,729K
10	ppt	1	4,922K
	Total Files & K Bytes Transferred	**29071**	**1,046,677K**

Source: Table generated by Webtrends; Data from COT server

Organization Breakdown

The below table C-18 shows different type of organization (.com, .net, .edu, .org, .mil, and .gov.) that visited the journal.

Table C-18: Organization breakdown for volume #1, issue #2

Organization Breakdown				
	Organization	Hits	% of Total Hits	User Sessions
1	Education	8196	50.04%	703
2	Company	6017	36.74%	996
3	Network	1720	10.5%	220
4	Organization	247	1.5%	21
5	Military	196	1.19%	22
	Total	**16376**	**100%**	**1962**

Source: Table generated by Webtrends; Data from COT server

North American States and Provinces

Table C-19 breaks down Web site activity to show which of the North American States and Provinces were the most active on your site. This information is based on where the domain name of the visitor is registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table C-19: North American states & Provinces for volume #1, issue #2

North American States & Provinces		
	State	User Sessions
1	**North Carolina**	537
2	**Virginia**	511
3	**California**	94
4	**Connecticut**	30
5	**South Carolina**	20
6	**Alabama**	19
7	**Michigan**	12
8	**Texas**	10
9	**New Jersey**	9
10	**Minnesota**	9
	Total For the States Above	**1251**

Source: Table generated by Webtrends; Data from COT server

Most Active City

Table C-20 further breaks down the journal's activity to show which cities were the most active on your site. This information is based on where the domain name of the visitor is registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table C-20: Activity by city for volume #1, issue #2

Activity by City		
	City, State	User Sessions
1	Raleigh, North Carolina, United States	504
2	Reston, Virginia, United States	483
3	San Mateo, California, United States	56
4	Stamford, Connecticut, United States	30
5	Fairfax, Virginia, United States	20
6	Auburn University, Alabama, United States	18
7	Redwood City, California, United States	16
8	Greensboro, North Carolina, United States	15
9	Durham, North Carolina, United States	8
10	East Lansing, Michigan, United States	8
	Total For the Cities Above	**1158**

Source: Table generated by Webtrends; Data from COT server

Browser Details

Most of the visitors were using Internet Explorer 5 (46.6%) followed by Netscape Navigator 4 (40.4%) (vice versa in Issue #1) and small portion were using Internet Explorer 4 (8.72%) and Netscape Navigator 5 (2.72%), unknown (1.33%) and Netscape Navigator 3 (0.18%).

Table C-21 shows the break-down of the Netscape and table C-22 of the Microsoft Explorer browsers.

Table C-21: Netscape browsers for volume #1, issue #2

Netscape Browsers				
	Browser	Hits	% of Total Hits	User Sessions
1	Netscape 4.x	10116	97.2%	859
2	Netscape 5.x	156	1.49%	10
3	Netscape 3.x	112	1.07%	17
4	Netscape 2.x	23	0.22%	1
	Total For Browsers Above	**10407**	**100%**	**887**

Source: Table generated by Webtrends; Data from COT server

Table C- 22: Microsoft Explorer browsers for volume #1, issue #2

Microsoft Explorer Browsers				
	Browser	Hits	% of Total Hits	User Sessions
1	Explorer 5.x	13168	81.71%	1570
2	Explorer 4.x	2844	17.64%	297
3	Explorer 3.x	86	0.53%	8
4	Explorer 6.x	17	0.1%	3
	Total For Browsers Above	**16115**	**100%**	**1878**

Source: Table generated by Webtrends; Data from COT server

Operating System

Windows 98 (31.2%) and Windows NT (30.9%) were the most commonly used operating systems to view JTATM, followed by Windows 95 (13.4%). A small percentage were using Macintosh (3.04%), Unix (or Linux) (0.27%). See Table C-23.

Table C-23: Most popular platform

Most Used Platforms				
	Platform	Hits	% of Total Hits	User Sessions
1	Windows 98	10169	31.2%	1228
2	Windows NT	10095	30.97%	838
3	Others	6801	20.86%	875
4	Windows 95	4374	13.42%	457
5	Macintosh PowerPC	993	3.04%	149
6	SunOS	91	0.27%	7
7	Hewlett Packard Unix (HP9000)	29	0.08%	7
8	Linux	21	0.06%	2
9	Windows 3.x	8	0.02%	2
10	Windows Win32s	8	0.02%	1
	Total For Platforms Above	**32589**	**100%**	**3566**

Source: Table generated by Webtrends; Data from COT server

Monitor Settings

Color Quality

Most of the visitors had the monitor set to 32 bits (very high good color quality; 40.0%) followed by 16 bits (good color quality; 38.4%), 24 bits (high color quality; 11.8%), 8 bits (low color quality; 5.9%) and unknown (3.9%).

Monitor Resolution

A large amount of visitors had the monitor resolution at 800x600 (45.56%) followed by 1024x768 (43.5%), 640x480 (3.6%), unknown (3.9%), 1152x864 (1.23%), 1280x1024 (1.34%), 1152x864 (1.21%) and 832x624 (0.83%).

Appendix D - Issue Analysis Volume #1, Issue #3

Summary Analysis of
Journal of Textile & Apparel Technology & Management - Issue #3

(http://www.tx.ncsu.edu/jtatm)

Issue #3: May 13, 2001– August 23, 2001
Special Issue: May 16, 2001 – August 23, 2001

TABLE OF CONTENTS

Introduction

Journal of Textile & Apparel Technology & Management (JTATM) (http://www.tx.ncsu.edu/jtatm) is a quarterly electronic journal published by the Department of Textile & Apparel, Technology & Management of College of Textiles, North Carolina State University. The third issue was launched on May 13, 2001. This report is prepared by analyzing the data from May 13, 2001– August 23, 2001. Data is sent on a weekly basis from www.sitestats.com in a *.csv format. Analysis is done in Microsoft Excel.

Table D-1 shows the general statistics for volume #1, issue #3 from May 16, 2001 to August 22, 2001. A special issue was sent through press release for the Fiber society conference on May 18, 2001. The hits include the special issue also.

Table D-1: General statistics for volume #1, issue #3

General Statistics for Volume #1, Issue #3	
Timeframe	05/16/01 00:00:00 - 08/22/01 23:59:00
Number of Successful Hits for Entire Site	50288
Number of Page Views (Impressions)	13137
Number of User Sessions	3785
User Sessions from United States	56.3%
International User Sessions	12.76%
User Sessions of Unknown Origin	30.93%
Average Number of Hits per Day	507
Average Number of Page Views Per Day	132
Average Number of User Sessions per Day	38
Average User Session Length	00:06:22

Source: Table generated by Webtrends; Data from COT server

Visit Profile

The visit profile analyzes the number of unique visits, repetitive visits and the total number of hits with graphs. The graphs generated are from the results of the data from www.sitestats.com

Unique visits

Unique visits are defined as the count of individual visitors who visited JTATM. The data reported on a weekly basis. Unique visits are tracked by Internet Protocol address of the visitor/reader computer (See Figure D-1). The number of unique visits for the first week of (May 13, 2001– August 23, 2001) JTATM issue #3 was 411. In week 2, the number of unique visits was 152 (64% decline from week 1). There was a decline in week 3 (n=72). There was an increase in Week 4 (n=79). Except for decrease in weeks 5 and 8 (n=53; n=53),

there was an increase in weeks 6, 7, 9, 10, 11 (week 6: n=55; week 7: n=70; week 9: n=79; week10: n=79; week11: n-80). There was a decrease in week 12 (n=75) and increase in week 13 (n=89). The hits declined in week 14 by 25% (n=67).

Repetitive visits

A repetitive visit is defined as the total number of all the visits (first time and repetitive visitors) who visited JTATM per week (see Table 1). The pattern for "repetitive visits" paralleled the pattern of "unique visits". Week 1 had the highest number of visits for issue #3 (n= 524) and declined for the next five weeks (week 2: n = 183; week 3: n = 93; week 4: n=88; week 5: n=73; week 6: n=64). Repetitive visits increased in week 7 (n=87) and declined in week 8 (n=61). Visits maintained a steady posture in weeks 9, 10, 11 and 13 (Week 9: n=93; week 10:n=96; week 11: n=100; week 13: n=121) Visits declined in weeks 12 and 14 (week 12: n=93; week 14: n=105).

Hits (page impressions)

Hits are defined as the total number of hits (for all the pages) that were made for the entire week. This pattern was similar to the "unique visits" and "repetitive visits"; the total number of hits per week was higher than unique visits and repetitive visits, as it counts all the page hits (page accessed) by the visitor (See Figure D-2). The first week recorded 2208 and then declined to 639 and 358 during weeks 3 and 4 respectively. Alternate increase occurred in week 4 and then decreased for weeks 4 and 5. Alternate increase and decrease occurred through the issue till week 14. Week 14 registered 437 hits.

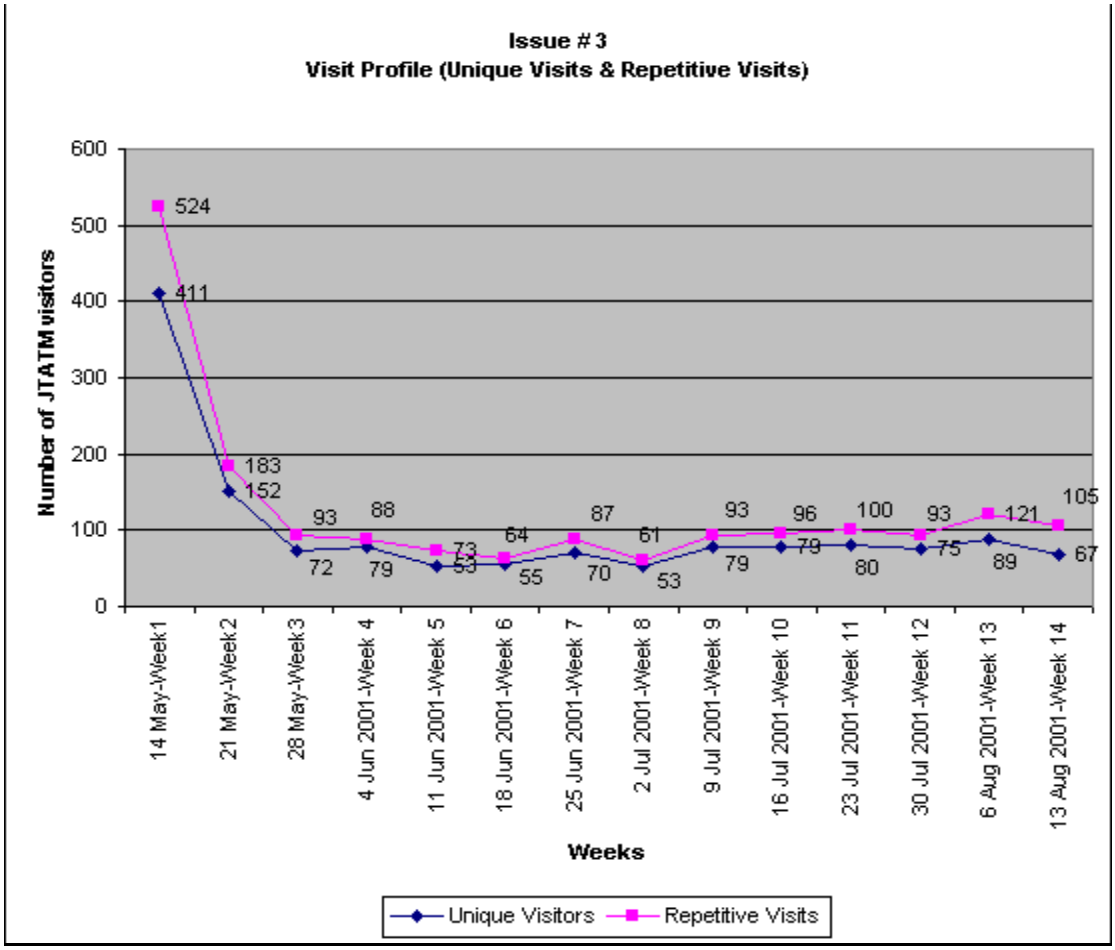


Figure D –1: Visit Profile for Volume#1, Issue #3

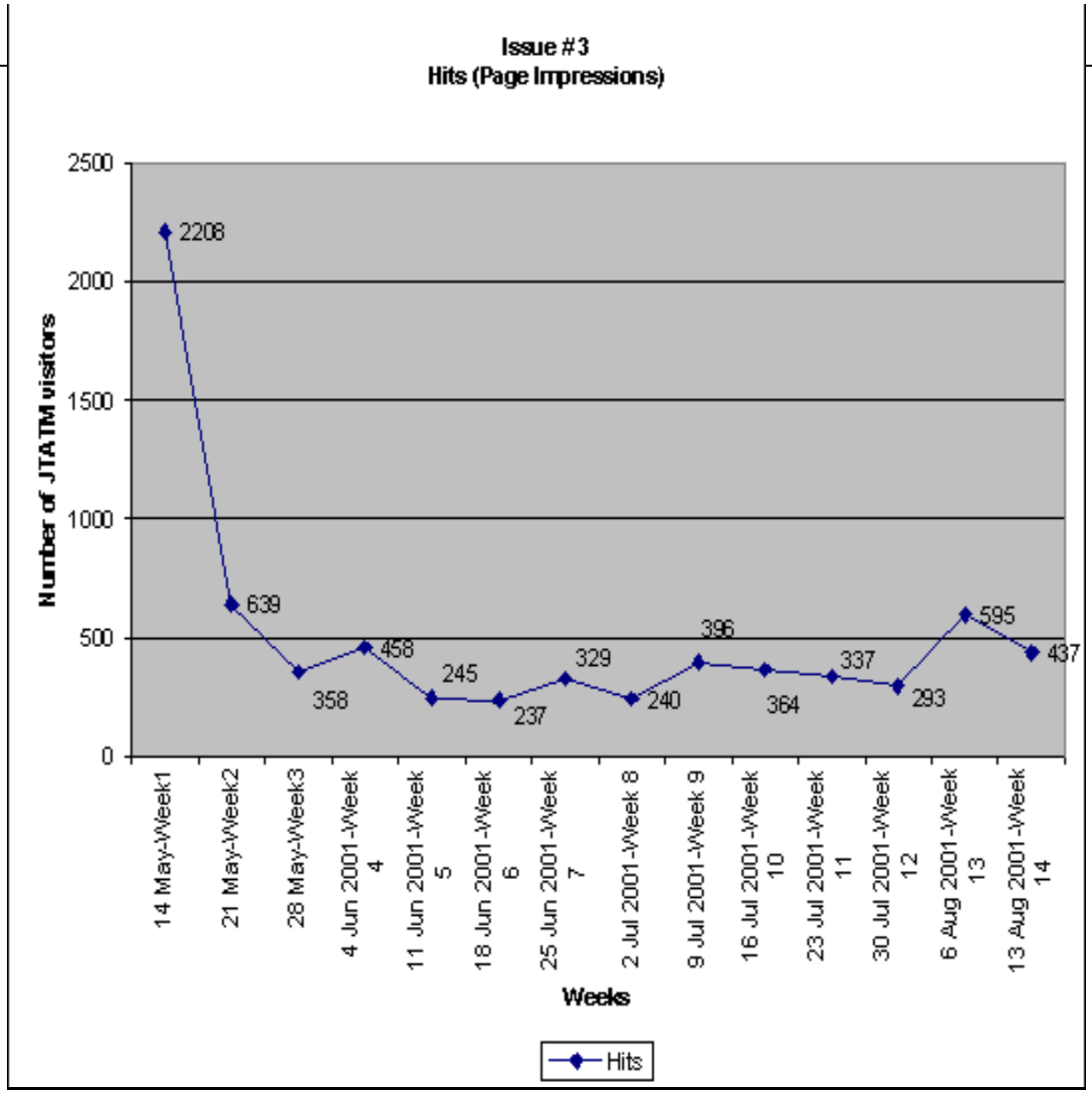


Figure D-2: Hit profile for Volume #1, Issue #3

Hit Profile

When considering the number of hits per page, the 'index' page – opening page - ranks the top (30.83%) (compared to Issue #1 – 39%)followed by the 'volumelists' (13.24%) pages (See Figure D-3). There has been a constant visit to the 'subscription' (2.03%) and 'announcement' page (3.46%). The 'author guidelines' (2.2%) and 'editorial board' page were also accessed regularly (1.83%).

