

Digital Bridges

Building Bridges Between Teaching and Technology

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Reflections on IT and the Digital Divide in India

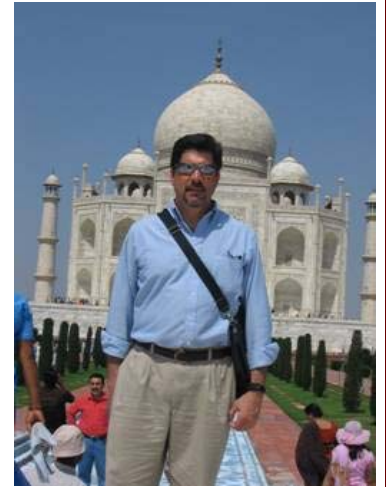
by Dr. Martin Grossman

To many, India represents one of the most exotic spots on earth. With one of the oldest civilizations on the planet, India is a land rich in culture and tradition. It is the world's second most populous nation, with approximately 1.1 billion people, over a dozen different religions and 23 national languages. Mention India, and you are likely to conjure up an array of images as diverse as the Taj Mahal, the Kama Sutra, Gunga Din, the British Raj, and the latest Bollywood film idol.

Most of us in the IT world, however, have a somewhat different perspective on India. Many of the software development and technical support jobs in the U.S. have been outsourced to India, whose workers do the job for a fraction of the U.S. rate. Not only are Indian outsourcing companies

providing low-end programming and call center functions, they are now also involved in more advanced aspects of the software development cycle, such as analysis and design. Indian software companies, for example, represent the majority of those worldwide who have achieved the prestigious Capability Maturity Model (CMM) Level 5 certification from Carnegie Mellon's *Software Engineering Institute*. Companies such as Wipro, Infosys and Tata have become household names. India has also made significant inroads in other areas, such as satellite remote sensing, financial services and medical tourism. A recent study by the global management consulting firm A.T. Kearny (<http://www.atkearney.com/main.taf>), ranks India number one in the provision of global services (the U.S. came in 21st).

Although it has not achieved the



same double digit growth rates as China, many pundits believe that India is poised to become the next great superpower, and that it will surpass China within the next few decades. Indeed, India has many things going for it that would support such a view. It has a critical mass of highly skilled English speaking engineers and

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Tablet PC Users—We Want Your Help!

by Dr. Robert Amey

A brief note (warning?) to those of you on campus using Tablet PCs: we are going to be emailing you in the next week or so to ask you to meet in one or more groups (the more the merrier). We are looking at having some folks with the tablets now for two years – maybe more – and some who just recently got them, and all sorts of folks in-between. And, of course, there will be more coming in the Fall.

Our aim in these sessions is to: 1) find out what you like about the Tablet PC, 2) what specific

uses you have made of the tablets that you could not do with a desktop or laptop, and 3) what problems you have had with the tablets that we need to find solutions for, if we can. We would like to have your input for both classroom uses and “other” uses. Those other uses could include your own research and/or office use, changes in the way you grade/revise papers, et cetera.

As more and more folks ask for Tablet PCs, we'd like to gather together as much info as we can on the new ways in which you are using them, as well as thinking forward about how to correct –

or avoid – any problems you've encountered.

In the Fall semester, we are also going to start up a Blackboard discussion board especially for Tablet PC users, so that we can have a channel of direct, ongoing communication. We'll send you that info in early September at the latest, and we hope that you will join in!



Reflections on IT and the Digital Divide in India *cont.*

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scientists; it has a swelling demographic of young people (one in ten people on the planet lives in India and is under 25); it has a well functioning democracy (the world's largest); and it has a large Diaspora, allowing for valuable knowledge linkages and networks. With all of these advantages and with the ever increasing buzz about the rise of India, it is easy to lose sight of the many obstacles still facing the country as it transitions to a knowledge economy. The harsh reality is that India is still racked with poverty. Between 350-400 million of India's population live below the poverty line, 75% percent in rural areas. Illiteracy is still very high (about 35% of the population). Foreign direct investment is comparatively low. Corruption is endemic.

The World Bank has developed a metric called the Knowledge Economy Index (KEI), which is based on a number of variables within the following categories: (1) Economic and institutional regime (e.g. tariff and non-tariff barriers, rule of law, regulatory quality), (2) Education (e.g.

