Virtual Community: A Concept Ripe for Harvest

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Background

From the beginning of time, humankind has exhibited tendencies toward socialization. As populations grow, the issue of community arises. In an effort to bring consensus to the definition of community, George Hillery, Jr. (1955) subjected 94 sociological definitions of the term 'community' to qualitative and quantitative analysis. In the interest of clarity and brevity, this study will use Hillery's definition based on the 1955 research. The sociological term 'community' should be understood here as meaning (1) a group of people (2) who share social interaction (3) and some common ties among themselves and the other members of the group (4) and who share an area for at least some of the time. In this case, the Internet is the shared area, giving definition to the term 'online' or 'virtual community.'

Howard Rheingold (1993) argues the development of virtual communities is 'in part a response to the hunger for community that has followed the disintegration of traditional communities around the world.' Citizens build communities for the purposes of survival, commerce and entertainment (Cohill & Kavanaugh, 2000).

New technologies, such as computers and the Internet (Gromov, 1998) give birth to innovative ideas which grow much the same as infants grow into adults - in jumps and starts. Historical events often serve as catalysts for latent or immature ideas to develop. Having compromised the very structure of American society, including its transportation system, security, economic stability, and overall sense of well-being, the terrorists' attack on the World Trade Center and the Pentagon struck the core of two of America's largest and most influential communities, New York and Washington, D.C. The events of September 11, however, could be the occurrence that catapults the concept of virtual community into maturity. Can society, in general, and agriculture, specifically, build virtual communities that will satisfy the needs of their members as well as traditional communities have? If so, at what levels?

In the words of M. Scott Peck (1987) in The Different Drum: Community-Making and Peace:

We know the rules of community; we know the healing effect of community in terms of individual lives. If we could somehow find a way across the bridge of our knowledge, would not these same rules have a healing effect upon our world? We human beings have often been referred to as social animals. But we are not yet community creatures. We are impelled to relate with each other for our survival. But we do not yet relate with the inclusivity, realism, self-awareness, vulnerability, commitment, openness, freedom, equality, and love of genuine community. It is clearly no longer enough to be simply social animals, babbling together at cocktail parties and brawling with each other in business and over boundaries. It is our task, our essential, central, crucial task - to transform ourselves from mere social creatures into community creatures. It is the only way that human evolution will be able to proceed. (p. 165)

Perhaps the Internet is or will provide the bridge of which Peck speaks. In the preface of Online Communities: Commerce, Community Action, and the Virtual University, Werry and Mowbray (2001) confirm that online communities have become increasingly important in commerce, education, and the nonprofit sector. Further, online communities are an international phenomenon.

At the end of William Mitchell's book City of Bits (1995) there is an image of a near future in which 'bitsphere planners and designers' shape the interfaces through which commerce, education, and community take place. He writes:

For designers and planners, the task of the twenty-first century will be to build the bitsphere - a worldwide, electronically mediated environment in which networks are everywhere. This unprecedented, hyperextended habitat will transcend national boundaries; the increasingly dense and widespread connectivity that it supplies will quickly create opportunities - the first in the history of humankind - for planning and designing truly worldwide communities. (p. 167)

Currently in the United States there are an astonishing number of grassroots projects in the area of Internet communication technology. Werry and Mowbray (2001) suggest that now is the time for a concerted effort to weave these projects - heretofore disconnected - into a tapestry of compelling community strength and creativity.

The U.S. Department of Commerce TIIAP awards (http://www.ntia.doc.gov/otiahome/tiiap/) showcase the diversity and creativity of these projects. However, Seattle, Washington, has emerged with the reputation of having more than its share of such communities. Developers of the Seattle projects have found that almost every aspect of the typical community, be it urban or rural, is deliverable via the Internet. Non-profit associations are at the center of many of the Seattle projects.

Existing virtual communities now contain tools for delivery of education through the collaboration of virtual universities. Communication systems made possible through free public Internetworks stand as counterparts to a traditional community's telephone system. The Web is an instant source for members of the community to retrieve information on subjects of personal relevance. These virtual communities even tap leadership by way of public advisory boards. Residents can socialize by visiting Internet Cafes and can seek out the entertainment from every genre imaginable to suit their personal tastes. Citizens of virtual communities can access unbiased information through independent media on the Web. Most community newspapers now have a Web presence.

With this trend in mind, the leadership of the Cooperative Communicators Association (CCA) launched a project in 1999 known as 'Virtual CCA.' CCA is an international association of 350 communications specialists employed by or working in a freelance capacity on behalf of cooperatives.

The association's expanding worldwide membership brought unique challenges to the forefront. The challenges related to the organization's ability to deliver the products, information, and services for which it is known. Cooperatives did not escape the effects of a weakening economy that deflated the marketing, communication, professional development, and travel budgets of most businesses. Shrinking budgets caused managers to rethink how the budget pie was divided as the downturn hit businesses connected with agriculture particularly hard. The membership rolls of non-profit professional organizations began to suffer as well because of the members' inability to participate fully as a result of restricted funds.

While other professional development groups were hiring additional staff and building brick-and-mortar office locations during the mid-1990s, CCA leaders watched an emerging trend among communicators using electronic mail to speed their communications along. Increased demands on communicators to do more with less forced the creatives of some of the largest cooperatives in the world to jump past the brick-and-mortar frenzy. In August of 2000, CCA reached a milestone in that 100 percent of its membership had access to the World Wide Web. As the cost of operating increased, growth in membership seemed to stagnate. The view of the board and informal surveys among the membership indicated a need to increase services while keeping operating budgets in check. Members seem to be looking for more opportunities to train, socialize, and exchange information with other members of this community of cooperative communicators.

One of the largest items on CCA's budget was the cost of producing its newsletter, CCA News. CCA members indicated that, similarly, the managers of their own cooperative employers were scrutinizing the company's communication or newsletter budget.

Results of an informal survey conducted by its Research Committee

indicated that almost 70 percent of CCA members would enjoy getting CCA News via the Internet. However, some who had Internet access but were less comfortable using it voiced concern that CCA might be leaving communicators from smaller shops behind with the new technology. Typically, the smaller one-person communication shops have smaller budgets and are less able financially to take advantage of the newest innovations.

After much discussion, the CCA board commissioned the CCA Editorial Committee to determine a course of action. The committee's task was to determine the readership preference of all its membership both in method of delivery and preferred content. The following proposed research is based on the CCA Editorial Advisory Committee's resolve to determine the:

- readership level of the black-and-white printed version of CCA News compared to that of a Portable Document Format (pdf) version of the same newsletter delivered online

- transition period needed to move the organization's membership to an online newsletter

- transition process preferred by CCA's members

- level of familiarity with pdf files

- educational programs necessary to make the transition from printed newsletter delivered via regular post to online newsletter delivered via e-mail.

Method

CCA membership meets the criteria of Hillery's definition of a community, and 100 percent of the members having access to the Internet makes them excellent subjects for virtual community research. Its 350 members share social interaction in their committee work whether the contact is in person, by phone, or by e-mail. Additionally, many participate in the annual educational institute where they meet face-to-face. Some regions also conduct regional workshops that are gatherings of smaller groups that have geography in common. All are members of the CCA listserv and may communicate at the drop of an e-mail message to all other members of the community. They have in common the desire to improve the communications skills they use daily in promoting the cooperative form of doing business. Many of their cooperatives are involved in agriculture. Most have at least a connection to rural America.