Specific pages: Issue_3_abstracts (12.16%) and special_issue_abstracts (7.62%) pages got the highest number of visits. Issue_2_abstracts (5.17%) and academic_tour_industry (3.4%) page also received constant hits.

Table D-2: Data for the page hits for Volume #1, issue #1

	14 May 2001-Week1	21 May 2001-Week2	28 May 2001-Week3	4 Jun 2001-Week 4	11 Jun 2001-Week 5	18 Jun 2001-Week 6	25 Jun 2001-Week 7	2 Jul 2001-Week 8	9 Jul 2001-Week 9	16 Jul 2001-Week 10	23 Jul 2001-Week 11	30 Jul 2001-Week 12	6 Aug 2001-Week 13	13 Aug 2001-Week 14
jtatm/index	834	245	94	94	63	63	77	59	105	88	81	72	109	92
jtatm/volumelists	235	64	62	86	29	36	49	47	57	54	28	12	65	68
jtatm/subscribe_to_jtatm	51	14	2	4	2	11	7	3	6			3	7	7
jtatm/announcements	89	9	11	11	13	14	12	4	14	6	15	7	15	13
jtatm/editiorial_board	36		9	5	5	4	6	7	10	1	11	5	8	7
jtatm/author_guidelines	44	8	9	6	10	4	15	5	10	3	14	2	14	4
jtatm/volume1issue2/thumbnail_bio	10	6	4	13	2	3			5	1	4			4
jtatm/volume1issue3/issue3_abstracts	340	79	43	37	27	27	38	22	38	38	20	12	50	48
jtatm/volume1issue1/current_abstracts	21			38	13	20	19	18	14	20	4	6	22	29
jtatm/volume1issue2/issue2_abstracts	114	18	23	41	11	13	14	15	22	22	12	4	21	18
jtatm/volume1issue3/internationalboard	94	19	13	2	3	2	13	8	11	6	6	3	6	4
jtatm/volume1issue3/academiatoursindustry	94	26	14	4	4	4	13	9	12	9	16	7	9	8
jtatm/volume1specialissue/indexforspecissue	92	40	8		12	4	7	5	13	8	7	17	20	
jtatm/volume1specialissue/specialissue_abstracts	47	68	30	19	20	17	48	27	40	43	43	50	35	26
jtatm/privacy	4	5	2			1	2	3	1	2		1	1	
jtatm/volume1issue2/coverpgv1i2				20		2		1	10	3	6		1	2
jtatm/volume1issue1/coverpgv1i1					4	3	2	2	3	1	1			

The 'index' page of the journal has the most number of hits when compared to other pages, and every week the index page hits were almost double the hits of the other pages (Table D-2). A total of 834 (compared to Issue #1-349) index page hits was recorded for the first week, following a decline in the week 2, 3, 5, 8, 10, 11, 12 and 14.

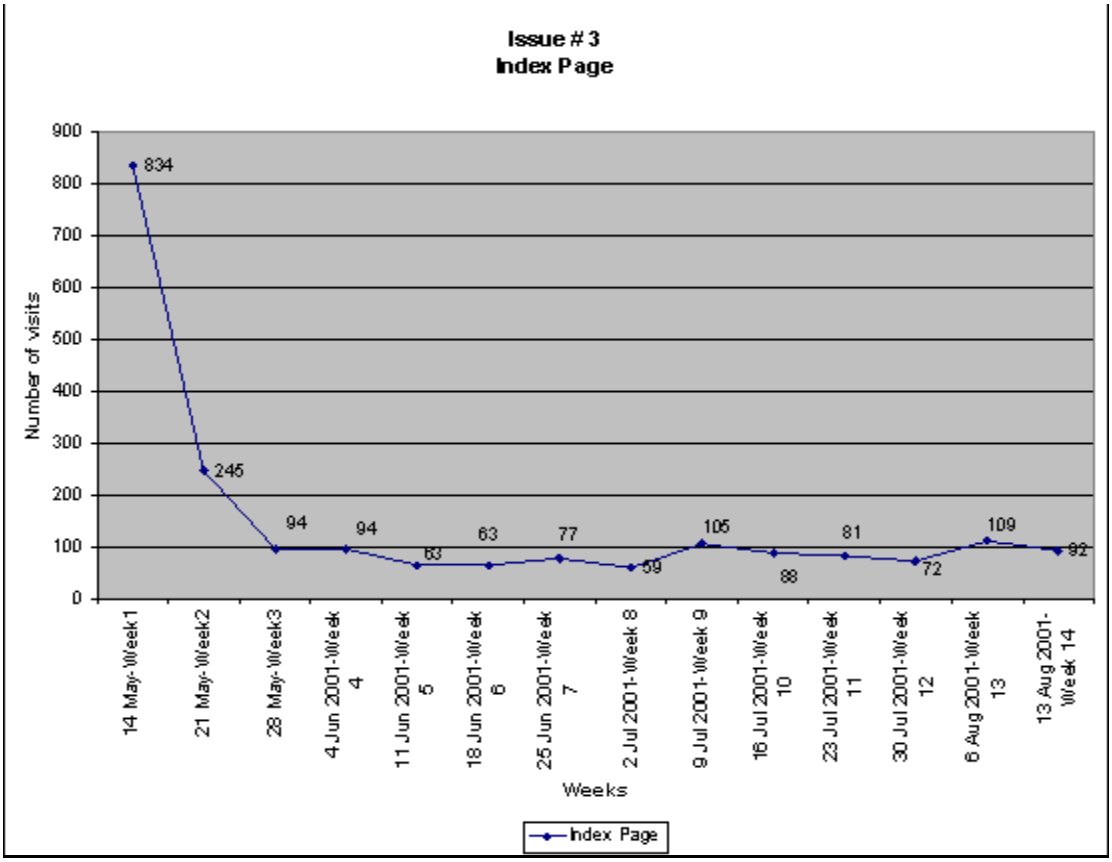


Figure D-3: Index page for Volume #1, Issue #3

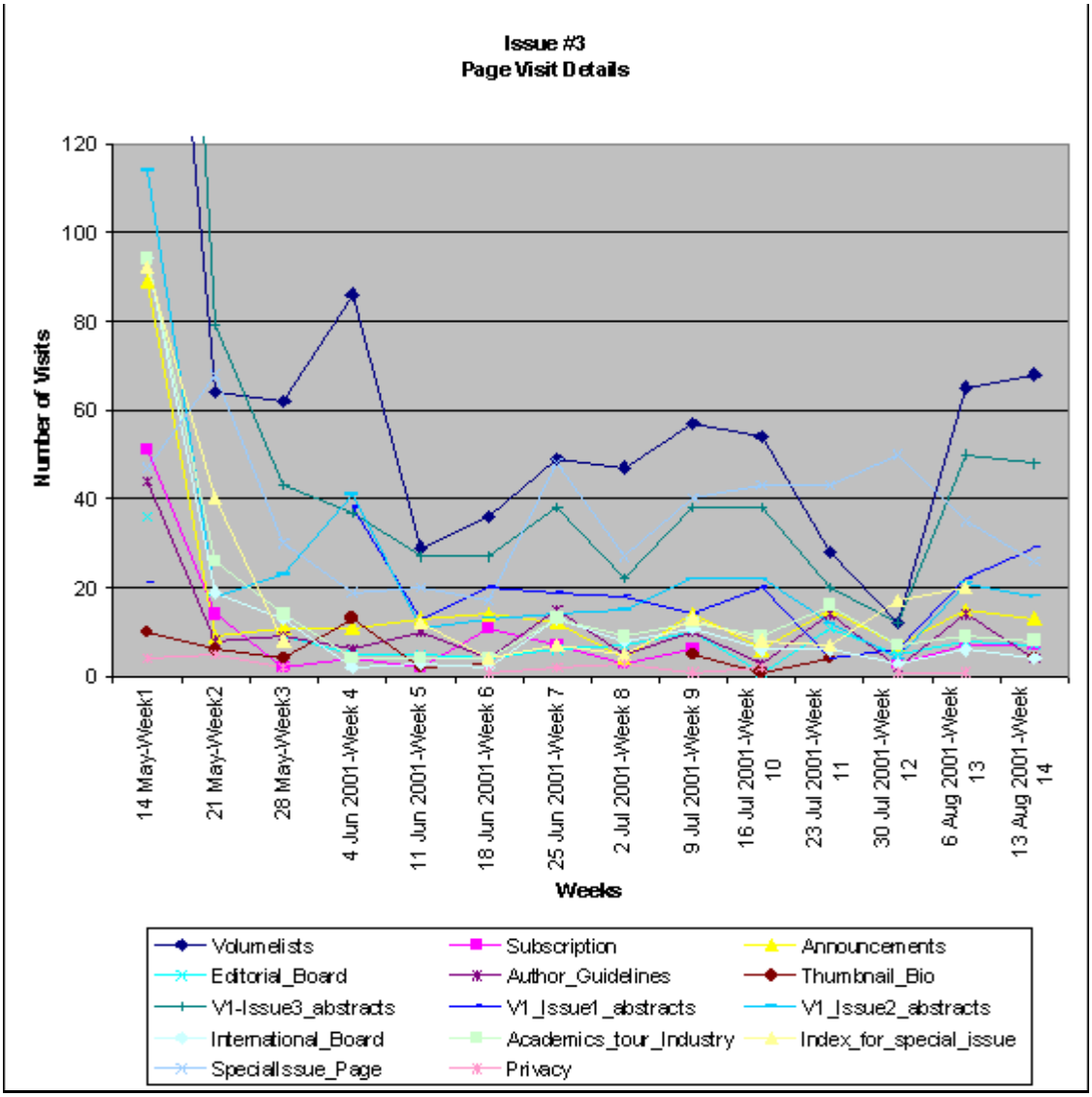


Figure B- 4: Page visit details for Volume #1, Issue #1

Country Profile

Respondents from 56 countries (compared with 32 in Issue #1 and 46 in Issue #2) have visited the journal, "unknown" includes unidentifiable countries by http://ww.sitestats.com. Responses from United States top the list, followed by United Kingdom, Canada, Australia, Portugal, Germany, France and Greece (See Figure D-5). See Table D-2 for a list of all the countries. New countries where the journal has reached for Issue #3 (and not for Issues #1 and #2) are China, Sri Lanka, Croatia (Hrvatska), Pakistan, Mauritius, Finland, Togo, Jamaica, Ukraine, Iran.

Indonesia, Ireland, Lithuania, Norway, Thailand are the countries that didn't visit JTATM for Issue #3 but visited for Issue #1 or #2.

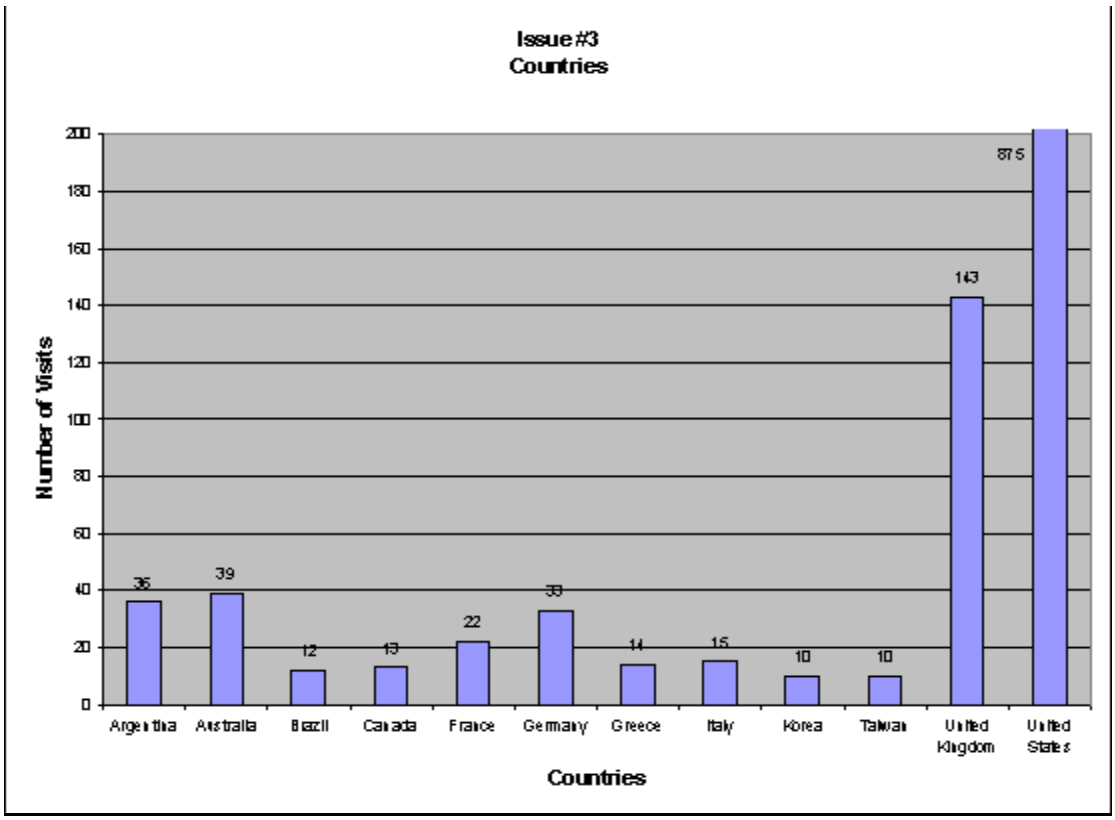


Figure D-5: Countries visited for Volume #1, Issue #3

Table D-3: Country Profile for Volume #1, Issue #3

Countries	Hits	Percentage
Argentina	36	2.03%
Australia	39	2.20%
Austria	3	0.17%
Belgium	8	0.45%
Brazil	12	0.68%
Bulgaria	1	0.06%
Canada	13	0.73%
China	5	0.28%
Colombia	1	0.06%
Croatia (Hrvatska)	1	0.06%
Czech Republic	3	0.17%
Denmark	3	0.17%
Egypt	1	0.06%
Finland	1	0.06%
France	22	1.24%
Guatemala	1	0.06%
Germany	33	1.86%
Greece	14	0.79%
Hong Kong	2	0.11%
Iran	1	0.06%
India	2	0.11%
Italy	15	0.85%
Japan	6	0.34%
Jamaica	1	0.06%
Korea	10	0.56%
Mauritius	9	0.51%
Malaysia	5	0.28%
Mexico	1	0.06%
Netherlands	3	0.17%
New Zealand (Aotearoa)	1	0.06%
Pakistan	1	0.06%
Poland	1	0.06%
Portugal	4	0.23%
Romania	3	0.17%
Russian Federation	2	0.11%
Saudi Arabia	1	0.06%
Slovenia	2	0.11%
Singapore	1	0.06%
South Africa	3	0.17%
Spain	3	0.17%
Sri Lanka	1	0.06%
Sweden	7	0.39%
Switzerland	5	0.28%

Taiwan	10	0.56%
Togo	1	0.06%
Turkey	4	0.23%
Ukraine	1	0.06%
United Kingdom	143	8.06%
United States	875	49.32%
unknown	451	25.42%
Yugoslavia	2	0.11%
	1,774	100.00%

Access profile

Most Requested Pages

This section identifies the most popular Web Site pages and how often they were accessed. The average time a user spends viewing a page is also indicated in the table D-4.