Country	KEI	Economic	Innovation	Education	ICT
Denmark	9.23	8.82	9.42	9.2	9.48
Sweden	9.22	8.41	9.72	8.98	9.77
Finland	9.12	8.79	9.71	9.16	8.84
Iceland	8.83	8.25	9.07	8.78	9.24
US	8.74	8.26	9.42	8.38	8.91
India	2.71	3.11	3.64	2.11	2

literacy, secondary and tertiary enrollment rates), (3) Innovation (e.g. researchers in R&D, scientific and technical scientific publications, and patents in the US), and (4) Information and Communication Technology – ICT (e.g. number of fixed and mobile phone lines, computers, internet users) .

A quick look at the chart above, derived from World Bank statistics (www.worldbank.org/kam), reveals that India has some serious catching up to do. As the country transitions into a global, knowledge-based economy, the government has recognized the need to develop more effective ways to leverage its intellectual capital. Such initiatives as President Kalam's *India 20/20* program and the recently created National Knowledge Commission, ad-

dress many of the critical issues (e.g. innovation, education, technology) that will enable India to accelerate its economic development in coming years.

The U.S. State Department recently put together a program to promote a dialogue on knowledge management with members of the academic and business communities in India. For reasons still unbeknownst to me, I was recruited for this position and received a 'U.S. Speaker and Specialist Grant' through the State Department's Bureau of International Information Programs. Over a three week period in March, I visited universities, technical institutes, government agencies, and business groups in eight Indian cities, delivering lectures on the use of information technology (IT) for knowledge management in business and industry. As I traveled through the country, traversing the chaotic roads choked with people, animals, bicycles, cars and rickshaws, I became intrigued with the following question: How will India's IT boom help the vast majority of people in the country, many of whom still live in conditions more reminiscent of the 12th rather than the 21st century? The remaining sections describe a few concrete examples of how this might happen.

Integrating technology into the classroom – the Shiksha program

Being affiliated with BSC's Teaching and Technology Center, I was particularly interested in learning how technology is being incorporated into classrooms throughout remote areas in India. With the illiteracy and language translation problems alluded to earlier, this is indeed a formidable task. While in Delhi, I had the opportunity to talk to the project manager of the Shiksha program (www.shikshaindia.org), an initiative launched by the Confederation of Indian Industry (CII) in 2001. The aim of the Shiksha program is to provide high quality multimedia educational material to students throughout the country, especially in underserved, rural areas.

Among the deliverables offered through the Shiksha program are:

* Online e-learning portal for teachers (www.eshikshaindia.in) - A platform for teachers to collaborate and engage in meaningful activities on issues/discussions concerning e-learning, e-teaching, creative teaching, etc. Major sections of the portal are Create, Collaborate, Discuss, Share, Blog, E-Tools& Strategies, and Content Repository.

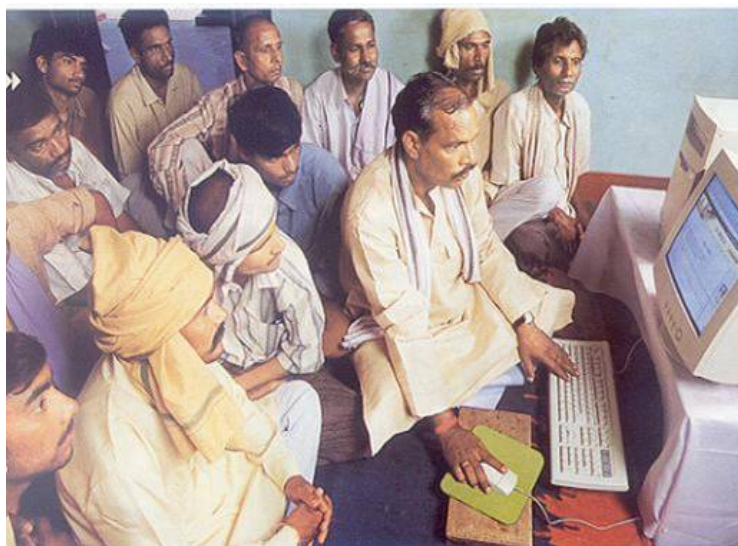


Image linked from <http://www.digitaldividend.org/graphics/echoupall.jpg>

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Reflections on IT and the Digital Divide in India *cont.*