The proposed research involves taking a census of the 315 active members of the organization to determine which method of delivery they prefer. The CCA staff will deliver three issues of the 2002 newsletter - January, February and March - through the traditional postal service delivery system. For these three issues of the newsletter the staff

will run parallel versions in pdf format both in black and white and in color. The pdf versions will go as an attachment or link in an e-mail message sent on the CCA listserv.

With each format of the January and February issues, readers will get notice that they will be asked to evaluate the delivery system as well as the format via an online survey that will go out with the March issue. Researchers will retrieve data using a Web-based survey instrument and will analyze the data using the SPSS program.

Results

We will present the results of this study to key leaders of the Cooperative Communicators Association. This group cuts across the agriculture industry with participation from cooperatives representing many commodity groups. Membership includes communicators specializing in dairy, farm supply, credit unions, rural electricity, telecommunications, corn, grain sorghum, cotton, sugar, livestock, rice, soybean, insurance, Farm Credit, consumer products, housing facilities, citrus fruit, grapes, almonds, and cranberries. The nature of the group and reliability of the data should render the results transferable to other professional agricultural communications organizations. Researchers will gain insight into the likelihood that virtual communities will accept online delivery of their communications pieces, such as newsletters.

Bottom line implications of this project are great. If data establish that members prefer or can be encouraged through education to move to online production and delivery of their newsletter, CCA will save approximately $5,000 annually on printing costs and $2,000 on postage for a total savings of $7,000 annually. Freeing up budget dollars will allow the association to direct these funds toward expanding its Web site as a virtual meeting place for the CCA community.

Conclusions

Many non-profit organizations, including commodity groups, produce and distribute member newsletters on a regular basis. Most also continue to be very budget conscious. Replication of this research and resulting educational process among other non-profit organizations will have strong budgetary implications.

This research may have additional implications for rural development. Because an organization's communicators frequently are the gatekeepers of what its clientele read, hear, and view via the media, it seems logical that the communicators would be key influences in providing tools for communicating with and further building virtual communities. Recent statistics (USDA, 2000) show that 43 percent of farmers in the United States now have Internet access. The goal of this study is to establish a bridge for building virtual communities in rural America to accomplish the social and economic agendas of agriculture.

Because written communications pieces often constitute the first and

sometimes the only common element among members of a community, research into Web delivery of these communications pieces are a logical starting place for research on virtual communities. However, the concept of virtual communities may have far-reaching implications for Cooperative Extension Service and other agricultural organizations as well.

The Internet will become more than just an information delivery or reporting system. It may evolve into a comfortable gathering place where professional communities will establish themselves, complete with virtual communications networks, educational facilities, meeting sites, recreational areas, networking capabilities, and bulletin boards. The feeling of belonging and contributing to a true community may well enhance the job satisfaction and performance of its members.

If researchers can establish the reliability and validity of this simple research project with cooperative communicators, the research can then be replicated with each element of any given community to determine what common ground exists. If residents of the Cooperative Extension Service, non-profit organizations and/or small rural communities can harvest from the Internet the benefits previously delivered by traditional communities, where one resides physically will become irrelevant.

For most of the 20th Century, rural America suffered while the metropolitan areas grew. An exodus occurred when agriculture declined. Farm size increased, efficiency of agriculture skyrocketed, and workers left the farm. The bridge provided by the Internet in the 21st Century may provide a passage for the return of those forced to leave rural America in search of jobs, enhanced socialization, education, and cultural activities. Opportunities available in the past only in metropolitan areas may now be available even to those who choose to reside in small rural communities.

In the 20th Century, the electric cooperative's delivery of electricity to the farm revolutionized country living. It appears that with the increased rate of delivery of the Internet to the farm in the 21st Century, another revolution may be afoot in rural America.

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How To Succeed in Writing Internet CGI Scripts Without Really Trying to Become a Programmer

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Background

From an Agricultural Communicator's perspective, the Internet Environment is an ever developing challenge and opportunity. It is no longer enough to serve up the Internet equivalent of brochures and other static content. On the other hand, the dynamic evolution of the Internet is presenting new ways to deliver news articles and other media to our clients. This is true in regards to our new urban clients as well as our traditional agricultural press clients.

But how does a small shop without a fulltime computer specialist or programmer serve up and index this material? As a communications officer at the Texas A&M University Agricultural Research and Extension Center, I was presented with just this problem. I had no problem with the photography. I worked as a report/photographer in the commercial agricultural press for 10 years prior to coming to the Texas Cooperative Extension Service.

Not every agricultural communications office has publication quality photos , but even if they do, a number of problems present themselves.
- - First, the photos, whether scanned from a print or slide or from a digital camera, must be of high enough resolution to be printed on newsprint.
- - Next, the photos must be mounted on an Internet webpage so that the viewer can browse through collection quickly. This means a low-resolution version of each photo needs to be made available. Also, a contact sheet of each photo shoot makes it convenient for the clientele to quickly navigate a large collection of photos
- - And third, there should be a way to record download history and usage of the high-resolution versions.

Method

The first problem is solved by either using a mega-pixel digital camera or by using professional quality slide scanners. This article will assume that the reader has some experience in producing image files of high enough resolution for print publication.

The second problem is primarily one of basic webpage design. Contact sheets of photo collections (see Appendix A) can easily be produced using software packages such as Infraview (freeware), LviewPro (shareware) or Photoshop 5.5 (commercial ware) and above.

These contact images can be linked in one fashion or another to versions of the images that are large enough to be comfortably viewed on-screen but not at such high resolution that those using slower connections will be discouraged by long download times. Once the clientele has found the image or images they want to use, they will be a little more patient in waiting for a large file to download than they were while merely browsing.

The third problem is more difficult. Although it is relatively easy to link from the webpage with the

low-resolution version to the high-resolution, recording download data, such as the name and email of the person downloading the image, the name of the publication and the expected date of publication, requires a little more sophisticated programming skills than those required by building standard webpages.

Standard Internet protocols allow the communications between a fill-in-the-blanks web form page and some form of script that records the information to a database. The protocol is called the "Common Gateway Interface " (CGI).

A CGI script can be written in any language that can read standard input (STDIN) and write to standard output (STDOUT) and read environment variables. Virtually any programming language, including C, Perl, or even shell scripting can be used.

But what if you're a non-programmer, or rather, computer programming challenged? As one on-line CG I primer (http://www.jmarshall.com/easy/cgi/) reads:

"If you're a programmer already, this primer can teach you the basics of CGI in a few minutes. If you're not a programmer, this primer won't help you much sorry. Learn some programming, even shell scripting, and come back when you're done. Good luck"

At this point, non-programmers, such as this author, usually throw up their hands in despair. But lacking the help of a computer programmer, and desperately needing a way to track photo usage, the author charged ahead and learned enough Perl to get the job done.

No Need to Reinvent the Script

If your webpages are hosted by a Linux or Unix operating system, as the majority of Internet servers are, then the Perl script, so with minor modifications and cooperation from the system administrator, the script should work for you. Perl is also a cross-platform language, so with a few more modifications it is possible to make it work on Windows NT servers.

The script is in the public domain, so its use is free. The author's sole request is that if you do use the script, please send an email to rd-burns@tamu.edu on the progress. The author is also available through this email for troubleshooting.

Basically, this Perl script (and most any other CGI script) does three things.
1. It reads the data the on-line user inputted into the webpage form.
2. It performs a specified operation on the data, in this case, records it to a retrievable database
3. And, finally, it responds to the user with a newly generated webpage.

Step-by-Step

The first step, of course, is to build your library of images. I make two versions of each image, a low-resolution image for on-line viewing, and a high-resolution image for use by print publications.