Table D-4: Most requested pages for volume #1, issue #3

Most Requested Pages					
	Pages	Views	% of Total Views	User Sessions	Avg. Time
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	1914	18.68%	1481	00:01:31
2	http://www.tx.ncsu.edu/jtatm	1496	14.6%	1246	00:01:05
3	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	963	9.4%	785	00:03:32
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	596	5.81%	463	00:00:44
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	484	4.72%	376	00:01:29
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	436	4.25%	297	00:02:17
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	421	4.11%	317	00:02:39
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/author_guidelines.html	308	3%	244	00:00:57
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	260	2.53%	219	00:01:54
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/editiorial_board.html	257	2.5%	209	00:00:51
11	http://www.tx.ncsu.edu/jtatm/Working_Site/volume1issue3/specialissue.html	181	1.76%	33	00:00:22

12	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/privacy.html	146	1.42%	103	00:00:38
13	**Index of /jtatm/volume1issue1** http://www.tx.ncsu.edu/jtatm/volume1issue1/	137	1.33%	77	00:00:50

Source: Table generated by Webtrends; Data from COT server

Entry pages

Table D-5 section identifies the first page viewed when a user visits this site. This is most likely your home page but, in some cases, it may also be specific URLs that users enter to access a particular page directly or they might have book marked a specific page. For issue #3, the index page (60.77%) was the most active entry page followed by special issue abstracts (5.6%).

Table D-5: Top entry pages for volume #1, issue #3

Top Entry Pages			
	Pages	**% of Total**	**User Sessions**
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	36.3%	1108
2	http://www.tx.ncsu.edu/jtatm	24.47%	747
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstracts.htm	5.6%	171
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	3.7%	113
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	2.75%	84
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	2.52%	77
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/specialissue.html	2.35%	72
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/issue3_abstracts.htm	2.32%	71
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/academiatoursindustry.html	2.29%	70
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	2.22%	68
	Total For the Pages Above (only sessions starting on a valid document type are included)	**84.56%**	**2581**

Source: Table generated by Webtrends; Data from COT server

Exit pages

This section identifies the most common pages users were on when they left your site. For most users, the exit page was the index page (32.76%) followed by the special_issue_abstracts (9.17%) and Issue3_abstracts page (8.94%) respectively. See Table D-6.

Table D-6: Top exit pages for volume #1, issue #3

Top Exit Pages			
	Pages	**% of Total**	**User Sessions**
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	21.46%	655
2	http://www.tx.ncsu.edu/jtatm	11.3%	345
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstracts.htm	9.17%	280
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/issue3_abstracts.htm	8.94%	273
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	5.04%	154
6	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	4.35%	133
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/academiatoursindustry.html	4.16%	127
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volumelists.html	4.09%	125
9	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/thumbnail_bio.html	4.03%	123
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue3/specialissue.html	3.99%	122
	Total For the Pages Above (only sessions starting on a valid document type are included)	**76.57%**	**2337**

Source: Table generated by Webtrends; Data from COT server

Most Downloaded Articles

Table D-7 identifies the most popular file downloads of your Web site. If an error occurred during the transfer, that transfer is not counted.

Most Downloaded Files				
	File	**No. of Downloads**	**% of Total Downloads**	**User Sessions**
1	**http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/senanayake/muditha_full.pdf**	942	11.65%	120

2	http://www.tx.ncsu.edu/jtatm/Working_Site/volume1issue 4/articles/andrea/andrea_full.pdf	888	10.98%	8
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf	589	7.28%	115
4	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Istook/fulleditistook.pdf	479	5.92%	95
5	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/tracimayplumlee/plumee_full.pdf	453	5.6%	124
6	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/martinking/king_full.pdf	369	4.56%	85
7	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part1.pdf	284	3.51%	72
8	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part2.pdf	237	2.93%	63
9	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part4.pdf	235	2.9%	55
10	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_full.pdf	227	2.8%	66
11	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part3.pdf	212	2.62%	62
12	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part2.pdf	195	2.41%	64
13	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/oxenham/oxenham_full.pdf	182	2.25%	51
14	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/oxenham/oxenham_full.pdf	181	2.23%	66
15	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part3.pdf	171	2.11%	49
16	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_full.pdf	162	2%	55
17	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/cassill/cassill_full.pdf	144	1.78%	41
18	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Pourdeyhimi/fulleditpourdeyhimi wip.pdf	141	1.74%	60
19	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Kilduff/fulleditkilduffa.pdf	120	1.48%	42
20	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/seyam/seyam_full.pdf	117	1.44%	41
21	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/senanayake/muditha_abstract.pdf	94	1.16%	49
22	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_full.pdf	93	1.15%	42
23	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Suh/fulleditsuh.pdf	91	1.12%	34
24	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/tracimayplumlee/plumee_abstract.pdf	86	1.06%	45
25	http://www.tx.ncsu.edu/jtatm/volume1issue1/	81	1%	30

	Articles/Ghosh/fulleditghosh.pdf			
	Total For the Files Above	**6773**	**83.79%**	**N/A**

Source: Table generated by Webtrends; Data from COT server

Visiting Spiders

This section identifies all robots, spiders, crawlers and search services (i.e. Alta Vista, Lycos, and Excite) visiting your site.

Table D-8: Visiting spiders for volume #1, issue #3

Visiting Spiders				
	Spider	Hits	% of Total Hits	User Sessions
1	**Slurp**	1308	44.71%	22
2	**vspider**	1269	43.38%	13
3	**Gulliver**	107	3.65%	15
4	**Mozilla/3.0 (Slurp/cat; slurp@inktomi.com; http://www.inktomi.com/slurp.html)**	63	2.15%	49
5	**Scooter-W3-1.0**	52	1.77%	19
6	**FAST-WebCrawler**	49	1.67%	21
7	**scooter-3.0.vns**	39	1.33%	38
8	**Openfind data gatherer, Openbot**	18	0.61%	18
9	**http:**	12	0.41%	3
10	**ArchitextSpider**	4	0.13%	4
	Total For Spiders Above	**2921**	**99.86%**	**202**

Source: Table generated by Webtrends; Data from COT server

Referrer Profile

Referring Sites

The main referring sites (sites that referred respondent to the journal) are www.tx.ncsu.edu (7.84%), www.google.com (9.41%), google.yahoo.com (5.16%), and www.lib.ncsu.edu (1.11%). See Table D-9.

Table D-9: Referring sites for Volume #1, Issue #3

Referring Site	Percentage
none	73.07%[a]
www.tx.ncsu.edu	7.84%
www.google.com	9.41%
google.yahoo.com	5.16%
www.lib.ncsu.edu	1.11%
catalog.lib.ncsu.edu	0.07%
www.google.de	0.46%
www.msu.edu	0.07%
rediffmail.com	0.13%
search.ncsu.edu	0.20%
search.netscape.com	0.20%
www.itaasite.org	0.07%
alltheweb.com	0.07%
www.ita.rwth-aachen.de	0.72%
enterprise.twu.edu	0.07%
web.tft.csiro.au	0.07%
search.msn.com	0.59%
www.google.fr	0.13%
www.paperonweb.com	0.33%
apparelkey.com	0.07%
textiles.about.com	0.07%
apparel.about.com	0.13%

[a] It is speculated that 82.448% ('none') are accessing via press release.

Table D-10 shows the top referring sites by the respective user sessions generated by Webtrends software.

Table D-10: Top Referring sites for volume #1, issue #3

Top Referring Sites		
	Site	**User Sessions**
1	**No Referrer**	1830
2	**http://www.tx.ncsu.edu/**	1367
3	**http://www.google.com/**	146
4	**http://search.ncsu.edu/**	110
5	**http://google.yahoo.com/**	78
6	**http://webserv1.tx.ncsu.edu/**	42
7	**[unknown origin]**	41
8	**http://www.lib.ncsu.edu/**	21
9	**http://www.ita.rwth-aachen.de/**	14

10	http://search.msn.com/	14
11	http://www.google.de/	12
12	http://www2.ncsu.edu/	8
13	bookmarks	7
14	https://secure-imho.ncsu.edu/	6
15	http://www.paperonweb.com/	5

Source: Table generated by Webtrends; Data from COT server

Referring Phrase

Some of the phrases used in search engines to locate JTATM issue #3 are given in Table D-11.

Table D-11: Top search keywords for volume #1, issue #3

Top Search Keywords			
	Keywords	Keywords found	% of Total
1	electrospinning	17	4.64%
2	textile	15	4.09%
3	for	10	2.73%
4	apparel	8	2.18%
5	of	8	2.18%
6	jtatm	7	1.91%
7	fibers	7	1.91%
8	in	6	1.63%
9	electrospun	5	1.36%
10	fiber	5	1.36%
	Total Found for the Keywords Above	88	24.04%
	Total of Keywords Found in the Log File	366	100%

Source: Table generated by Webtrends; Data from COT server

Referring URL

Some of the top referring URL for issue #3 are given in Table D-12.

Table D-12: Top referring URL for volume #1, issue #3

Top Referring URLs		
	URL	User Sessions
1	No Referrer	1830
2	http://www.tx.ncsu.edu:8190/jtatm/	641
3	http://www.tx.ncsu.edu/jtatm	120
4	http://search.ncsu.edu/s97is.vts?action=View&VdkVgwKey=http://www.tx	109
5	http://www.tx.ncsu.edu/tam/aboutdept/reserach/research.htm	94
6	http://www.tx.ncsu.edu:8190/jtatm/volume1specialissue/specialissue_abstracts.htm	74
7	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/thumbnail_bio.html	69
8	[unknown origin]	41
9	http://www.tx.ncsu.edu:8190/jtatm/volume1issue3/issue3_abstracts.htm	36
10	http://www.tx.ncsu.edu/jtatm/	33
11	http://www.tx.ncsu.edu:8190/jtatm/volume1issue2/issue2_abstracts.htm	30
12	http://www.tx.ncsu.edu/tam/indept/news/jtatm_press_release.htm	28
13	http://www.tx.ncsu.edu:8190/jtatm/index.html	25
14	http://www.tx.ncsu.edu:8190/jtatm/volumelists.html	24
15	http://www.tx.ncsu.edu:8190/jtatm/announcements.html	24
16	http://www.tx.ncsu.edu:8190/jtatm/volume1issue3/academiatoursindustry.html	20
17	http://www.tx.ncsu.edu:8190/jtatm/Working_Site/	16
18	http://www.tx.ncsu.edu/jtatm/index.html	16
19	http://www.lib.ncsu.edu/eresources/textiles.html	16
20	http://www.tx.ncsu.edu:8190/jtatm/volume1issue1/current_abstracts.html	12
	Sub Total for the Referrers Above	**3258**
	Total for the Log File	**3785**

Source: Table generated by Webtrends; Data from COT server

Visitor Profile

Most Active Organization

Table D-13 identifies the companies or organizations that accessed your Web site the most often.

Table D-13: Most active organization for volume #1, issue #3

Most Active Organizations				
	Organizations	**Hits**	**% of Total Hits**	**User Sessions**
1	**North Carolina State University** ncsu.edu	10569	21.01%	543
2	152.1.40.242	2884	5.73%	66
3	**Inktomi Corp.** inktomi.com	1347	2.67%	55
4	**EXCALIBUR Group A Time Warner Company** rr.com	1114	2.21%	46
5	152.1.40.254	1075	2.13%	36
6	**America Online** aol.com	980	1.94%	435
7	conveynet.com	547	1.08%	19
8	army.mil	460	0.91%	37
9	**MindSpring Enterprises Inc.** mindspring.com	442	0.87%	23
10	tft.csiro.au	419	0.83%	27
	Subtotal For Companies Above	**19837**	**39.44%**	**1287**
	Total For the Log File	**50288**	**100%**	**3785**

Source: Table generated by Webtrends; Data from COT server

Activity level by Day of the week

This section shows the activity for each day of the week for the report period (i.e. if there are two Mondays in the report period, the value presented is the sum of all hits for both Mondays.) See Table D- 14.

Table D-14: Activity level by Day of the week volume #1, issue #3

Activity Level by Day of the Week				
	Day	**Hits**	**% of Total Hits**	**User Sessions**
1	**Sun**	2271	4.51%	252
2	**Mon**	8251	16.4%	637
3	**Tue**	6911	13.74%	533
4	**Wed**	9572	19.03%	632
5	**Thu**	12823	25.49%	844

6	**Fri**	6461	12.84%	553
7	**Sat**	3999	7.95%	334
	Total Weekdays	**44018**	**87.53%**	**3199**
	Total Weekend	**6270**	**12.46%**	**586**

Source: Table generated by Webtrends; Data from COT server

Activity level by hour of the day

This section shows the most and the least active hour of the day for the report period. The second table breaks down activity for the given report period to show the average activity for each individual hour of the day. See Table D-15.