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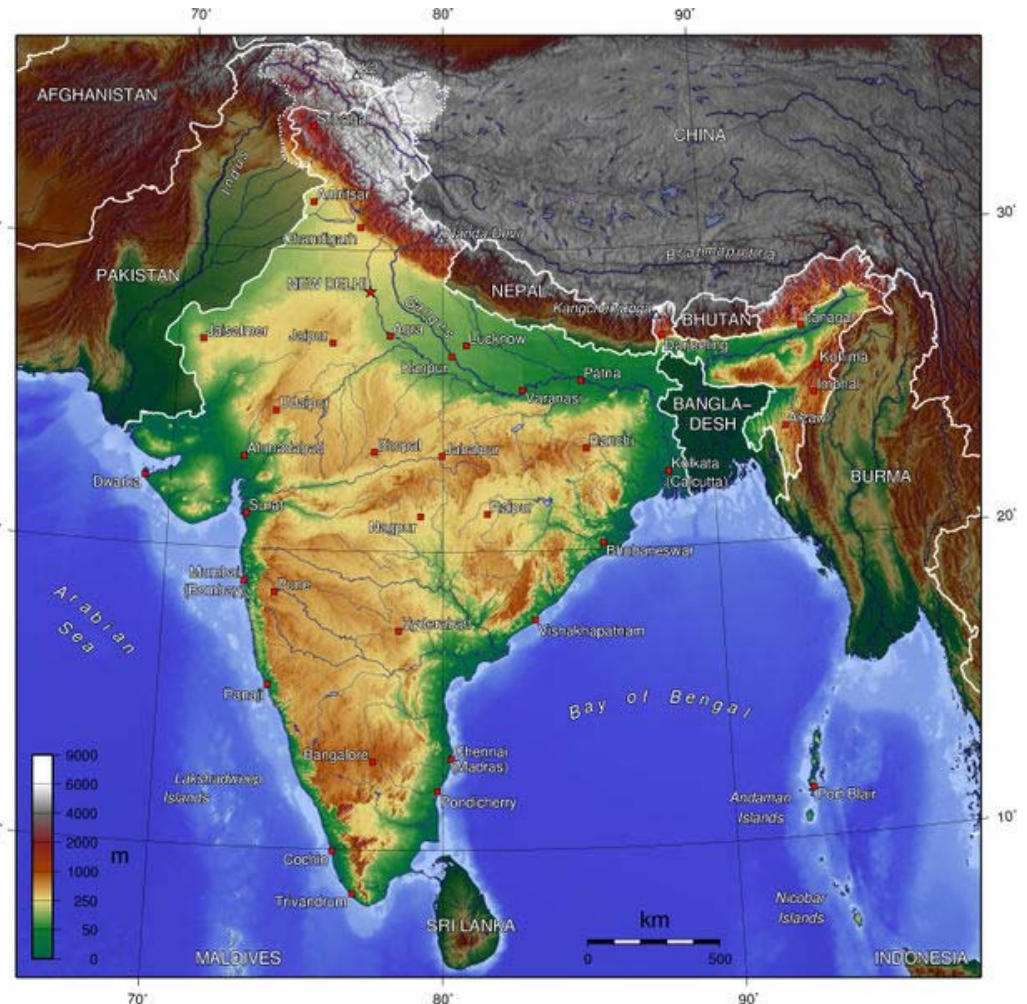
* Learning modules—
Multimedia rich school curriculum content in the public domain for children (age 12-16) available in English, Hindi, and Tamil; Basic computer skills (e.g. mouse and keyboard).

* Open source software, tools and training.

I was very impressed by this program, particularly with its utilization of Web 2.0 technologies (e.g. blogs and wikis), the use of open source platforms (e.g. Moodle, Drupal, etc.), and the creative usage of PowerPoint and Flash technologies to create reusable 'Learning Objects'.

Reaching the rural poor with e-Choupal

Another interesting program with the potential to narrow the digital divide is e-Choupal, an initiative started by the Indian Tobacco Company (ITC), aimed at bringing the power of the Internet to India's farmers. Due to a number of factors, including weak infrastructure and severe weather conditions, Indian agriculture has not fulfilled its potential. Inconsistent quality and uncompetitive prices have made it difficult for the Indian farmer to sell his produce in the world market. The e-Choupal initiative has empowered farmers by providing access to real-time information and knowledge, improving their ability to make decisions relating to market demands, quality, productivity, etc. The following passage from Wikipedia describes the impact this movement is having on Indian agriculture: *ITC eChoupal creatively leverages information technology to set up a meta-market in favour of India's small and poor farmers, who would otherwise*



continue to operate and transact in 'un-evolved' markets. As of July 2006, ITC eChoupal services, through 6100 eChoupals across 8 states, reach more than 4 million farmers in about 36,000 villages. ITC intends scaling up the initiative with 20,000 choupals and 700 saagars to reach 10 million farmers in 100,000 villages by 2010.