The low resolution image should be at a viewable size at a resolution no higher than 72 dpi. Thus a 5-inch wide by 6-i nc h deep image would have a total pixel count of 360 x 424 pixels.

This image size quickly downloads over a modem connection allowing rapid browsing by the user. I also use these low-resolution images to build a contact sheet. As mentioned above, there are a number of programs, both proprietary and shareware, that will do this.

The high-resolution images should have enough pixels to meet the publishing needs of the publication. For most newspaper applications, one of the new digital cameras with 2 million pixels or more should be

sufficient. For magazines, using glossy stock, this 2 million pixel level may not be sufficient to run the picture more than two or three inches on a side. Slides should be scanned at the highest possible resolution of which the scanner is capable. Warning: many of the lower end commercial scanners do not have the optical quality needed to scan for print use. (Though the scanned images may look fine on your monitor but will not be of sufficient quality for print reproduction.)

File Naming Conventions

Long ago, the author adapted a purely arbitrary convention of naming low-resolution files with a short descriptive label such as "weather_0l.jpg." High-resolution files of the same image were named by appending "_600." Thus, the high resolution version of the above file is "weather_01_600.jpg."

As the author developed the Perl script, this naming convention was utilized. Pages that contained the image were made utilizing the name of the jpeg image. Thus, the HTML webpage for weather_01.jpg is weather_0l.htm.

For the high-resolution image form page, the script utilizes something called an environmental variable that returns the name of the webpage to be processed by the CGI.

You don't have to understand how this works to make the Perl script do its job. Just follow these instructions.

1. In Appendix D, you'll find a sample HTML form template page. Create or download the form to disk from the url provided.. Name the form whatever you wish (the author used photoguest.htm).
2. Make a copy of the template form for each high-resolution image you wish to serve up. Name it according to the conventions above. Thus the copy of the template for weather_01_600.jpg would be weather_01_600.htm. Unless you're up to grossly modifying the supplied CGI script, follow these naming conventions.
3. Put the copy into the same directory in which you store your high-resolution images. The author created a directory immediately under the low-resolution photo directory and named it "high_res/". You may use another directory name and place it elsewhere, but the other HTML templates and their links will have to be changed accordingly.
4. Modify the low-resolution template provided in Appendix C so that it reflects the name of your image files. This is standard, boiler plate HTML, so you may modify it greatly. Note that the link &l t;A HREF="high_res/weather_02_600.htm"> points to the high resolution form download page copied from the template.
5. Create or download the CGI Perl script in Appendix B. Every line preceded by the "#" sign is a comment that either explains how the script works or how to modify it to fit local system setup. All comment lines may be omitted and the script will still work. It's a good idea to leave the comments in, however, to help your system administrator install the script.
6. For security sake, don't forget to set the permissions on the CGI script. Don't worry if you don't understand this. Your system administrator should. The ideal security is to have the CGI script run from a root-owned directory. The default is cgi-bin. For ease of modification, the script can be run from one of your subdirectories, but this is inherently less secure.

Results

Retrieving the Data

The CGI script places the user data collected from the form and appends it to a file named signin.db. This a simple, delimited ASCII text file and can be imported into most spreadsheet or commercial database programs. As you import, the spreadsheet program will ask what delimiter was used. The delimiter is the "bar" character (|) which is accessed on a standard keyboard by the shift and backslash key.

The name of the file and the path to it is specified in the Perl script line that reads:

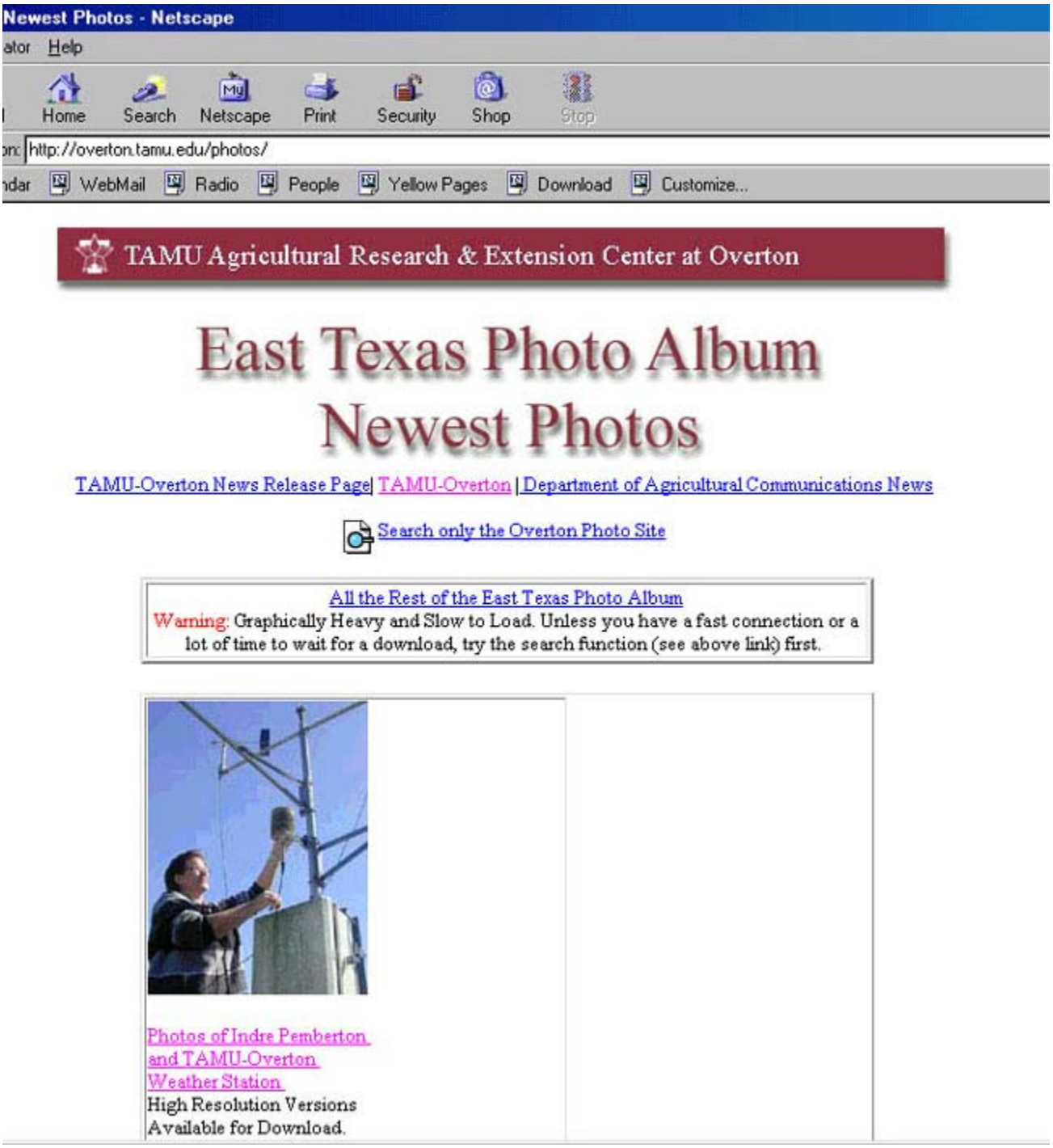
open(OUTF, ">> ../photos/guestdata/signin.db")

If you wish to change the path, the subdirectory in which the file resides, and the name of the text database, do it here. There are more detailed instructions in the comment lines of the script itself.

Conclusions

(1) Common Gateway Interface scripts are a powerful tool for tracking usage and collecting information from clientele using Extension webpages.
(2) One doesn't have to have advanced programming skills to develop Common Gateway Interface scripts for advanced Internet applications.
(2) Perl scripts in the public domain can be easily modified for custom uses.