Table D-15: Activity level by hour of the day for volume #1, issue #3

Activity Level by Hour of the Day	
Most Active Hour of the Day	09:00-09:59
Least Active Hour of the Day	23:00-23:59

Activity Level by Hours Details			
Hour	**# of Hits**	**% of Total Hits**	**# of User Sessions**
00:00-00:59	1090	2.16%	90
01:00-01:59	1165	2.31%	86
02:00-02:59	1360	2.7%	111
03:00-03:59	2721	5.41%	127
04:00-04:59	1516	3.01%	102
05:00-05:59	1752	3.48%	149
06:00-06:59	1293	2.57%	125
07:00-07:59	1506	2.99%	127
08:00-08:59	3284	6.53%	187
09:00-09:59	3971	7.89%	223
10:00-10:59	3514	6.98%	197
11:00-11:59	3435	6.83%	256
12:00-12:59	3231	6.42%	206
13:00-13:59	2532	5.03%	216
14:00-14:59	3189	6.34%	206
15:00-15:59	2698	5.36%	215
16:00-16:59	2370	4.71%	211
17:00-17:59	2203	4.38%	184
18:00-18:59	2204	4.38%	167

19:00-19:59	1410	2.8%	150
20:00-20:59	1031	2.05%	101
21:00-21:59	1125	2.23%	122
22:00-22:59	924	1.83%	141
23:00-23:59	764	1.51%	86
Total Users during Work Hours (8:00am-5:00pm)	**28224**	**56.12%**	**1917**
Total Users during After Hours (5:01pm-7:59am)	**22064**	**43.87%**	**1868**

Source: Table generated by Webtrends; Data from COT server

Technical Statistics and Analysis

Table D-16 shows the total number of hits for the site, how many were successful, how many failed, and calculates the percentage of hits that failed.

Table D-16: Technical Statistics and Analysis for volume #1, issue #3

Technical Statistics and Analysis	
Total Hits	54454
Successful Hits	50288
Failed Hits	4166
Failed Hits as Percent	7.65%
Cached Hits	7681
Cached Hits as Percent	14.1%

Source: Table generated by Webtrends; Data from COT server

Most downloaded file types

Table D-17 identifies the download file types and the total kilobytes downloaded for each file type. Cached requests and erred hits are excluded from the totals.

Table D-17: Most downloaded file types for volume #1, issue #3

Most downloaded File Types			
	File type	**No. of Files**	**K Bytes Transferred**

1	**gif**	14066	97,028K
2	**pdf**	7746	1,687,396K
3	**jpg**	6879	113,838K
4	**htm**	6721	81,039K
5	**html**	6416	75,054K
6	**doc**	370	589,967K
7	**mno**	253	31K
8	**log**	110	17K
9	**tmp**	30	44,213K
10	**ppt**	5	651K
	Total Files & K Bytes Transferred	**42596**	**2,689,230K**

Source: Table generated by Webtrends; Data from COT server

Organization Breakdown

Table D-18 provides a breakdown by types of organizations (.com, .net, .edu, .org, .mil, and .gov.).

Table D-18: Organization Breakdown for volume #1, issue #3

Organization Breakdown				
	Organization	**Hits**	**% of Total Hits**	**User Sessions**
1	**Education**	13575	51%	756
2	**Company**	8829	33.17%	1155
3	**Network**	3578	13.44%	299
4	**Military**	507	1.9%	47
5	**Organization**	99	0.37%	24
6	**Government**	28	0.1%	5
	Total	**26616**	**100%**	**2286**

Source: Table generated by Webtrends; Data from COT server

North American states and Provinces

Table D-19 shows the breaks down Web site activity to show which of the North American States and Provinces were the most active on your site. This information is based on where the domain name of the visitor is registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table D-19: North American states and Provinces for volume #1, issue #3

North American States & Provinces		
	State	User Sessions
1	North Carolina	575
2	Virginia	466
3	California	79
4	Connecticut	46
5	Michigan	28
6	Texas	22
7	Massachusetts	19
8	South Carolina	17
9	Alabama	13
10	New Jersey	11
	Total For the States Above	**1276**

Source: Table generated by Webtrends; Data from COT server

Most Active City

Table D-20 further breaks down the journal activity to show which cities were the most active on your site. This information is based on where the domain name of the visitor is registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table D-20: Most Active City for volume #1, issue #3

Activity by City		
	City, State	User Sessions
1	Raleigh, North Carolina, United States	553
2	Reston, Virginia, United States	439
3	San Mateo, California, United States	55
4	Stamford, Connecticut, United States	46
5	East Lansing, Michigan, United States	24
6	Fairfax, Virginia, United States	15
7	Redwood City, California, United States	14
8	Auburn University, Alabama, United States	13
9	Dallas, Texas, United States	13

10	**Blacksburg, Virginia, United States**	8
	Total For the Cities Above	**1180**

Source: Table generated by Webtrends; Data from COT server

Browser Details

Most of the visitors were using Internet Explorer 5 (53%) followed by Netscape Navigator 4 (33.6%) and small portion were using Internet Explorer 4 (8.83%) and Netscape Navigator 5 (0.39%), Netscape Navigator 3 (0.11)%, unknown (3.77%) and Internet Explorer 6 (0.73%).

Table D-21 and table D-22 shows the breakdown of the various versions of Netscape browsers and Internet explorer respectively those who visit the journal.

Table D- 21: Netscape browsers for volume #1, issue #3

Netscape Browsers				
	Browser	**Hits**	**% of Total Hits**	**User Sessions**
1	**Netscape 4.x**	15916	97.42%	729
2	**Netscape 5.x**	206	1.26%	11
3	**Netscape 3.x**	138	0.84%	52
4	**Netscape 2.x**	76	0.46%	3
5	**Netscape**	1	0%	1
	Total For Browsers Above	**16337**	**100%**	**796**

Source: Table generated by Webtrends; Data from COT server

Table D-22: Microsoft explorers for volume #1, issue #3

Microsoft Explorer Browsers				
	Browser	**Hits**	**% of Total Hits**	**User Sessions**
1	**Explorer 5.x**	22010	79.67%	1746
2	**Explorer 4.x**	5248	18.99%	266
3	**Explorer 6.x**	253	0.91%	17
4	**Explorer 3.x**	114	0.41%	4
5	**Explorer 1.x**	1	0%	1
	Total For Browsers Above	**27626**	**100%**	**2034**

Source: Table generated by Webtrends; Data from COT server

Operating System

Windows NT (40.19%) and Windows 98 (30.04%) were the most commonly used operating systems to view JTATM, followed by Windows 95 (10.48%). See Table D-23

Table D-23: Operating system for volume #1, issue #3

Most Used Platforms				
	Platform	Hits	% of Total Hits	User Sessions
1	**Windows NT**	20213	40.19%	1000
2	**Windows 98**	15110	30.04%	1216
3	**Others**	7741	15.39%	1077
4	**Windows 95**	5275	10.48%	356
5	**Macintosh PowerPC**	1772	3.52%	124
6	**SunOS**	78	0.15%	3
7	**Linux**	47	0.09%	5
8	**Windows 3.x**	34	0.06%	1
9	**Windows Win32s**	12	0.02%	2
10	**OS/2**	6	0.01%	1
	Total For Platforms Above	**50288**	**100%**	**3785**

Source: Table generated by Webtrends; Data from COT server

Monitor Settings

Color Quality:

Most of the visitors had the monitor set to 16 bits (good color quality; 44.32%) followed by; 24 bits 32 bits (very high good color quality; 36.63% 24 bits (high color quality; 7.95%), 8 bits (low color quality; 5.3%) and unknown (5.3%).

Monitor Resolution:

A large amount of visitors had the monitor resolution at 1024x768 (47.72%) followed by 800x600 (37.08%), 640x480 (3.45%), unknown (6.43%), 1152x864 (2.27%), 1280x1024 (1.99%), and 832x624 (1.05%).

Appendix E - Issue Analysis Volume #1, Issue #4

Summary Analysis of
Journal of Textile & Apparel Technology & Management – Volume #1, Issue #4

(http://www.tx.ncsu.edu/jtatm)

(August 24, 2001 – December 16, 2001)

Table of contents

Introduction

Journal of Textile & Apparel Technology & Management (JTATM) (http://www.tx.ncsu.edu/jtatm) is a quarterly electronic journal published by the Department of Textile & Apparel, Technology & Management of College of Textiles, North Carolina State University. The fourth issue of Volume #1 was launched on August 24, 2001. This report is prepared by analyzing the data from August 24, 2001– October 28, 2001 received from www.sitestats.com and from October 29, 2001 to December 16, 2001 from College of Textiles webserver. Data generated are with the help of the COT webmaster with a log analyzer software, Webtrends. Hence some data will only be available only for the first 10 weeks (August 24, 2001– October 28, 2001).

Table E-1 shows the general statistics for volume #1, issue #4 from August 23, 2001 to December 16, 2001.

Table E-1: General statistics for volume #1, issue #4

General Statistics	
Timeframe	08/23/01 00:00:00 - 12/16/01 23:59:00
Number of Successful Hits for Entire Site	73296
Number of Page Views (Impressions)	7162
Number of User Sessions	4557
User Sessions from United States	47.5%
International User Sessions	22.44%
User Sessions of Unknown Origin	30.04%
Average Number of Hits per Day	631
Average Number of Page Views Per Day	61
Average Number of User Sessions per Day	39
Average User Session Length	00:07:04

Source: Table generated by Webtrends; Data from COT server

Visit Profile

Number of unique visits, repetitive visits and the total number of hits are analyzed.

Unique visits

Unique visits are defined as the count of individual visitors who visited JTATM. The data is reported on a weekly basis. Unique visits are tracked by Internet Protocol address of the visitor/reader computer (See Figure E-1). The number of unique visits for the first week of (August 24, 2001– October 29, 2001) JTATM issue #4 was 235. In week 2, the number of unique visits was 18 (93% decline from week 1). There was a sharp increase in week 3 (n=171). There was an increase in Week 4 (n=208). There was a decrease in week 5 (n=127), week 6 (n=104) and week 7(n=96). There was a steady increase till week 10; week 8 (n=123), week 9 (n=123) and week 10 (n=125). After week 10, data was not received from www.sitestats.com and data from COT web server was not configured to receive specific visits on unique visits.

Repetitive visits

A repetitive visit is defined as the total number of all the visits (first time and repetitive visitors) who visited JTATM per week (see Table 1). The pattern for "repetitive visits" paralleled the pattern of "unique visits". Week 1 had the highest number of visits for issue #3 (n= 338) and declined for the next five week (week 2: n = 20). There was a sharp increase in week 3 with n=171 and week 4 (n=236). The follwing three weeks reported a decline (week 5: n=160; Week 6: n=117; Week 7: n=115). Weeks 8, 9 and 10 found an increase with n=123 on weeks 8 and 9 and n=125 on week 10.

Hits (page impressions)

Hits are defined as the total number of hits (for all the pages) that were made for the entire week. This pattern was similar to the "unique visits" and "repetitive visits"; the total number of hits per week was higher than unique visits and repetitive visits, as it counts all the page hits (page accessed) by the visitor (See Figure E-2). The first week recorded 1613 and then declined to 53 and a sharp increase to 930 in week 3. Next couple of weeks saw a decline in the trend (Week 4: n=835; Week 5: n=512; Week 6: n=435). The next three weeks remained the same with not major occurance in reduction or increase in hits till after week 11 (n=595). There was a sharp decline in week 12 (n=292) and then the hits increased till week 16 (n=557). Week 17 had 507 hits. Note: Data from Week 11 was received from COT webserver. So the increase/ decrease after that may be due to the data from two different parties.