For more information on this fascinating trend, see http://www.itcportal.com/ruraldevp_philosophy/echoupal.htm and http://www.digitaldividend.org/case/case_echoupal.htm

Final thoughts

While globalization and the

digital economy have the potential to profoundly improve people's lives, sadly it often does not have such an effect. While visiting eastern India, I became keenly aware of a growing insurgency among the area's villagers in the face of government plans to develop a Special Economic Zone (SEZ) and to expand the IT sector on tribal lands. As I traveled through West Bengal and Orissa, the daily newspapers were filled with reports of violence between the local police and the Naxalite (a Maoist resistance movement) rebels. For more on this situation, see <http://www.hinduonnet.com/fline/fl2320/sto->

[ries/20061020004700900.htm](http://www.ies/20061020004700900.htm), http://economist.com/world/asia/displaystory.cfm?story_id=7799247, and <http://us.rediff.com/news/2003/oct/02spec.htm>.

In spite of such pockets of discontent, there does not seem to be any significant impediment to India's development and there is general enthusiasm and optimism about where the country is heading. For people with an adventurous spirit, India represents a land of great opportunity. I, for one, plan to cultivate my contacts and explore areas for collaboration with my counterparts in the academic and IT communities.

Educational Podcasts Ready to be Served

by Eric LePage

In the last issue of Digital Bridges, we talked about the various ways in which Bridgewater State College Faculty have developed their own podcasts for use in their courses. Their ideas varied from using podcasts for library tours, to going over homework answers, to reinforcing course concepts. However, even if you don't have the time or interest in developing your own podcasts, there are still hundreds upon hundreds of great free podcast resources out there that you can use in your own classes.

Once again, podcasts are digital audio and video recordings of radio and television shows, book and poetry readings, music videos, lectures, and more that can be listened to and viewed on a computer or on a portable multimedia device (such as an iPod) at any time.

Podcasts have become so commonplace that you can find podcasts of your favorite television programs, the evening news, your favorite radio shows, and more. CNN, ABC, NBC, and the BBC all have video podcast recordings created for their evening news programs. In addition, more and more developers have been creating podcasts specifically targeting learners.

Recently, I spent an hour online pouring through some of the available free podcasts on the *iTunes Podcast Directory*, and found topics tying in to many of

our own academic programs. Here's a sampling:

* Art – Digital Photography Tips from the Top Floor; The Digital Photography Show; Art History in Just a Minute; Adobe Photoshop Killer Tips (video), and many other more focused Adobe Photoshop video tip shows

* English – Grammar Girl's Quick and Dirty Tips for Better Writing; Just Vocabulary; Merriam-Webster's Word of the Day

* Foreign Language – Coffee Break Spanish; The French Pod Class; JapanesePod101, and many other audio podcasts in languages such as German, Italian, and even English as a Second Language

* Hard Sciences – National Geographic Wild Chronicles (video); Discovery Channel Video Podcast (video); Science Channel Features; Instant Anatomy; Animal Planet Presents; NASAcast Video, Nature: PBS; NOVA Science Now

* History – Great Speeches in History; The Thomas Jefferson Hour; Ancient and Medieval History; British History 101

* MAHPLS – Discovery Health: Ask the Experts



* Philosophy - Philosophy 6:Man, God, and Society in Western Literature (from UC Berkeley); Plato the Republic

* Politics - Meet the Press (video); NPR: Intelligence Squared

* School of Business - Wall Street Journal reports (various)

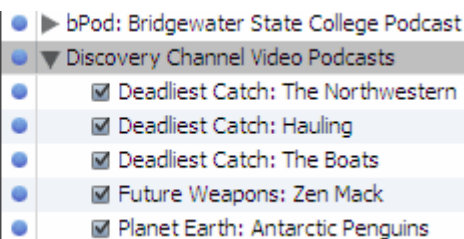
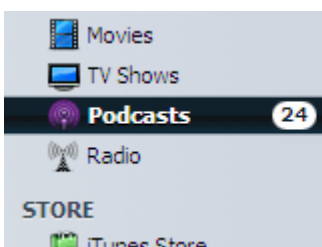
* Sociology – Sociology You Can Use

If you haven't found a podcast of interest through iTunes' Podcast Directory, there are many other podcast directories available to search through, such as <http://www.podcast.net/>, which also allows you to search for podcasts by category.