Appendix A: Screen Shots from Webpages



This is the "welcome" page with a thumbnail picture and link to a contact sheet. See http://overton.tamu.edu/photos for more examples.

Here's the thumbnail sheet. An image-mapping program was used to create a client-side image map linking the thumbnails to larger versions. See http://overton.tamu.edu/weather_cs.htm to see how the links operate

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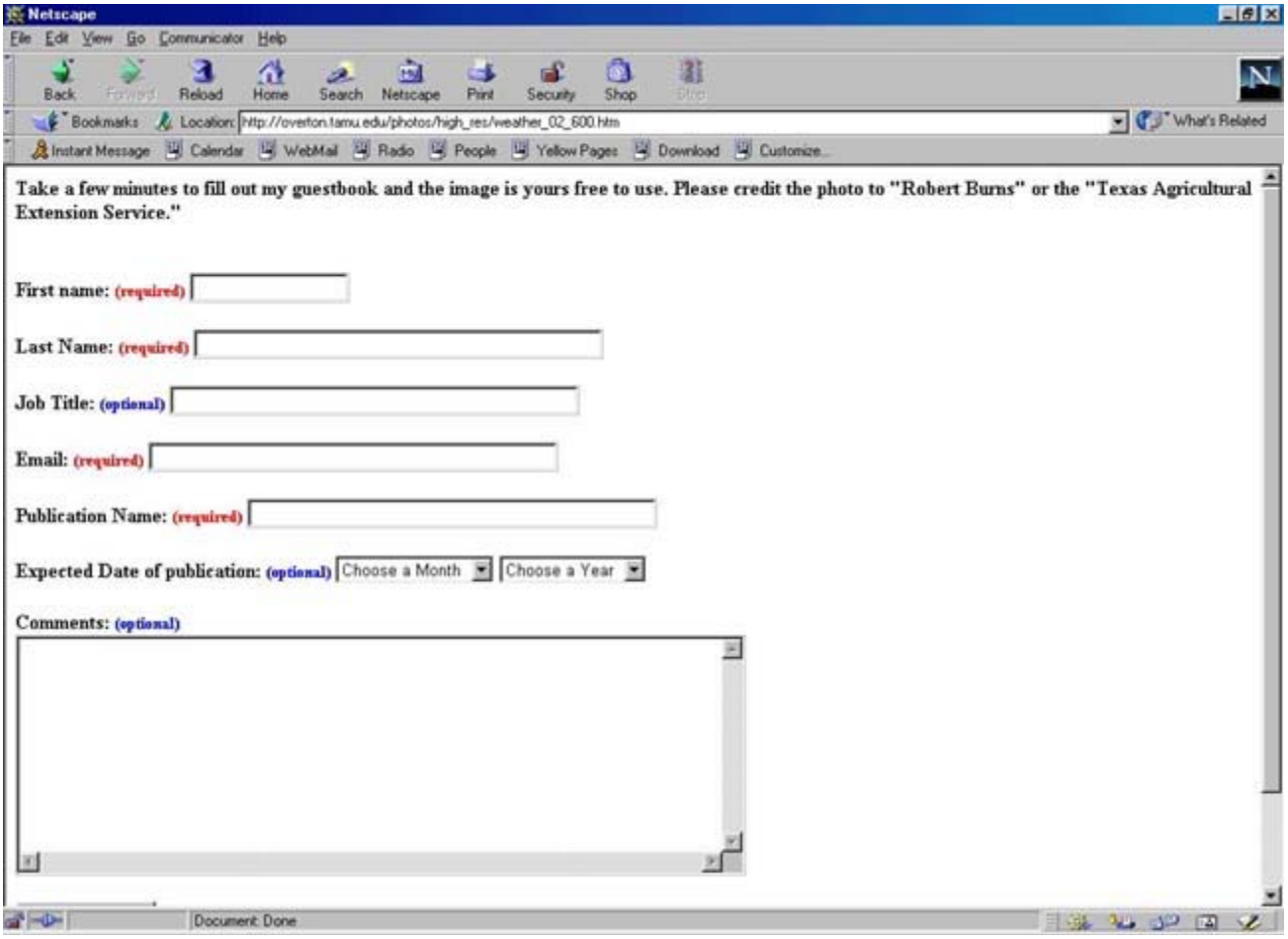
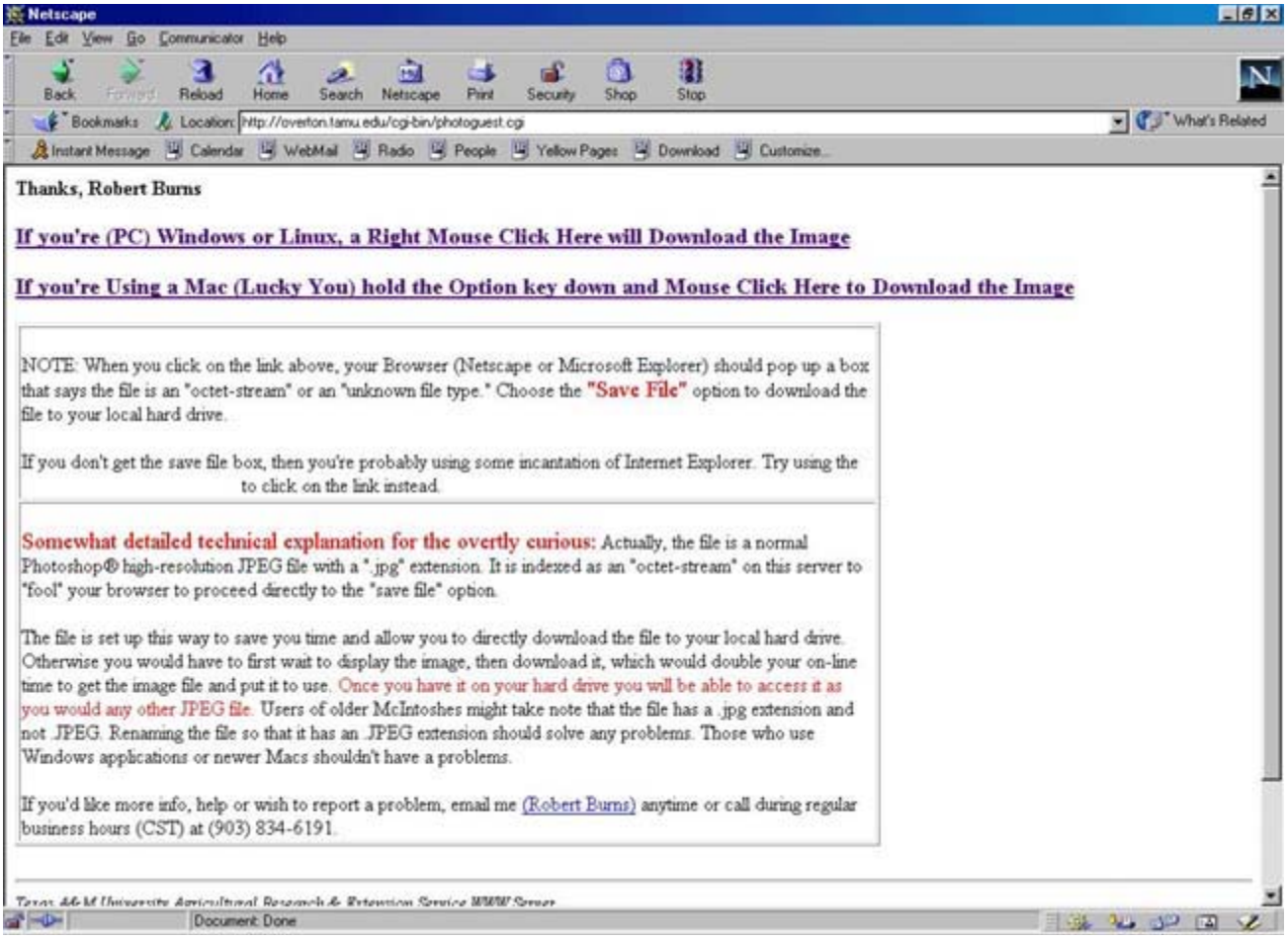
Here's the intermediate page with a short caption, a link to an associated story and a link to the high-resolution version of the image. The image is 31 kb in size, meaning it will download on a moderately fast modem in less than 30 seconds.