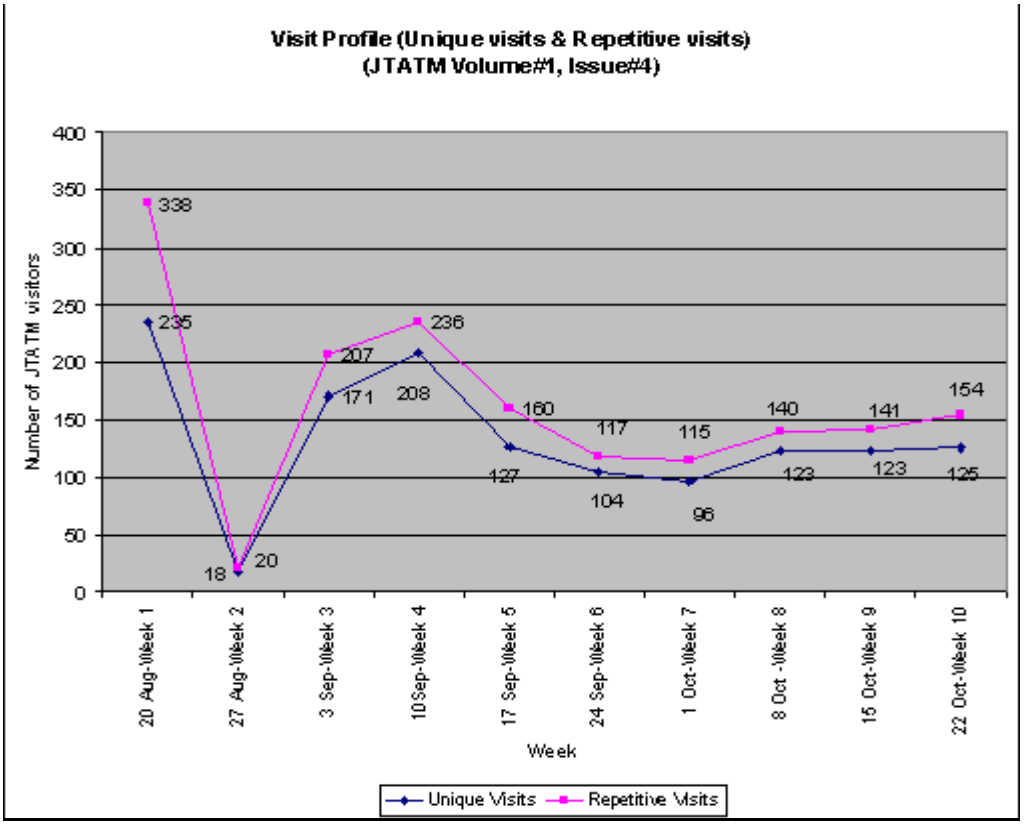


Figure E –1: Visit Profile for Volume#1, Issue #4

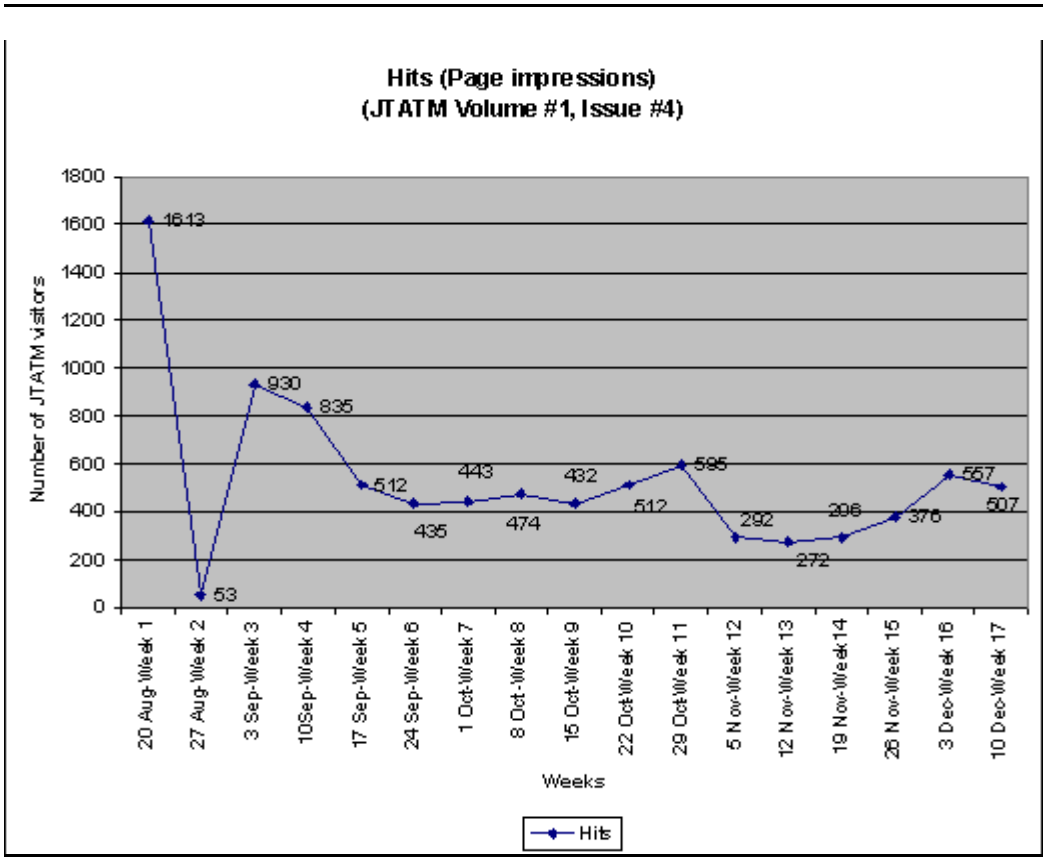


Figure E-2: Hit profile for Volume #1, Issue #4

Hit Profile

When considering the number of hits per page, the 'index' page – opening page - ranks the top (25.85%) (compared to Issue #1 – 39%)followed by the 'volumelists' (12.01%) pages (See Figure E-3). There has been a constant visit to the 'subscription' (1.08%) and 'announcement' page (4.18%). The 'author guidelines' (1.96%) and 'editorial board' page were also accessed regularly (1.71%).

Specific pages: Issue_4_abstracts (6.8%); issue_4_koreanconference (2.13%); issue_4_textileinstitue (1.65%); issue_4_fibersociety (1.58%); Issue_4_graduatebio (3.22%) Issue_3_abstracts (2.78%) and specialissue_abstractsv1i3a (5.79%); issue_3_internationboard (1.26%); issue_3_academic_tour_industry (0.91%) page also received hits.

Issue_2_abstracts (4.41%); issue_2_thumbnailbio (0.83%); issue_1_currentabstracts (6.94%) received hits through out the period.

Table E-2: Data for the page hits for Volume #1, issue #4

	20 Aug-Week 1	27 Aug-Week 2	3 Sep-Week 3	10Sep-Week 4	17 Sep-Week 5	24 Sep-Week 6	1 Oct-Week 7	8 Oct -Week 8	15 Oct-Week 9	22 Oct-Week 10	29 Oct-Week 11	5 Nov-Week 12	12 Nov-Week 13	19 Nov-Week14	26 Nov-Week 15	3 Dec-Week 16	10 Dec-Week 17
index	507	16	220	309	192	133	102	126	106	125	164	66	57	74	80	92	140
volumelists	158	8	205	130	62	81	82	35	53	85	88	46	12	17	27	38	39
subscribe_to_jtatm	13	2	10	10	6	6	3	1	3	3	5	4	4		8	13	8
announcements	93		9	22	21	11	15	16	33	59	22	7	11	12	10	17	24
editiorial_board	19		7	7	13	10	6	9	9	9	16		5	6	9		12
author_guidelines	23	4	12	12	22	6	4	8	6	15	22	5	5		9	13	13
volume1issue2/thumbnail_bio			2	4	5	5	4		5	3	4	3	6	4	3	12	6
volume1issue 4/graduate_bio	76	2	10	24	6	8	15	32	9	19	18	6	10	12	25	20	21
volume1issue 4/issue4_abstracts	126	7	39	84	60	39	41	27	28	27	36	12	19		23	23	30
volume1issue 4/ koreanconference	34	1	11	22	6	7	9	6	9	9	19	5	10	11	14	16	18
volume1issue 4/textileinstitute	24	2	17	26	8	7	7	6	6	5	10	3	6	5	8	10	10
volume1issue 4/fibersociety	40		6	16	1	3	5	7	9	7	7		3	7	5	10	
volume1specialissue/ specialissue_abstractsv1i3a	46			19	28	20	28	30	43	28	56	37	17	33	42	31	38
collaborator	21		5	9	6		2	3	6	5	8	4	3	3	6	11	9
volume1issue3/issue3_abstracts	57	2	22	30	17	13	15	6	11	17	18	7	5	8	8	19	15
volume1issue1/current_abstracts	51		196	50	13	22	34	13	33	25	31	12	7	11	17	28	22
volume1issue2/issue2_abstracts	30	1	102	39	16	17	36	8	20	25	35	15	12	12	17	27	16
volume1issue3/ academiatoursindustry	4		8	4	8	11		1		2	2	3	3	6	8	7	6

The ‘index’ page of the journal has the most number of hits when compared to other pages, and every week the index page hits were almost double the hits of the other pages (Table E-2). A total of 507 (compared to Issue #1-349) index page hits was recorded for the first week. The final week recorded 140 hits.

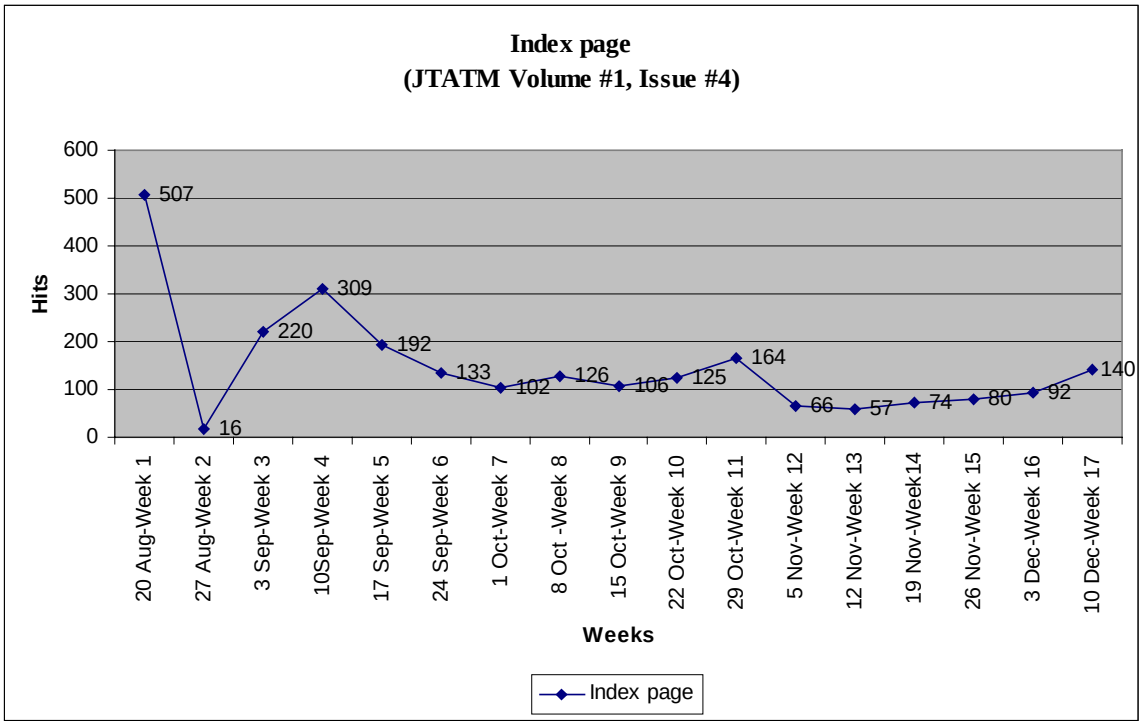


Figure E-3: Index page for Volume #1, Issue #4

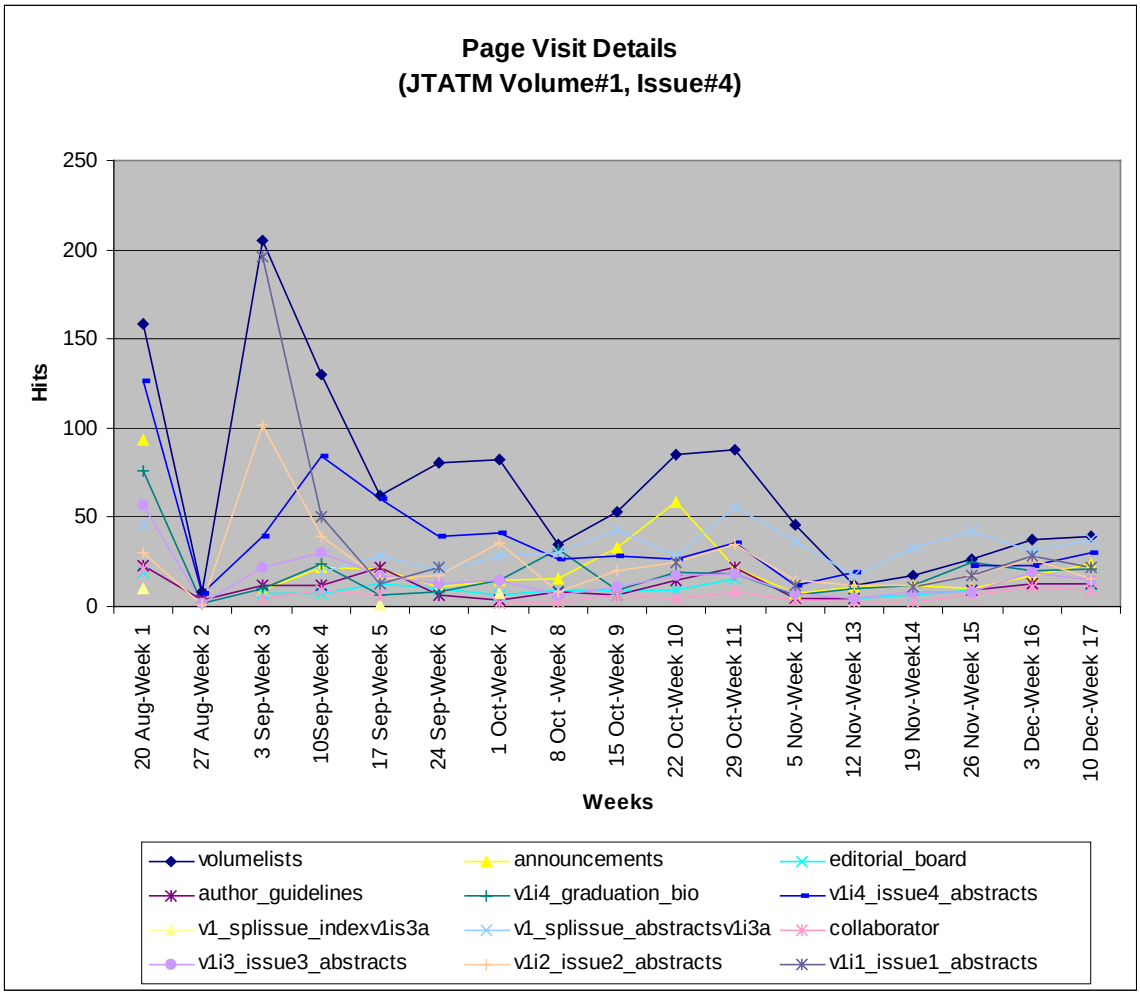


Figure E- 4: Page visit details for Volume #1, Issue #4

Country Profile

Respondents from 59 countries (compared with 32 in Issue #1 and 46 in Issue #2 and 56 in Issue #3) have visited the journal, "unknown" includes unidentifiable countries by www.sitestats.com and COT webserver. Responses from United States top the list, followed by United Kingdom, Canada, Germany, France, Australia, Japan, Taiwan (See Figure E-5). See Table E-3 for a list of all the countries. New countries where the journal has reached for Issue #4 (and not for Issues #1, #2, and #3) are Cyprus, UAE (COT- stats), Isreal (COT-stats).

Gautemala, Lithuania, Mauritius, Mexico, Sri Lanka, Sweden, Ukraine, Yugoslavia are the countries that visited JTATM for the past issues, but did not visit for this issue.

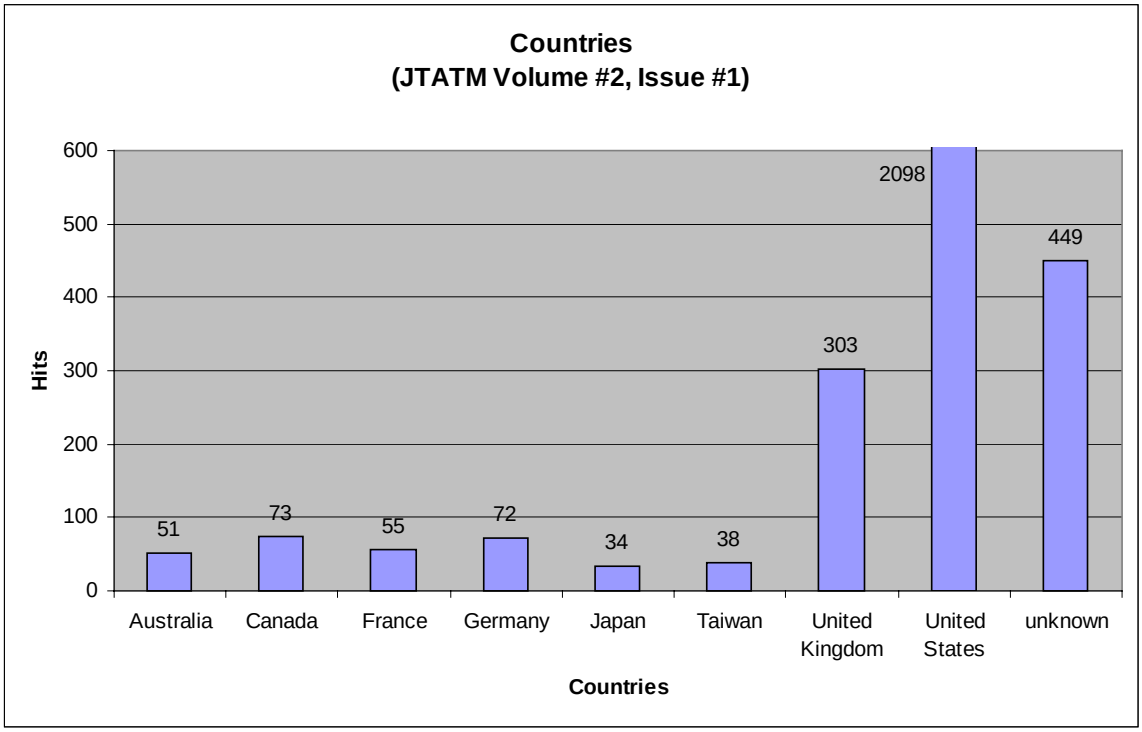


Figure E-5: Countries visited for Volume #1, Issue #4

Table E-3: Country Profile for Volume #1, Issue #4

Countries	Hits	Percentage
Argentina	15	0.43%
Australia	51	1.47%
Austria	1	0.03%
Belgium	9	0.26%
Brazil	4	0.12%
Bulgaria	1	0.03%
Canada	73	2.10%
China	2	0.06%
Colombia	2	0.06%
Croatia (Hrvatska)	4	0.12%
Cyprus	2	0.06%
Czech Republic	3	0.09%
Denmark	1	0.03%
Egypt	4	0.12%
Finland	3	0.09%
France	55	1.58%
Germany	72	2.07%
Greece	20	0.58%
Hong Kong	29	0.83%
Iran	3	0.09%
India	12	0.35%
Indonesia	3	0.09%
Ireland	18	0.52%
Isreal	7	0.20%
Italy	32	0.92%
Japan	34	0.98%
Jamaica	1	0.03%
Korea	7	0.20%
Malaysia	6	0.17%
Netherlands	8	0.23%
New Zealand (Aotearoa)	12	0.35%
Norway	1	0.03%
Pakistan	1	0.03%
Poland	3	0.09%
Portugal	3	0.09%
Romania	5	0.14%
Russian Federation	2	0.06%
Saudi Arabia	2	0.06%
Slovenia	15	0.43%
Singapore	27	0.78%
South Africa	3	0.09%
Spain	13	0.37%
Switzerland	15	0.43%