Of course, the great thing about podcasts is that when you subscribe to a podcast show, the latest episodes of that show are downloaded to your iTunes program for you, so you never have to search for a newly created recording.

To download and install iTunes, go to <http://www.apple.com/itunes/download/>. Once iTunes is installed, open the program and click the **Podcasts** button in the left-hand menu to access your Podcast subscription area (see left image). Click the **Podcast Directory** link in the lower right-hand corner to begin perusing iTunes Podcast Directory listings.

To learn more about podcasting, please contact the Teaching and Technology Center at 508.531.2634 or ttc@bridgew.edu.



Classroom Response Systems—“The Classroom Clickers”

by Dr. Robert Amey

You have probably already seen the announcement (see below) that the TTC is looking for a few (3, to be specific) good folks to try their hand at using the Turning Point classroom clickers. Send us your proposal! We'd like to see some inventive ways these could be used in classes. A small number of college and universities are actually requiring that students buy these for certain courses (see some of the case studies on Turning Point's website (<http://www.turningtechnologies.com>) – look under *Higher Education* and then look for the **Case Studies** link).

Most likely the two primary uses for classroom clickers would be to: (1) create instantaneous surveys (polling) in class, and (2) give short quizzes (announced or unannounced).

Using the clickers for polling can allow you to display the results of a question asked in class. That could be, for example, to gauge the attitude of students about something (“Do you think that airport security measures have made flying safer?” 1=yes, 2=no). If you're using the set of clickers we have, you could hand them out without worrying about which student has which one, and students can be free to more honestly answer questions that they might be unwilling to raise their hands and answer, potentially identifying them with an unpopular position. An alternative to this might be to ask how something came about or changed over time (“What change in transportation enabled the rapidly growing middle class in the late 1800s to move away from the city center?” 1=bicycles, 2=streetcars, 3=cars). This would allow the instructor to then lead the dis-

cussion as to why (in this case) number 1 and number 3 are less important factors than the age of the electric streetcar.

That same question could be used as a quiz question. The clicker software has the potential to identify the correct answer to a question and create a grade sheet that can be imported directly into Excel. There is a bit more preplanning involved, though. You have to assign each clicker to a specific student so that the software knows who is answering the question – which means that you also have to be sure that each student gets the same clicker every time you use them. This entails you creating a list that assigns each clicker by its ID number to each student in your class. I would note here that I am very interested in getting this to work... and I also have to say that I've been less successful at it that I care to

admit. Getting the clickers assigned is not a problem, but I have had some problems getting the scoring part of the software to work right. I will be reinstalling the software and working with it this summer, and hope to be more helpful in getting this to work as I would expect it to if being able to give quick quizzes in class (that would be graded and saved for you by the time the quiz was over!) is one of your objectives in using Turning Point.

We are hoping that you all will have some interesting ideas about using Turning-Point!

Note: Turning Point interfaces with PowerPoint. I am going to be trying this on both the Office 2003 and the Office 2007 versions of PowerPoint over the summer to look at that grading issue.

CALL FOR PROPOSALS: TTC Classroom Response System Initiative

We are pleased to announce a new TTC Innovators Program grant called the TTC Classroom Response System Initiative which looks to provide instructors with the ability to elicit instant feedback from their students through the use of wireless radio frequency devices commonly known as “classroom clickers”. The grant program will support faculty in the development of PowerPoint lectures utilizing this polling technology to support course objectives and learning outcomes for students within the curriculum.

Interested faculty who would like to experiment using Classroom Response Systems will develop a series of PowerPoint lectures (minimum of five) to be used as the interface for students who will be responding to questions via their wireless radio frequency devices. Students can provide instant feedback anonymously for polling purposes or their responses can be tracked for assessment purposes. To learn more about Classroom Response Systems, see the Campus Technology piece “Choose One from Column B: Real-Time Feedback” at http://campustechnology.com/articles/45245_4/.