Here's the form page. The HTML code for this form page is listed in Appendix D. The code for this page is used again and again. For two disparate image files, weather_01_600.jpg and bberry_09_600.jpg, the identical HTML code is used. The only difference is the version for weather_01_600.jpg is named weather_01_600.htm and the version for bberry_09_600.jpg is named bberry_09_600.htm.



The page is standard, boiler plate html, generated by the Perl Script, which is listed in Appendix B.

Appendix B: Source Code of photoguest.cgi

(available to download from http://overton.tamu.edu/publish/photoguest.cgi

Appendix C: Source of sample low-resolution HTML code

(view or download from http://overton.tamu.edu/photos/weather_02.htm)

Appendix D: Source Code of Photo Download Page

View or download from http://overton.tamu.edu/photos/high_res/photoguest.htm

Avoiding "Foot in Mouth" Disease:
Attempts at Crisis Communications Planning Among State Agencies in Texas

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Background

The United Kingdom's protracted battle with foot and mouth disease during 2001 has raised major questions about how well-prepared the United States is to combat this or other diseases that could potentially devastate the livestock industry. The terrorist attacks of Sept. 11 only served to underscore how vulnerable the U.S. livestock industry is to disease-spread ing sabotage that could be accomplished quickly, easily and on the cheap. An increasing chorus of industry and government voices have sounded alarms concerning this national state of unpreparedness. One of the latest is the research foundation of the National Association of State Departments of Agriculture, which conducted an eight-month review of the nation's ability to protect livestock and human health from animal diseases. In an October report, its primary recommendation was that the Congress and USDA "must provide funding and act to rebuild the state and national infrastructure for animal disease control, emergency disease preparedness, and response."

Texas, among other states, has struggled to mount a response to a potential Foreign Animal Disease (FAD) crisis. Led by the governor's office, planning for such an emergency began in the spring of 2001 and involved some 30 state agencies. Initially, the effort focused on adapting the state's usual emergency response mechanism employed for hurricanes, tornadoes, and other largely weather-related disasters to the FAD problem. A new wrinkle, however, was the agency primarily charged with protecting the livestock industry in Texas is the Texas Animal Health Commission, which had rarely, if ever, been asked to participate in emergency management at the state level.

The state attempted to wed the TAHC veterinary expertise to the state's emergency response mechanism through a mock foot-and-mouth disease (FMD) exercise held at Texas A&M over three days last June. The exercise was conducted by the National Emergency Response and Rescue Training Center at Texas A&M. While the exercise involved some 120 participants and was successful in demonstrating cooperation among agencies on certain tasks, it also exposed the fact that the state did not have policies in place to manage the crisis. USDA's Animal Plant Health Inspection Service (APHIS) has put together a specific set of recommended actions that states may take to address an FMD crisis, but Texas has not yet decided which recommendations to adopt.

Going into the June exercise, there had been no planning done for handling a statewide news and media relations effort in connection with an FMD or other foreign animal disease outbreak. News concerning weather-based state emergencies in the past had been handled routinely by police or emergency personnel at

the scene. When a more comprehensive regional or statewide perspective was necessary, those stories were channeled through the governor's state emergency management council, which during an emergency, convenes in a situation room beneath the headquarters building of the state's Department of Public Safety in Austin. These news and media relations efforts usually were handled by two staff communicators within DPS.

When communicators from a half-dozen state agencies met for the first time at the June exercise, it became obvious that handling news and information for an FMD outbreak was going to be anything but routine. The FMD story potentially offered these unusual aspects:

*It would be a world story. If foot-and-mouth disease were to hit Texas, and this was the first modern-day outbreak in the United States, world interest would be extremely high. Texas, the largest producer of cattle and sheep in the United States, would find its markets evaporate overnight, its animals quarantined within its borders. It's also likely that the animal export ban imposed on Texas by the rest of the world would extend nationwide, at least until it's determined how widely the foot-and-mouth disease had spread in Texas. With so much at stake economically, the state must be able to communicate quickly and clearly to the rest of the world precisely what it is doing to control the outbreak and deal with the problem.

*It is a story where the state is not only the victim, but also the "bad guy." Unlike a weather disaster, which no one can prevent, an FMD outbreak in Texas would require the state to take draconian measures to stamp it out. This includes halting the movement of all livestock within the state and slaughtering all cloven-hoofed livestock and wildlife within kill zones established around outbreak areas. Such a practice was highly controversial in Great Britain, and likely would be criticized and met with opposition if implemented here as well. Despite the experience of Great Britain, FMD remains background noise for most Americans. Most people know very little about it. When people don't know much abo ut a subject, they are most open to misinformation, fears and rumors. The state must be able to counter misunderstanding and criticism with clear explanations about why its FMD countermeasures, including kill zone policies, are for the best in the long run.

*It is a story that will develop rapidly, with little warning. Given the highly contagious nature of FMD, the state may have little more than 24 hours to put its crisis plans into motion. Typically, FMD will be diagnosed by a state or USDA veterinarian called in to examine suspicious animals at a farm or ranch. However, the state will not take full-scale preventive measures until FMD is confirmed at the Foreign Animal Disease Laboratory at Plum Island, New York. The disease sample likely will be taken by courier to New York, where a team of technicians will be waiting to fast-track identification procedures. Thus it is quite possible that the state may find a suspicious case one day and have it confirmed the n ex t. As a result, the state's emergency response mechanisms, including communications efforts to the news media and the general public, must be poised and ready to roll out on very short notice. Given that the disease eradication effort will involve dozens if not hundreds of individuals, the state also needs a reliable internal communications network as well, preferably one that is computer-based to allow a flow of e-mail and data, with archival capabilities.

Faced with these challenges, a core group of communicators has been meeting monthly since June to work out a crisis communications plan. The agencies represented included the Texas Animal Health Commission, Texas Department of Agriculture, Texas Department of Public Safety and Texas Cooperative Extension (served by Agricultural Communications at Texas A&M University). This plan in its draft form is being shared with communicators from the Governor's office and other state agencies that also will be involved in the emergency effort. These include representatives from the Texas Department of Health, Texas Department of Mental Health and Mental Retardation , Texas A&M College of Veterinary Medicine, Texas Parks and Wildlife Department, Texas Department of Criminal Justice, and the Texas Natural Resource Conservation Commission.

What follows is still very much a work in progress. We offer the plan and a discussion of its strengths and weaknesses in hopes that communicators facing similar challenges in others states might benefit from the

Texas experience (and also offer suggestions on how to improve our own efforts).