Taiwan	38	1.09%
Thailand	3	0.09%
Turkey	1	0.03%
United Kingdom	303	8.71%
United States	2098	60.32%
unknown	449	12.91%
UAE	2	0.06%
Total	3478	100.00%

Access profile

Entry pages

The entry page for the majority of the visitors was through the index page (51.2%) followed by the specialissue_abstractsv1i3a (4.07%). See Table E-4.

Table E-4: Top entry pages for volume #1, issue #4

Top Entry Pages			
	Pages	**% of Total**	**User Sessions**
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	22.08%	472
2	**JTATM - North Carolina State University** http://webserv1.tx.ncsu.edu/jtatm/	21.66%	463
3	http://www.tx.ncsu.edu/jtatm	7.48%	160
4	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	4.07%	87
5	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	2.99%	64
6	http://webserv1.tx.ncsu.edu/jtatm/volume1issue+4/graduate_bio.html	2.85%	61
7	**JTATM - North Carolina State University** http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	1.87%	40
8	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	1.73%	37
9	http://www.tx.ncsu.edu/jtatm/volume1issue 4/koreanconference.htm	1.68%	36
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	1.63%	35
	Total For the Pages Above (only sessions starting on a valid document type are included)	**68.08%**	**1455**

Source: Table generated by Webtrends; Data from COT server

Exit pages

For most users, the exit page was the index page (29.29%) followed by the issue4_abstracts (5.71%). See Table E-5.

Table E- 5: Top exit pages for volume #1, issue #4

Top Exit Pages			
	Pages	**% of Total**	**User Sessions**
1	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/	14.74%	315
2	**JTATM - North Carolina State University** http://webserv1.tx.ncsu.edu/jtatm/	14.55%	311
3	http://www.tx.ncsu.edu/jtatm/volume1issue 4/issue4_abstracts.htm	5.71%	122
4	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	4.77%	102
5	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	4.49%	96
6	**JTATM - North Carolina State University** http://webserv1.tx.ncsu.edu/jtatm/announcements.html	3.41%	73
7	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/announcements.html	3.13%	67
8	http://webserv1.tx.ncsu.edu/jtatm/volume1issue+4/graduate_bio.html	2.85%	61
9	**JTATM - North Carolina State University** http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	2.62%	56
10	**JTATM - North Carolina State University** http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	2.43%	52
	Total For the Pages Above (only sessions starting on a valid document type are included)	**58.75%**	**1255**

Source: Table generated by Webtrends; Data from COT server

Most downloaded Articles:

Table E-6 identifies the most popular file downloads of your Web site. If an error occurred during the transfer, that transfer is not counted.

Table E-6: Most downloaded files for volume #1, issue #4

Most Downloaded Files				
	File	No. of Downloads	% of Total Downloads	User Sessions
1	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Pourdeyhimi/fulleditpourdeyhimi wip.pdf	809	6.24%	30
2	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part3.pdf	598	4.61%	131
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part4.pdf	552	4.26%	121
4	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part2.pdf	532	4.1%	127
5	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_full.pdf	520	4.01%	132
6	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Kilduff/fulleditkilduffa.pdf	459	3.54%	131
7	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part2.pdf	444	3.42%	104
8	http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Istook/fulleditistook.pdf	396	3.05%	69
9	http://www.tx.ncsu.edu/jtatm/volume1issue 4/articles/andrea/andrea_full.pdf	380	2.93%	134
10	http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part1.pdf	376	2.9%	99
11	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf	365	2.81%	75
12	http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part3.pdf	270	2.08%	73
13	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/martinking/king_full.pdf	253	1.95%	61
14	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part4.pdf	242	1.86%	46
15	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part3.pdf	224	1.73%	42
16	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part1.pdf	223	1.72%	44
17	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/kilduff/kilduff_full.pdf	212	1.63%	61
18	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part2.pdf	210	1.62%	49
19	http://www.tx.ncsu.edu/jtatm/volume1issue2/articles/istook/istook_full.pdf	208	1.6%	73

20	http://webserv1.tx.ncsu.edu/jtatm/volume1issue2/articles/fralix/fralix_full.pdf	196	1.51%	41
21	http://www.tx.ncsu.edu/jtatm/volume1issue3/articles/tracimayplumlee/plumee_full.pdf	189	1.46%	46
22	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf	182	1.4%	38
23	http://www.tx.ncsu.edu/jtatm/volume1issue 4/fibersociety_webprogram.pdf	179	1.38%	79
24	http://webserv1.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part2.pdf	178	1.37%	44
25	http://www.tx.ncsu.edu/jtatm/volume1issue 4/articles/primentas/primentas_full.pdf	172	1.32%	55
	Total For the Files Above	**8369**	**64.65%**	**N/A**

Source: Table generated by Webtrends; Data from COT server

Visiting Spiders

Table E- 7 identifies all robots, spiders, crawlers and search services (i.e. Alta Vista, Lycos, and Excite) visiting the journal.

Table E- 7: Visiting spiders for volume #1, issue #4

Visiting Spiders				
	Spider	Hits	% of Total Hits	User Sessions
1	vspider	983	82.6%	12
2	FAST-WebCrawler	70	5.88%	30
3	scooter-venus-3.0.vns	35	2.94%	6
4	Mozilla/4.0 (compatible; MSIE 5.0; Windows 98; 3Com U.S. Robotics Connections; DigExt)	28	2.35%	1
5	Scooter-W3-1.0	26	2.18%	5
6	Mozilla/3.0 (Slurp/cat; slurp@inktomi.com; http://www.inktomi.com/slurp.html)	14	1.17%	10
7	Openfind data gatherer, Openbot	11	0.92%	9
8	Gulliver	10	0.84%	2
9	Scooter_trk14-3.0.3	7	0.58%	2
10	RRC crawler_admin@bigfoot.com	2	0.16%	2
	Total For Spiders Above	**1186**	**99.66%**	**79**

Source: Table generated by Webtrends; Data from COT server

Referrer Profile

Referring Sites

The main referring sites (sites that referred respondent to the journal) are http://ww.tx.ncsu.edu (14.5%), http://ww.google.com (18.49%), http://google.yahoo.com (9.65%), and http://www.lib.ncsu.edu (4.11%). See Table E-8.

Table E-8: Referring sites for Volume #1, Issue #4

Site	Hits	Percentage
none[a]	897.00	51.20%
www.tx.ncsu.edu	254.00	14.50%
www.google.com	324.00	18.49%
google.yahoo.com	169.00	9.65%
asia.google.yahoo.com	8.00	0.46%
www.lib.ncsu.edu	72.00	4.11%
www.msu.edu	1.00	0.06%
search.netscape.com	1.00	0.06%
www.ita.rwth-aachen.de	3.00	0.17%
web.tft.csiro.au	4.00	0.23%
search.msn.com	3.00	0.17%
apparel.about.com	10.00	0.57%
www.textiles.umist.ac.uk	6.00	0.34%
Total	1752.00	100.00%

[a] It is speculated that 82.448% ('none') are accessing via press release.

Table E-9 shows the user sessions from the referring sites.

Table E-9: Top referring sites for volume #1, issue #4

Top Referring Sites		
	Site	**User Sessions**
1	**No Referrer**	3299
2	**http://www.tx.ncsu.edu/**	522
3	**http://www.google.com/**	338
4	**http://google.yahoo.com/**	187

5	[unknown+origin]	23
6	http://webserv1.tx.ncsu.edu/	21
7	http://www.textiles.umist.ac.uk/	14
8	http://www.lib.ncsu.edu/	12
9	http://search.ncsu.edu/	11
10	http://www.cgibin.ncsu.edu/	10
11	https://secure-imho.ncsu.edu/	7
12	http://www.google.co.uk/	7
13	http://homestead.juno.com/	6
14	http://aolsearch.aol.com/	6
15	http://uk.google.yahoo.com/	5
16	http://www.google.de/	5
17	http://databases.lib.ncsu.edu/	5

Source: Table generated by Webtrends; Data from COT server

Referring Keyword

Some of the phrases used in search engines to locate JTATM issue #4 are shown in Table E-10.

Table E-10: Top search keyword for volume #1, issue #4

Top Search Keywords			
	Keywords	Keywords found	% of Total
1	electrospinning	49	4.7%
2	of	34	3.26%
3	clothing	26	2.49%
4	nano	22	2.11%
5	in	20	1.92%
6	fiber	19	1.82%
7	lines	17	1.63%
8	textile	17	1.63%
9	fashion	17	1.63%
10	apparel	15	1.44%
	Total Found for the Keywords Above	236	22.67%
	Total of Keywords Found in the Log File	1041	100%

Source: Table generated by Webtrends; Data from COT server

Referring URL

Table E – 11 provides the full URLs of the sites with links to your site.

Table E-11: Top referring URL's for volume #1, issue #4

Top Referring URLs		
	URL	User Sessions
1	No Referrer	3299
2	http://www.tx.ncsu.edu:8190/jtatm/	116
3	http://www.tx.ncsu.edu/jtatm/	74
4	http://www.tx.ncsu.edu/jtatm	64
5	http://www.tx.ncsu.edu/jtatm/volume1issue%204/graduate_bio.html	33
6	http://www.tx.ncsu.edu/verity/VSearchResult.cfm	31
7	http://www.tx.ncsu.edu/tam/indept/news/jtatm_press_release.htm	25
8	[unknown+origin]	23
9	http://www.tx.ncsu.edu/departments/tatm/research_in_tatm.html	16
10	http://www.tx.ncsu.edu/jtatm/announcements.html	16
11	http://www.textiles.umist.ac.uk/textiles/other_www_sites.htm	14
12	http://www.tx.ncsu.edu/jtatm/volume1specialissue /specialissue_abstractsv1i3a.htm	13
13	http://www.tx.ncsu.edu/jtatm/volume1issue%204/koreanconference.htm	13
14	http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	10
15	http://www.tx.ncsu.edu/jtatm/volumelists.html	10
16	http://www.lib.ncsu.edu/eresources/textiles.html	10
17	http://www.tx.ncsu.edu:8190/jtatm/volume1issue 4/graduate_bio.html	10
18	http://www.cgibin.ncsu.edu/tx-bin/jtatmform.pl	10
19	http://search.ncsu.edu/s97is.vts? action=View&VdkVgwKey=http://www.tx	10
20	http://www.tx.ncsu.edu/tam/aboutdept/reserach/research.htm	9
	Sub Total for the Referrers Above	**3806**
	Total for the Log File	**4557**

Source: Table generated by Webtrends; Data from COT server

Visitor Profile

Most Active organization

The frequently visited organizations for the journal are listed in Table E-12.

Table E-12: Most Active organization for volume #1, issue #4

Most Active Organizations				
	Organizations	Hits	% of Total Hits	User Sessions
1	**North Carolina State University** ncsu.edu	15711	21.43%	373
2	152.1.40.242	15114	20.62%	40
3	152.1.40.210	2263	3.08%	8
4	army.mil	1142	1.55%	41
5	purdue.edu	1088	1.48%	2
6	**EXCALIBUR Group A Time Warner Company** rr.com	925	1.26%	65
7	**Kansas State University** ksu.edu	807	1.1%	6
8	**America Online** aol.com	700	0.95%	337
9	test.ensait.fr	509	0.69%	16
10	googlebot.com	488	0.66%	336
	Subtotal For Companies Above	**38747**	**52.86%**	**1224**
	Total For the Log File	**73296**	**100%**	**4557**

Source: Table generated by Webtrends; Data from COT server

Activity level by day of the week

This section shows the activity for each day of the week for the report period (i.e. if there are two Mondays in the report period, the value presented is the sum of all hits for both Mondays.) See Table E- 13.

Table E-13: Activity level by day of the week for volume #1, issue #4

Activity Level by Day of the Week				
	Day	Hits	% of Total Hits	User Sessions
1	**Sun**	3349	4.56%	426
2	**Mon**	7540	10.28%	679
3	**Tue**	18264	24.91%	697
4	**Wed**	10484	14.3%	842
5	**Thu**	17750	24.21%	886
6	**Fri**	13809	18.84%	683
7	**Sat**	2100	2.86%	344
	Total Weekdays	**67847**	**92.56%**	**3787**
	Total Weekend	**5449**	**7.43%**	**770**

Source: Table generated by Webtrends; Data from COT server

Activity level by Hour of the Day

This section shows the most and the least active hour of the day for the report period. The second table breaks down activity for the given report period to show the average activity for each individual hour of the day. See Table E-14.