Teaching and Technology Center (TTC) staff and Faculty Fellows will provide hands-on workshops and peer instructional and technological support to Participants in both the planning and implementation stages of the project. Upon the completion of the program, Participants will be expected to participate in a round-table discussion at a TTC Seminar or CART Celebration session, as well as share a description and summation of your projects for inclusion in a website on examples of effective practices for using Classroom Response Systems to support teaching and learning.

Interested faculty and librarians can submit an online proposal (200 words or less) at <http://it.bridgew.edu/facstaff/crs/form.cfm> demonstrating how you would plan to use Classroom Response Systems in your courses. Applications are due before noon on April 27, 2007. Grant stipends of \$500 each will be awarded to the 3 proposals exhibiting the most innovative uses of Classroom Response Systems in your courses.

If you have questions about the project or application process, please contact Eric LePage (ext. 3634; elepage@bridgew.edu). We encourage your participation in this exciting application of technology to teaching and learning at Bridgewater State College.



BRIDGEWATER
STATE COLLEGE



John Joseph Moakley Center
100 Burrill Avenue, M-200
Bridgewater, MA 02325

Phone: 508.531.2634
E-mail: ttc@bridgew.edu


We're on
the web!

<http://it.bridgew.edu/FacStaff>

Feed Your Need for RSS in Blackboard

by Tim Wenson

RSS (Really Simple Syndication or Rich Site Summary) is a way to display frequently-updated digital articles, such as those from a news site or a weblog. It simplifies the use of the web by allowing you to keep up to date on sites you frequently visit by not having to actually visit that site. RSS also allows you to avoid having to sign up for newsletters or email lists to get the information you want. On web pages, RSS




are typically linked with the word Subscribe, an orange square , or a rectangle with the letters

XML or **RSS**.

Examples of some popular sites that offer RSS feeds are: CNN.com, ESPN.com, and AOL.com. Typically users can use a program such as RSS Bandit or web services such as Yahoo or Google to subscribe to RSS feeds. This works well for your own personal use, but if you want to post an RSS feed for your students, you will need another option. By visiting <http://itde.vccs.edu/rss2js/build.php> and entering the URL of the RSS feed you would like to add, you can generate a section of JavaScript code to add into a Blackboard Course Document or a website of your choice.

The program that is run on this website is called *Feed2JS* (Feed to JavaScript), and it allows the user to customize the RSS feed they display. Options include how many articles to display at a time, whether to show descriptions of the articles, and whether or not to open the article link in a new window. The code will take on the default formatting of the page you paste it into, whether that be Blackboard or a BSC department website.

To add the code into your Blackboard page, use the following directions (in this example, I am placing the RSS feed into a Course Documents folder).

1. Find the URL of the RSS feed you wish to add. Copy the URL
2. Go to <http://itde.vccs.edu/rss2js/build.php>
3. Paste into the URL field (see right image)
4. Select from the various options (see right image) and click the **Generate JavaScript** button
5. Copy the entire section of code that appears
6. Log into your Blackboard course site and proceed to **Control Panel > Course Documents**
7. Click the  **Folder** button
8. Give your folder a title, such as *RSS Feed*, and click **Submit**
9. Click **OK** and then click the link to your *RSS Feed* folder
10. Click the  **Item** button, and enter a title for your feed
11. Click the  button to toggle between text and html code
12. Paste the JavaScript code you copied from the *Feed2JS* page into the text box
13. Click **Submit**, and your feed is complete

Resources:

<http://www.whatisrss.com/>
<http://www.webreference.com/authoring/languages/xml/rss/intro/>
<http://itde.vccs.edu/rss2js/build.php>

To learn more about using RSS feeds in Blackboard, please contact the Teaching and Technology Center at 508.531.2634 or ttc@bridgew.edu.

Feed2JS

Build a Feed!

The tool below will help you format a feed source, and select the desired options below.

First, be sure to **preview** the feed to verify you get your code. Once the content looks OK, click the **Generate JavaScript** button.

URL Enter the web address of the RSS Feed

Show channel? (yes/no/title) Display info or not to display anything

yes title no

Number of items to display. Enter the number of items to display

Show item descriptions? How much? (0=none, 1=short, 2=full)

Show item posting date? (yes/no) Display the posting date

yes no

Open links in a new window? (yes/no) Show links in a new window

yes no