Method

The FMD communications task force meeting at the June exercise brought together a diverse group of agency representatives. Some knew each other and had worked together in the past; others had not. Their communications resources ranged from one-person shops at the Texas Animal Health Commission and the Texas A&M College of Veterinary Medicine to such agencies as the Texas Department of Agriculture and Texas A&M Agricultural Communications, which each could involve as many as a half-dozen people in planning and production efforts. Monthly meetings have mainly involved compiling task lists and dividing up the work among volunteers.

Through December, the FMD communications task force has taken these preparatory steps, many of them textbook actions in development of a crisis communications plan:

*Produced an educational video about foot-and-mouth disease. Actually, two versions were completed: one runs 15 minutes and was designed to give lay audiences an overview of the issues involved in the disease; a second, 20-minute version included more detailed, technical information for those in the livestock industry. A 10-minute supplement was added to help livestock producers recognize symptoms in their herds. Both sets were distributed among participating agencies, but especially to Extension county agents serving all 254 counties in Texas. This effort capitalizes on a lesson learned during the FMD outbreak in Great Britain -- that informed livestock producers can be a first-line defense against the disease.

* Put together a list of 850 news media contacts based in Texas and across the country. Most of these consist of e-mail addresses of reporters who would likely cover news of an FMD outbreak. This list would receive first news of an FMD emergency on Texas. Preparations were also made to put county Extension agents and county judges in the first line of notification of a confirmed case.

*Drafted an initial press release that announces the FMD outbreak and provides an overview of what the state is doing to handle the emergency and minimize its consequences.

*Developed a Web site for news media and general public that will be posted in the event of an FMD outbreak. The Web site will include these listings:

- Key fact sheets on FMD
- Names of experts who can speak about FMD in various regions, with their contact information and mug shots
- Streaming video of FMD educational video for general public
- Downloadable radio PSAs in English and Spanish
- High-resolution photos of animals with FMD, graphics showing how disease spreads, maps of recent outbreaks
- Who's who of key players in FMD crisis leadership team. Include photos, titles, brief description of each person's responsibility, role in crisis.

*Developed rules of engagement for news coverage of this story. Due to the extraordinary efforts that will be necessary to prevent spread of FMD by contact, access to disease outbreak sites will be strictly limited. No one will be allowed to go in or out without undergoing lengthy decontamination procedures. However, it is

expected that news reporters will be dispatched to the scene of the outbreak, to be as close to the local action as possible. As a consequence, plans have been developed to hold news briefings close to quarantine zones. This necessitated designating a team of communicators that is willing to leave at practically a moment's notice to travel to the outbreak site and set up temporary communications headquarters.

Once the state's emergency efforts have begun on site, news briefings will be held at regular intervals. Video news footage within the outbreak zones sites will be provided via a pool arrangement. A news camera maintained and operated by a Texas A&M communicator would be used to provide video feeds. The camera would be protected from FMD contamination by an envelope similar to one that encases a camera used for underwater video shooting. The envelope would be disinfected, then opened to retrieve the video tape from the camera.

Frankly, these actions have been the relatively easy things to get done. What faces the task force are these more daunting challenges:

*****Obtaining a clear understanding of the state's plan for dealing with an FMD crisis. Development of communications materials has been slowed by the state's failure to make key policy decisions concerning what specific actions it will take to manage an FMD emergency. For example, when (or if) the state orders a halt to all movement of livestock after the announcement of an FMD outbreak, what will it do with the animals? As one Department of Public Safety trooper put it during the June exercise, "I know how to pull a trucker over and even give him a ticket, but what do I do with the cattle he is hauling? I can't very well take them all to jail." This question has not been addressed.

Yet to be worked out are similar details of the state's plan for handling funding and liability issues, security and containment issues, environmental health and safety concerns, and community impact issues. Four separate statewide committees, with representation from numerous agencies, have been charged with developing these portions of the plan, but none have met since June. In fairness, it should be noted that the terrorist attacks of Sept. 11 reordered the state's priorities, and organization of a state homeland defense department has taken center stage. The TAHC, a key player in nearly all of the committees, also has been tasked with handling unexpected outbreaks of anthrax, tuberculosis, brucellosis and scrapie in animal populations.

The state's new timetable is to tackle the FMD plan committee work between February and April 2002. In the meantime, the communications panel, the only active statewide committee, has been pushing for a summary of what FMD policies the state has decided to date.

*****Coordinating FMD communications at the highest levels. The Governor's communications staff was not included in the FMD exercise in June or in subsequent communications planning. To correct this oversight, the communications panel is seeking to brief the members of the Governor's communications staff on the FMD plan in January. This seems only logical, especially since the governor's emergency powers will be invoked to respond to such a crisis. Texas Gov. Rick Perry, the state's former agriculture commissioner who has close personal ties to the ag industry, will likely make the call concerning whether he wants to personally make the initial announcement concerning the finding of FMD in Texas at a news conference at the state capitol. Without the governor's staff plugged into our FMD planning effort, such plans run the risk of never being employed.

*****Developing a strategy for handling a national and a world story. Beyond periodic postings on Web sites, are there any other ways to make the news of an FMD outbreak in Texas accessible to reporters across the country and around the world? At the suggestion of Texas A&M Agricultural Communications colleague Kathleen Phillips, we are exploring how we might conduct a virtual news conference over the Internet. The

idea would be to stream video of experts in real-time over a Web site to which reporters could log on. Reporters could send questions in via e-mail, which the expert would answer over the Webcast. An added advantage is that such briefings can be archived on the Web site, providing useful background and helpful quotes from experts.

> What's needed is a video camera that can be plugged directly into a computer and a video streaming server for the Web site. We already have the camera and computer, and are working with KAMU-TV, the Public Broadcasting System station at Texas A&M, to test their streaming server. Our plan is to field-test the equipment in several configurations. We are especially interested in seeing how well the Web streaming might be done from a field location, using a camera plugged into a laptop with a dial-up Internet connection. With a standing Web site designated by KAMU, we also will have a regular site to send the news media for other real-time news conferences as needed.
>
> We are also looking into ways to utilize Texas A&M phone bridges that would enable up to 24 news reporters at a time to talk with an FMD news source. The reporters would call a phone number at a certain time to be linked to the source's briefing.

*****Developing a Web-based internal communications network. We are exploring public-domain software that would enable the state's FMD field investigators to communicate with decision-makers at the state's crisis management headquarters via the Internet. There will be a tremendous need to relay, share and coordinate field reports, situation updates, and decisions among the numerous teams working on the crisis. The unpublicized Web site would be password protected and enable the state's crisis teams to rapidly share and archive developing information about the FMD outbreak. The state has no such computer-based network currently.

Results

So how did we do? Since there has been no foot-and-mouth disease outbreak in Texas, it is hard to do a final evaluation. However, we have achieved several things:

*****Consensus and buy-in on our plan from the four major state agencies involved (Texas Animal Health Commission, Division of Emergency Management, Texas Department of Agriculture and Texas Department of Agriculture).

*****Evaluation by a crisis communications expert. Jeff Braun, who represents Ammerman Experience, a firm that specializes in crisis communications, was favorably impressed with the plan and its brevity.

> He said the biggest challenge would be keeping all of the communicators and agencies cohesive and constant. He suggested that Texas Cooperative Extension and Texas A&M College of Veterinary Medicine should prepare for a worst-case scenario, which would be that all of the struck out on their own and the message became fragmented. He wanted us to determine our agencies' agenda.
>
> Additionally, he wanted us to identify all of our audiences, both internal and external, which we have been in the process of doing.

TAHC vets did not want us to release a statement if there was only a suspected case (because of trade issues), however, it was our feeling and Mr. Braun agreed that we should have a prepared statement if word leaked out about a suspected case, and the agencies became flooded with media calls. That statement has been prepared, and will be released only if deemed necessary.