Table E-14: Activity level by Hour of the Day for volume #1, issue #4

Activity Level by Hour of the Day	
Most Active Hour of the Day	14:00-14:59
Least Active Hour of the Day	23:00-23:59

Activity Level by Hours Details			
Hour	# of Hits	% of Total Hits	# of User Sessions
00:00-00:59	1975	2.69%	129
01:00-01:59	1498	2.04%	137
02:00-02:59	1336	1.82%	135
03:00-03:59	2646	3.61%	146

04:00-04:59	1406	1.91%	148
05:00-05:59	1703	2.32%	195
06:00-06:59	1212	1.65%	142
07:00-07:59	1211	1.65%	202
08:00-08:59	2111	2.88%	262
09:00-09:59	2523	3.44%	252
10:00-10:59	3256	4.44%	250
11:00-11:59	4306	5.87%	264
12:00-12:59	4602	6.27%	241
13:00-13:59	6537	8.91%	250
14:00-14:59	8740	11.92%	250
15:00-15:59	7868	10.73%	250
16:00-16:59	6493	8.85%	237
17:00-17:59	2199	3%	181
18:00-18:59	5169	7.05%	105
19:00-19:59	1284	1.75%	161
20:00-20:59	1462	1.99%	148
21:00-21:59	1256	1.71%	159
22:00-22:59	1447	1.97%	211
23:00-23:59	1056	1.44%	102
Total Users during Work Hours (8:00am-5:00pm)	**46436**	**63.35%**	**2256**
Total Users during After Hours (5:01pm-7:59am)	**26860**	**36.64%**	**2301**

Source: Table generated by Webtrends; Data from COT server

Technical statistics and Analysis

Table E-15 shows the total number of hits for the site, how many were successful, how many failed, and calculates the percentage of hits that failed.

Table E-15: Technical statistics and analysis for volume #1, issue #4

Technical Statistics and Analysis	
Total Hits	74349
Successful Hits	73296
Failed Hits	1053
Failed Hits as Percent	1.41%
Cached Hits	30915
Cached Hits as Percent	41.58%

Source: Table generated by Webtrends; Data from COT server

Most downloaded file types

Table D-16 identifies the download file types and the total kilobytes downloaded for each file type. Cached requests and erred hits are excluded from the totals.

Table E-16: Most downloaded file types for volume #1, issue #4

Most downloaded File Types			
	File type	No. of Files	K Bytes Transferred
1	pdf	12588	1,352,929K
2	jpg	11592	174,686K
3	gif	11525	44,008K
4	html	3578	52,919K
5	htm	3051	35,573K
6	ppt	27	1,908K
7	doc	17	28,198K
8	tmp	2	5,547K
9	log	1	1K
	Total Files & K Bytes Transferred	**42381**	**1,695,765K**

Source: Table generated by Webtrends; Data from COT server

Organization breakdown

Table E-17 provides a breakdown by types of organizations (.com, .net, .edu, .org, .mil, and .gov.).

Table E-17: Organization breakdown for volume #1, issue #4

Organization Breakdown				
	Organization	Hits	% of Total Hits	User Sessions
1	Education	21469	65.26%	710

2	**Company**	6068	18.44%	1183
3	**Network**	3901	11.85%	594
4	**Military**	1179	3.58%	47
5	**Organization**	225	0.68%	24
6	**Government**	52	0.15%	6
	Total	**32894**	**100%**	**2564**

Source: Table generated by Webtrends; Data from COT server

North American States and Provinces

Table E-18 shows the breaks down Web site activity to show which of the North American States and Provinces were the most active on your site. This information is based on where the domain name of the visitor is registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table E-18: North American States and Provinces for volume #1, issue #4

North American States & Provinces		
	State	**User Sessions**
1	**North Carolina**	387
2	**Virginia**	358
3	**California**	70
4	**Connecticut**	70
5	**New York**	44
6	**Texas**	21
7	**South Carolina**	19
8	**Massachusetts**	18
9	**Alabama**	17
10	**Pennsylvania**	17
	Total For the States Above	**1021**

Source: Table generated by Webtrends; Data from COT server

Most Active city

Table E-19 further breaks down the journal activity to show which cities were the most active on your site. This information is based on where the domain name of the visitor is

registered, and may not always be an accurate representation of the actual geographic location of this visitor.

Table E-19: Most Active city for volume #1, issue #4

Activity by City		
	City, State	User Sessions
1	Raleigh, North Carolina, United States	376
2	Reston, Virginia, United States	340
3	Stamford, Connecticut, United States	65
4	New York, New York, United States	28
5	San Mateo, California, United States	23
6	Redwood City, California, United States	21
7	Auburn University, Alabama, United States	16
8	Norcross, Georgia, United States	9
9	Spartanburg, South Carolina, United States	9
10	Fairfax, Virginia, United States	9
	Total For the Cities Above	**896**

Source: Table generated by Webtrends; Data from COT server

Browser Details

Table E- 20 section identifies the most popular WWW Browsers used by visitors to your site.

Table E-20: Top browsers for volume #1, issue #4

Top Browsers				
	Browser	Hits	% of Total Hits	User Sessions
1	Netscape	32647	44.54%	356
2	Microsoft Internet Explorer	20380	27.8%	1315
3	Others	17358	23.68%	2354
4	vspider/3.51	983	1.34%	12
5	contype	310	0.42%	14
6	Other Netscape Compatible	232	0.31%	31
7	Googlebot/2.1 (http://www.googlebot.com/bot.html)	220	0.3%	146
8	WebCopier v2.7	199	0.27%	2
9	COAST WebMaster/4.1.1.1 (Windows NT)	184	0.25%	3

10	**Verity-URL-Gateway/1.0**	143	0.19%	36
	Total For Browsers Above	**72656**	**99.12%**	**4269**

Source: Table generated by Webtrends; Data from COT server

Table E-21 and E-22 shows the breakdown of the various versions of Netscape browsers and Internet explorer respectively those who visit the journal.

Table E-21: Netscape browsers for volume #1, issue #4

Netscape Browsers				
	Browser	**Hits**	**% of Total Hits**	**User Sessions**
1	**Netscape 4.x**	32403	99.25%	325
2	**Netscape 5.x**	129	0.39%	17
3	**Netscape 2.x**	86	0.26%	2
4	**Netscape 3.x**	29	0.08%	12
	Total For Browsers Above	**32647**	**100%**	**356**

Source: Table generated by Webtrends; Data from COT server

Table E-22: Microsoft explorer for volume #1, issue #4

Microsoft Explorer Browsers				
	Browser	**Hits**	**% of Total Hits**	**User Sessions**
1	**Explorer 5.x**	17716	86.92%	1100
2	**Explorer 4.x**	1460	7.16%	102
3	**Explorer 6.x**	1192	5.84%	111
4	**Explorer 3.x**	12	0.05%	2
	Total For Browsers Above	**20380**	**100%**	**1315**

Source: Table generated by Webtrends; Data from COT server

Operating System

Windows NT (52.5%) and Windows 98 (14.34%) were the most commonly used operating systems to view JTATM, followed by Windows 95 (4.1%). See Table E- 23.

Table E-23: Operating system for volume #1, issue #4

Most Used Platforms				
	Platform	Hits	% of Total Hits	User Sessions
1	**Windows NT**	38483	52.5%	727
2	**Others**	20374	27.79%	2906
3	**Windows 98**	10514	14.34%	689
4	**Windows 95**	3011	4.1%	156
5	**Macintosh PowerPC**	809	1.1%	69
6	**Linux**	71	0.09%	4
7	**SunOS**	34	0.04%	6
	Total For Platforms Above	**73296**	**100%**	**4557**

Source: Table generated by Webtrends; Data from COT server

Monitor Settings

Color Quality

Most of the visitors had the monitor set to 16 bits (good color quality; 45.31%) followed by; 32 bits (very high good color quality; 37.49% 24 bits (high color quality; 9.99%), 8 bits (low color quality; 4.53%) and unknown (2.67%).
Note: (Data analyzed from August 24, 2001– October 28, 2001)

Monitor Resolution

A large amount of visitors had the monitor resolution at 1024x768 (46.94%) followed by 800x600 (42.58%), 640x480 (2.86%), unknown (2.80%), 1152x864 (3.39%), and 1280x1024 (1.24%).
Note: (Data analyzed from August 24, 2001– October 28, 2001)

Appendix F - Issue Analysis Volume #2, Issue #1

Summary Analysis of
Journal of Textile & Apparel Technology & Management - Volume#2, Issue#1

(http://www.tx.ncsu.edu/jtatm)

(December 17, 2001– February 15, 2002)
(Issue analysis is shortened)

TABLE OF CONTENTS

Introduction

Journal of Textile & Apparel Technology & Management (JTATM) (http://www.tx.ncsu.edu/jtatm) is a quarterly electronic journal published by the Department of Textile & Apparel, Technology & Management of College of Textiles, North Carolina State University. This report is prepared by analyzing the data from December 17, 2001 to February 15, 2001. Eventhough the next issue is not yet come online, this report is studied till February 15, 2002 as the student needs to analyze the report before defending his thesis. Data for this issue is got from College of Textiles (COT) web server. The COT Webmaster generates the graphs from the log files using the log analyzer software, WebTrends.

General Details

Table F-38: General details for Volume #2, Issue #1

Number of Successful Hits for Entire Site	24420
Number of Page Views (Impressions)	4254
Number of User Sessions	3150
User Sessions from United States	52.22%
International User Sessions	18.47%
User Sessions of Unknown Origin	29.3%
Average Number of Hits per Day	400
Average Number of Page Views Per Day	69
Average Number of User Sessions per Day	51
Average User Session Length	00:06:44

Most requested page

The most requested page is the most popular page for this issue by the readers/visitors of JTATM. This gives the idea for the editors the most visited page and hence concluding who the target audiences are for this issue.

Table F-39: Most requested pages – Volume #2, Issue #1

	Pages	Views	% of Total Views	User Sessions	Avg. Time
1	*http://www.tx.ncsu.edu/jtatm/*	800	18.8%	663	00:01:24
2	*http://www.tx.ncsu.edu/jtatm*	582	13.68%	513	00:00:15

3	http://www.tx.ncsu.edu/jtatm/volume2issue1/vo2_issue1_abstracts.htm	390	9.16%	342	00:03:23
4	http://www.tx.ncsu.edu/jtatm/volumelists.html	261	6.13%	225	00:00:34
5	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	212	4.98%	188	00:03:08
6	http://www.tx.ncsu.edu/jtatm/volume2issue1/industry.htm	122	2.86%	110	00:01:17
7	http://www.tx.ncsu.edu/jtatm/announcements.html	96	2.25%	87	00:01:13
8	http://www.tx.ncsu.edu/jtatm/volume1issue4/issue4_abstracts.htm	89	2.09%	82	00:01:36
9	http://www.tx.ncsu.edu/jtatm/volume1issue3/issue3_abstracts.htm	87	2.04%	80	00:01:22
10	http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	84	1.97%	78	00:01:55
11	http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	82	1.92%	76	00:02:37
12	http://www.tx.ncsu.edu/jtatm/volume2issue1/intltrade.htm	77	1.81%	66	00:01:14
13	http://www.tx.ncsu.edu/jtatm/collaborator.html	70	1.64%	61	00:02:28
14	http://www.tx.ncsu.edu/jtatm/volume2issue1/fibersocietylecture.htm	68	1.59%	61	00:01:05
15	http://www.tx.ncsu.edu/jtatm/editiorial_board.html	66	1.55%	61	00:02:22
16	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	63	1.48%	60	00:05:36
17	http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	61	1.43%	56	00:01:29
18	http://www.tx.ncsu.edu/jtatm/author_guidelines.html	55	1.29%	48	00:02:19
19	http://www.tx.ncsu.edu/jtatm/toteprogram.htm	52	1.22%	46	00:01:03
20	http://www.tx.ncsu.edu/jtatm/volume2issue1/insidetatmvol2issue1.htm	52	1.22%	45	00:01:48

Top entry pages

This section identifies the first page viewed when a JTATM reader/visitor visits the site. This is most likely the home page but, in some cases, it may also be specific URLs that users enter to access a particular page directly.

Table F-40: Top entry page for Volume #2, Issue #1

	Pages	% of Total	User Sessions
1	http://www.tx.ncsu.edu/jtatm	35.52%	508
2	http://www.tx.ncsu.edu/jtatm/	12.93%	185
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	7.41%	106
4	http://www.tx.ncsu.edu/jtatm/volume2issue1/vo2_issue1_abstracts.htm	4.61%	66
5	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	3.91%	56
6	http://www.tx.ncsu.edu/jtatm/volumelists.html	2.58%	37
7	http://www.tx.ncsu.edu/jtatm/announcements.html	2.02%	29
8	http://www.tx.ncsu.edu/jtatm/collaborator.html	2.02%	29
9	http://www.tx.ncsu.edu/jtatm/volume1issue 4/koreanconference.htm	1.67%	24

10	http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm	1.39%	20
	Total For the Pages Above (only sessions starting on a valid document type are included)	**74.12%**	**1060**

Top exit pages

This section identifies the most common pages JTATM readers/visitors were on when they left your site. The percentages refer to the total number of user sessions that started with a valid Document Type.

Table F-41: Top exit pages for Volume 2, Issue #1

	Pages	% of Total	User Sessions
1	http://www.tx.ncsu.edu/jtatm/	22.46%	321
2	http://www.tx.ncsu.edu/jtatm/volume2issue1/vo2_issue1_abstracts.htm	14.06%	201
3	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	8.04%	115
4	http://www.tx.ncsu.edu/jtatm	3.98%	57
5	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	3.77%	54
6	http://www.tx.ncsu.edu/jtatm/announcements.html	3.77%	54
7	http://www.tx.ncsu.edu/jtatm/volumelists.html	2.93%	42
8	http://www.tx.ncsu.edu/jtatm/volume2issue1/industry.htm	2.72%	39
9	http://www.tx.ncsu.edu/jtatm/volume1issue1/current_abstracts.html	2.23%	32
10	http://www.tx.ncsu.edu/jtatm/subscribe_to_jtatm.html	1.88%	27
	Total For the Pages Above (only sessions starting on a valid document type are included)	**65.92%**	**942**

Single access page

This section identifies the pages on the JTATM web site that JTATM reader/visitor access and exit without viewing any other page. The percentages refer to the total number of user sessions that started with a valid Document Type.

Table F-42: Single access pages for Volume #2, Issue #1

	Pages	% of Total	User Sessions
1	http://www.tx.ncsu.edu/jtatm/	16.77%	125
2	http://www.tx.ncsu.edu/jtatm/volume1specialissue/specialissue_abstractsv1i3a.htm	13.02%	97
3	http://www.tx.ncsu.edu/jtatm/volume2issue1/vo2_issue1_abstracts.htm	7.51%	56
4	http://www.tx.ncsu.edu/jtatm/volume1issue 4/graduate_bio.html	6.97%	52
5	http://www.tx.ncsu.edu/jtatm	6.44%	48
6	http://www.tx.ncsu.edu/jtatm/announcements.html	3.62%	27

7	*http://www.tx.ncsu.edu/jtatm/volume1issue 4/koreanconference.htm*	2.81%	21
8	*http://www.tx.ncsu.edu/jtatm/volumelists.html*	2.81%	21
9	*http://www.tx.ncsu.edu/jtatm/collaborator.html*	2.68%	20
10	*http://www.tx.ncsu.edu/jtatm/volume1issue2/issue2_abstracts.htm*	2.01%	15
	Total For the Pages Above	**64.69%**	**482**

Most downloaded files

This section identifies the most popular file downloads of your Web site.