Another suggestion -- which came from both Mr. Braun and the agencies involved -- is training for those who would be spokespersons in the case of an outbreak. We are preparing question-and-answer, briefing sheets and are preparing training for our experts.

Mr. Braun also suggested that we write out a justification -- available to the media before an incident -- for not allowing cameras on-site.

*****Evaluation from veterinarian who had been to the United Kingdom. We also asked Dr. Bruce Lawhorn, veterinarian with Texas Cooperative Extension and the Texas A&M College of Veterinary Medicine, evaluate our plan against what he experience in the United Kingdom. He was one of the veterinarians who traveled to the United Kingdom to assisting in diagnosing FMD there.

"When I previously reviewed the plan, I thought it very necessary to have experts available to help media (your staff) answer questions and by scientifically correct as much as possible...this would be via cell phone, etc....contact with experts that would fighting the FMD outbreak."

We have developed a list of experts -- with each agency and region of the state represented -- that is already posted on the Texas A&M web site.

We also plan to have an expert or expert at each site, if there are multiple outbreaks, to brief media. This will most likely not be the incident commander, since we feel he or she will have many other things that would pull them away.

Dr. Lawhorn's other comment was, "Also, if Ag comm and their media people are on site of FMD outbreak, they will need to be expected to also comply with biosecurity measures...suiting up, disinfecting clothes, shoes, equipment, cameras, etc....could receive crash course from TAHC vets and be furnished all necessary stuff by them...This may not be that big a deal since media persons are probably only interviewing vets over cell phones but I believe you have equipment now to actually go on site...must make sure you know how to put waterproof stuff on cameras, etc, so they can be disinfected on/off premises."
We have already begun preparing for this by planning for videographers from Texas Cooperative Extension and Texas Parks and Wildlife Department to be on-site to shoot footage to reproduce and give to reporters. We also are investigating the feasibility of having satellite up-links and also streaming video from our web site.

A password-accessible-only Web site for communications between the field and the governor's state emergency council at DPS headquarters in Austin in under development by Ag. Communications. This would allow on-site veterinarians and TAHC administrators and directors and emergency management personnel to communicate quickly and efficiently the latest outbreak numbers and needed equipment and manpower at the site or sites.

*****Utilization of county Extension agent network. The county Extension network in Texas is valued and envied by other state agencies, and we plan to utilize that network greatly. Armed with the educational videos, two state veterinarians have been training county agents, and county agents, in turn, have had many educational meetings for producers and the general public alike. As mentioned earlier, the county agents are on the front lines of notification as soon as the first case is confirmed. They will be updated through email from their district directors and through Web page updates.

Conclusions

Appendix 1
Foot and Mouth Disease Media Response Plan, Step by Step

Key Assumption:
FMD find in Texas is first in the country, making this a national and world news story. Lead time between trigger event and need to alert news media will be short, perhaps only hours, requiring rapid decisions and movement of people and resources. This makes having a well-thought-out media response plan critical. As an extra curve ball, it may not be known for hours or days whether introduction of the FMD case was accidental or a deliberate act of terrorism.

Prior to Trigger Events, these items are complete and ready to go:

- Step-by-Step Media Response Plan
- Shell of news release announcing FMD find
- Web site for news media and general public on FMD. Listings on site include:
- Key fact sheets on FMD
- Names of experts who can speak about FMD in various regions, with their contact info and mug shots; include experts who can speak about bioterrorism
- Streaming video of FMD educational video for general public
- Downloadable radio PSAs in English and Spanish
- High-resolution photos of animals with FMD, graphics showing how disease spreads, maps of recent outbreaks
- Develop rules of engagement: press protocols for covering this story; include as an editor's note with initial release.
- Compile who's who of key players in FMD crisis leadership team. Include photos, titles, brief description of each person's responsibility, role in crisis.
- Web site, protected by password, for communications use by crisis leadership team, veterinarians in field and other agency professionals working on problem.
- Designation of a hotline number for news media to call for additional info. (Should be included in initial press release).

First Trigger Event:
Notification by TAHC that a suspected case of FMD exists in Texas.

TAHC's Carla Everett (or alternate) sends e-mail advisory to designated "tree" of communications reps at these agencies: Texas Department of Agriculture (Carrie Critchfield plus 2 alternates), Texas Parks and Wildlife (Steve Lightfoot plus 2 alternates), Texas A&M Ag Program (Edith Chenault, Dave Mayes, Diane Oswald, Lorri Jones, plus 2 alternates), Texas Department of Public Safety (Don Rogers, plus 2 alternates), communications designates from Governor's press office, Texas Health Department, Texas Mental Health, Mental Retardation, Texas Department of Criminal Justice, Texas Natural Resource Conservation Commission, USDA.

Hours 1-2

*Tree reps or alternates notify Carla by return e-mail that message has been received and they are ready to implement response plan. [If no response received from an agency, Carla or designate tries to make contact by phone.]
*Carla or designate sets up conference call (can be done quickly during office hours through Texas A&M; if this is option chosen, Carla contacts Dave or Edith to set up) to brief tree communicators on what has transpired. [Handle this via e-mail if telephone coordination poses problems]
*Edith Chenault or designate begins revising standing news release to fit facts of existing situation.
*Quick Response Team (QRT) activated and readied to travel to site of FMD find. Members should be packed and ready for stay of 3 days at least. QRT member calls DPS to learn if mobile media command post will be activated. Based on assessment that suspected FMD case will be confirmed, Quick Response Team leaves for FMD site. Travel by car if at all possible so equipment can be carried more easily.

Advance Actions Needed:

- Determine what role Governor will play in making announcement, and where he wants initial briefing to take place (likely would be at state capital).
- Complete news release and clear with crisis team leadership as to form. Translate standing release into Spanish; have Spanish-language capability for revised release based on existing facts.
- Designate QRT team members: Blair Fannin and Andy Smith (A&M), Steve Lightfoot (TP&W) Alternates: Edith Chenault
- Decide on items QRT should have with them:
    - Cell phones (the ones that are listed on contact sheet)
    - Laptop computers with Internet connections
    - Portable printer with extra cartridge and paper
    - Printed handouts of key FMD fact sheets
    - Tape recorders for interviews and tapes
    - Andy should take video camera with protective shell for shooting pool video footage
    - Nametags for press credentials
    - Extra electrical cords and surge protectors
    - Pens and notepads

Hours 2-4 (or as soon as possible thereafter)

- QRT works with crisis leadership to help determine appropriate site for setting up field headquarters and handling press briefings. This designation may range from a nearby public building to a spot of ground in a field.
- Carla or designate heads for Austin DPS command post (State Emergency Operating Center) where FMD crisis leadership will begin assembling.
- Edith or designate wraps up news release announcing FMD find in Texas. Clearances for all news releases will come through Austin headquarters.

Second Trigger Event:
Confirmation by Plum Island that Texas has FMD case.

- Initial news release announcing FMD finding sent via e-mail and fax to media list maintained by AgComm at Texas A&M
- Web site goes up with background info on FMD

- QRT works with crisis leadership team to flesh out communications site plans.
    - Issues that must be determined on site include:
    - How lines of communication will be established between QRT members and key people working on the FMD case
    - If bioterrorism is suspected, who will be investigating at site
    - Media access to perimeter of premises where FMD is suspected
    - Identity of affected people (owners of FMD livestock and their families) and media access to them
    - Identification and prepping of key spokespersons on site
    - Drafting of key talking points/messages for spokesperson to use during briefing
    - Scheduling of first news briefing and deciding schedule for those that follow
    - Determine whether news conferences via Web cast are feasible from site.