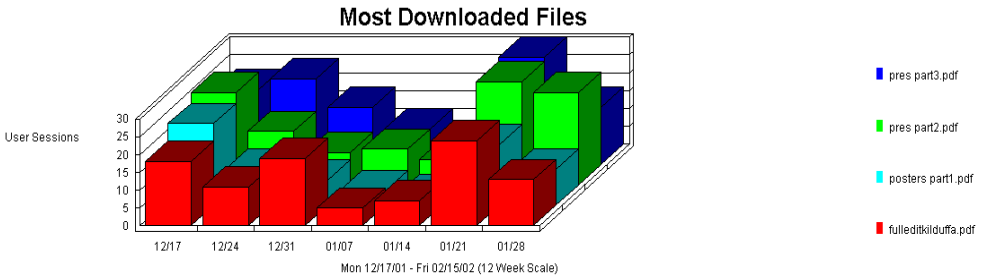


Figure F-19: Downloaded files for Volume #2, Issue #1

The statistics shows that *special_issue_abstracts* were the most often download (7.39%) for the time period. The article that was downloaded more frequently (4.81%) was Volume#1, Issue#1, fulleditkilduff.pdf followed by fulleditistook.pdf (4.41%). Table F-6 shows the top 10 downloads.

Table F-43: Downloaded files for Volume #2, Issue #1

	File	No. of Downloads	% of Total Downloads	User Sessions
1	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part3.pdf**	640	7.39%	121
2	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part2.pdf**	517	5.97%	122
3	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part1.pdf**	442	5.1%	74
4	**http://www.tx.ncsu.edu/jtatm/volume1issue1/Articles/Kilduff/fulleditkilduffa.pdf**	417	4.81%	97
5	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part4.pdf**	393	4.54%	111
6	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part2.pdf**	384	4.43%	90
7	**http://www.tx.ncsu.edu/jtatm/volume1issue1/**	382	4.41%	58

	Articles/Istook/fulleditistook.pdf			
8	**http://www.tx.ncsu.edu/jtatm/volume2issue1/articles/gereffi/gerefficomplete.pdf**	380	4.39%	106
9	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/presentations/pres_part1.pdf**	364	4.2%	82
10	**http://www.tx.ncsu.edu/jtatm/volume1specialissue/posters/posters_part3.pdf**	323	3.73%	90

Most Active Organization

This section identifies the companies or organizations that accessed your Web site the most often.
Table F-7 shows that North Carolina State University (10.7%) has been the most active organzation during the time period followed by America Online (3.4%), Road Runner- High speedonline (2.04%).
Search engines like Googlebot also visits the journal (1.7%).

Table F-44: Active organization for Volume #2, Issue #1

	Organizations	Hits	% of Total Hits	User Sessions
1	**North Carolina State University** ncsu.edu	2612	10.69%	105
2	**America Online** aol.com	833	3.41%	497
3	**EXCALIBUR Group A Time Warner Company** rr.com	500	2.04%	42
4	googlebot.com	413	1.69%	250
5	tft.csiro.au	320	1.31%	5
6	152.1.40.242	291	1.19%	6
7	63.novo.dk	259	1.06%	2
8	210.113.152.130	239	0.97%	12
9	**Home Network** home.com	225	0.92%	17
10	**University Of Mississippi** olemiss.edu	216	0.88%	12
	Subtotal For Companies Above	**5908**	**24.19%**	**948**
	Total For the Log File	**24420**	**100%**	**3150**

Active Countries

This section identifies the top locations of the users of your site by country. The country of the user is determined by the suffix of their domain name. Use this information carefully because this information is based on where the domain name of the visitor is registered, and may not always be an accurate identifier of the actual geographic location of

this visitor (for example, while a vast majority of .com domain names are from the United States, there is a small minority of domain names that exist outside of the United States.)

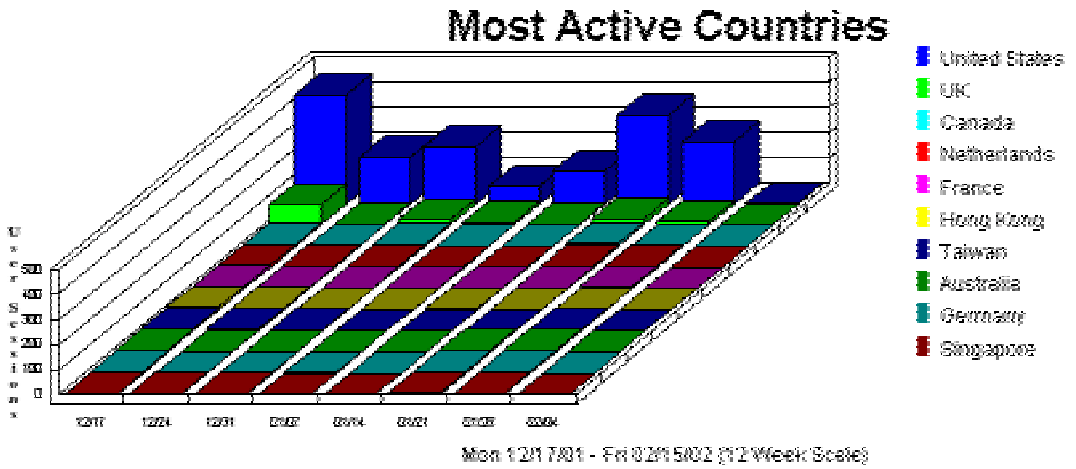


Figure F-20: Active countries for Volume #2, Issue #1

Table F-8 shows the top 15 countries visiting JTATM during Volume #2, Issue #1.

Table F- 45: Active countries for volume #2, Issue #1

	Countries	User Sessions
1	**United States**	**1645**
2	**UK**	**153**
3	**Canada**	**40**
4	**Netherlands**	**30**
5	**France**	**28**
6	**Hong Kong**	**26**
7	**Taiwan**	**26**
8	**Australia**	**26**
9	**Germany**	**25**
10	**Singapore**	**20**
11	**Japan**	**16**
12	**Malaysia**	**13**
13	**Israel**	**11**
14	**Denmark**	**10**
15	**Spain**	**9**
	Total	**2078**

Activity by day

This section outlines general server activity, comparing the level of activity on weekdays and weekends. The Average Number of Users and Hits on Weekdays are the averages for each individual week day. The Average Number of Users and Hits for Weekends groups Saturday and Sunday together. Values in the table do not include erred hits.

Table F-46: Activity by Day for Volume #2, Issue #1

Summary of Activity by Day	
Average Number of ***Users*** per day on Weekdays	89
Average Number of ***Hits*** per day on Weekdays	757
Average Number of ***Users*** for the entire Weekend	109
Average Number of ***Hits*** for the entire Weekend	492
Most Active Day of the Week	Mon
Least Active Day of the Week	Sat
Most Active Day Ever	December 18, 2001
Number of Hits on Most Active Day	3374
Least Active Day Ever	January 17, 2002
Number of Hits on Least Active Day	69

Monday has been the active day with 6050 hits and 660 user sessions (24.77%). Saturday has been the least active day with 1020 hits and 220 user sessions (4.17%).

The most active hour of the day were 11:00 – 11:59am EST with 143 user sessions and 1454 hits (5.95%) and the least being 1:00-1:59am EST with 90 user sessions and 633 hits (2.59%).

Successful and failed hits

There were 1966 failed hits (7.45%) out of the total 26386 hits. There were 2566 cached hits (9.72%). Out of the failed hits, Page not found (404) errors were the most (82.52% of the total failed hits).

Organization breakdown

This section provides a breakdown by types of organizations (.com, .net, .edu, .org, .mil, and .gov.) This information can only be displayed if reverse DNS lookups have been performed (See Figure F-3).

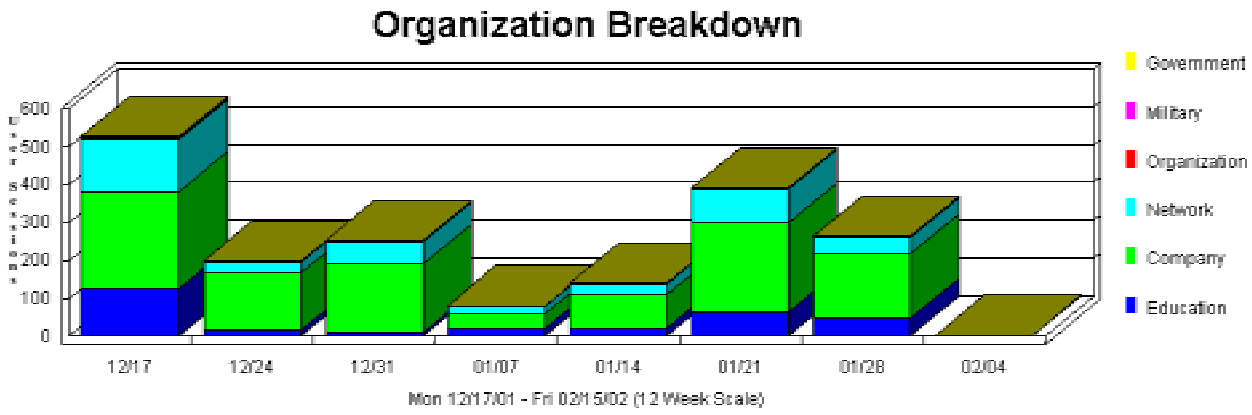


Figure F-21: Organization breakdown for Volume #2, Issue #1

Data shows that Education domains (.edu) had 4963 hits with 313 user sessions (40.66%) and Company domains (.com) have 4204 hits and 1113 user sessions (34.44%). Network domains with 21.8%, Organization domains (.org) with 1.73%, Military domains with 1.31%, and government domains with 0.01% were also visitors for JTATM.

North American States

Most of the reader/visitor for JTATM came from Virgina with 518 user sessions followed by North Carolina with 121 sessions and California with 62 sessions.

Table 47: American states visited for Volume #2, Issue #1

	State	User Sessions
1	**Virginia**	518
2	**North Carolina**	121
3	**California**	62
4	**Connecticut**	44
5	**New Jersey**	11
6	**South Carolina**	11
7	**Illinois**	10
8	**Ohio**	10
9	**New York**	9
10	**Pennsylvania**	9
	Total For the States Above	**805**

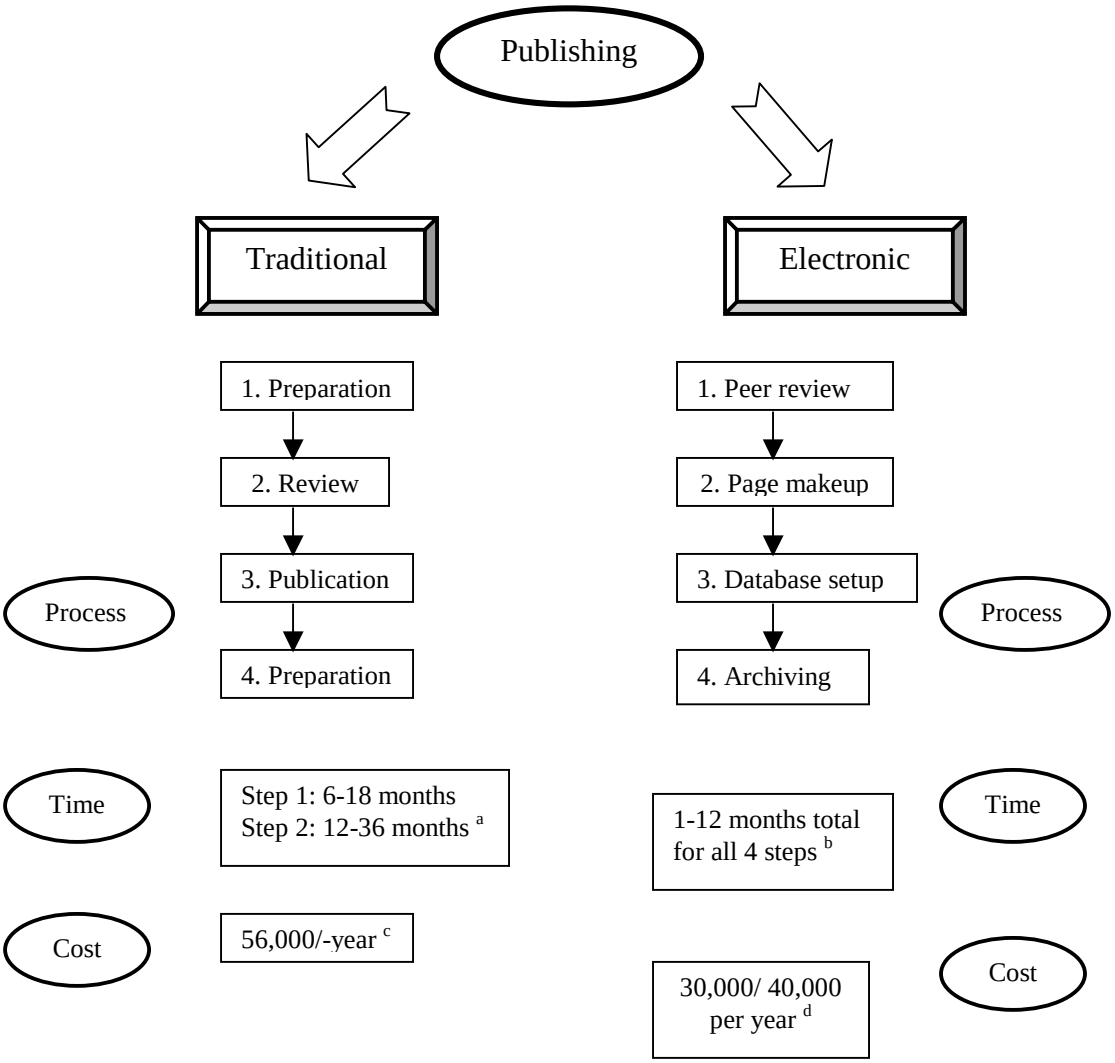
The most active city for December 17, 2001 to February 15, 2002 was from Reston, Virgina (499 user sessions) followed by Raleigh, NC (111 user sessions), Stamford, Connecticut (42 user sessions), San Mateo, California (22 user sessions), Redwood City, and California (17 user sessions).

Bandwidth

The most kBytes transferred during this issue was from December 17, 2001 to December 23, 2201 (317,077 kbytes)

Appendix G - Electronic Publishing Cost Comparison

Electronic Publishing Cost Comparison



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[a] Length of time for traditional may be extended due to

a. page limitations of an issue in the journal
b. revision process, especially with time in postal delays

[b] Time may be shortened due to

- Most of the review process handled electronically
- Quick turnaround for review process
- Formatting and publishing takes less time than traditional publishing
- Expanded capabilities for number of articles per issue

[c] Jog (1995) estimated that traditional journals has 28-45% higher cost, than electronic journals; $56,000 is estimate (40% of 40,000)

[d] JTATM startup ~ 30,000/ year: one graduate student (tuition, fees), one computer with overhead supplies