*Phone bank activated to field media calls around the clock during first 2 days, at least.

Advance Actions Needed:

- Determine how logistically the phone bank can happen, and whether phones can be rolled to various agencies to provide staffing relief. Determine minimum staffing of phone bank and consider how to keep all coordinated and on message. [Some initial thoughts: Develop briefing book that has key message points and facts. Provide updates through e-mail and intranet Website. Provide someone on phones who can converse in Spanish. One approach to 24/7 phone staffing issue may be to shuffle clusters of media calls to A&M phone bridge (up to 24-parties), where expert or one of us could field multiple questions from media without tying up phone lines with individual callers. Also investigate whether experts could be made available via Internet on Web, with reporters asking questions live via e-mail.]

That Evening or Next Morning

- Conduct initial press briefing on site
- Coordinate this with any statement Governor or high-ranking federal official may be planning to make on FMD crisis
- Generate maps showing location of confirmed case with concentric circles showing designated kill zones
- Monitor written and broadcast news reports on Texas FMD case, in order to correct false or misleading info generated by news coverage
- Post on FMD news website first digital and video images of scene, as gathered and transmitted by QRT.

Appendix 2
Foot and Mouth Disease Response Plan, Internal Communications

Assumption: Prior to an FMD outbreak, an outline will be circulated to Extension agents indicating where they will find FMD background information for use in their counties and how updated information will be shared with them.

First Trigger Event:
Notification by TAHC that a suspected case of FMD exists in Texas. Once notification received from TAHC, Edith/Chenault/Dave Mayes or alternates in Ag Comm send e-mail to Ag Program leadership alerting execs that suspected FMD case in being investigated

E-mail list includes: E. Hiler, C. Scifres, C. Fehlis, K. Smith, E. Smith

Second Trigger Event:
National lab at Plum Island confirms Texas has FMD case.
*Once news release is completed and cleared, send story via e-mail to Ag Program leadership, designated spokes persons re FMD, Resident Directors, District Extension Directors, Extension specialists, Extension Ag Program leaders in each county
*How best to notify county agents? Via e-mail, through DEDs? How to ensure the agents get the message in a timely manner?
*E-mail message directs agents to Ag Comm FMD website for more information. Info developed for use by agents is provided on website, along with news releases and updates.
*Special attention will be given to providing agents with info that can be passed along to their producer clients. Some of this can be developed in advance, but we can also attempt to keep a running list of FAQ's to help agents deal with questions they are trying to field.
*Some backgrounders could be ordered on demand from Copy Services for quick shipment to a county. Some allocation will have to be made centrally to pay for them.
*Agent(s) in whose county FMD was found is given password for intranet website where field communications will be carried. Password also shared with K. Smith. Who else in Extension should have password for intranet website?
*Do we need to have an expert available to field agent questions over a special hotline number during the first couple of days after the event? A&M conference call phone bridge could allow as many as 24 agents to join in at a time to ask questions of expert.

Appendix 3
DRAFT NEWS RELEASE

Date
FIRST U.S. FOOT-AND-MOUTH CASE(S) CONFIRMED IN TEXAS
Writers: Carla Everett, Texas Animal Health Commission, (512) 719-0700, c-everett@tahc.state.tx.us; Edith Chenault, Texas A&M Agricultural Communications, (979) 845-2895, e-chenault1@tamu.edu
Contact: Dr. Linda Logan, (512) 719-0700

AUSTIN -- _____ confirmed case(s) of foot-and-mouth disease has (have) been found near _____ in _____ County, and state authorities immediately are suspending all livestock movement in Texas, Linda Logan, executive director of the Texas Animal Health Commission, announced today.

The case(s) is/are in cattle/sheep/goats/swine, and are the first cases found in the United States. All of the livestock within a xx-mile radius of the site are being tested/examined by state veterinarians for symptoms of the highly contagious disease, Logan said.

The confirmation was made (when) by the USDA's Foreign Animal Disease Diagnostic Lab at Plum Island, N.Y.

The state's stop-order on livestock, Logan said, means that no livestock considered susceptible to the disease will be permitted to be moved from their current locations, which includes sale barns, feed yards and shows and fairs.

Trucks and vehicles carrying livestock are being stopped by Texas Department of Public Safety officers and

requested to return to their points of departure. In addition, no livestock will be permitted to leave the state or enter it.

Affected animals are all cloven-hoofed species, which include all cattle, swine, sheep, goats, deer, elk, bison and llamas. The transportation of horses, mules, donkeys, poultry, or other birds are (or are not, or require some special permit) exempt from this order.

Logan said the transport ban will remain in effect until state investigators have determined how widely this disease outbreak may have spread.

Logan offered assurances that foot-and-mouth disease provides no threat to human beings, nor does it endanger the food supply. However, the disease is highly contagious in certain animals, and it can spread quite rapidly.

"If this disease gets out of control, it can devastate our livestock industry," Logan explained, "as has been the case in Great Britain. We are determined to keep that from happening, so we must take these measures."

Gov. Rick Perry plans to issue an emergency declaration and request a presidential emergency declaration. He is planning a news conference at _____
(Need to verify Perry's role, nail down protocol for announcement)
(Include remarks from the Governor's office about the stop-movement and its hardship).

The state's actions are in accordance with a statewide plan for dealing with foreign animal diseases. The plan was developed over the past year by the Governor's Emergency Management Council, which has been activated for this emergency.

The plan calls for all susceptible animals within a one-mile radius of the infected site, and all swine, sheep and goats within a two-mile radius, to be humanely slaughtered and disposed of in a bio-secure manner.

All susceptible livestock within an eight-mile radius of the infected site will be quarantined and monitored for evidence of foot-and-mouth disease.
People living within the quarantine area will be allowed to travel in and out, but will have to pass through biosecurity checkpoints to ensure they do not transport the virus out of the zones unintentionally.

According to Dr. Bruce Lawhorn, veterinarian with Texas Cooperative Extension and the College of Veterinary Medicine, the disease can cause serious, chronic illness in cloven-footed animals. It also can cause high mortality in young livestock, such as pigs.

Infected animals can develop blisters in the mouth, tongue, muzzle, teats and skin between the hooves, Lawhorn said.

Texas Commissioner of Agriculture Susan Combs urged the state's livestock owners to keep abreast of the current situation, inspect their livestock daily for symptoms, isolate any new animals, monitor visitors to ranches and comply with disease prevention guidelines.

Suspected foot-and-mouth cases in livestock or wildlife should be reported to the Texas Animal Health Commission, (800) 550-8242.

More than 30 state agencies are members of the Governor's Emergency Management Council, which is working closely with the Division of Emergency Management, Texas Department of Public Safety. Among the members are the Texas Veterinary Medical Diagnostic Laboratory (TVMDL), the Texas Department of Transportation, Texas A&M University and the Texas Department of Agriculture.

Logan said the TAHC also has organized a Stakeholder Advisory Group that includes all the major livestock industry organizations in Texas. This group will provide advice in managing this animal health emergency.

Texas leads the United States in the number of cattle and calves produced, with the inventory of cattle and calves totaling 15 million in July, according to the Texas Agricultural Statistics Service. The U.S. inventory of cattle in July totaled nearly 106 million head.

Further information on foot-and-mouth disease is available from
http://agnews.tamu.edu/footandmouth/
http://tahc.state.tx.us/
http://www.aphis.usda.gov

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MEDIA ADVISORY

● A public information office will be located at a headquarters (Incident Command Post) established near the disease outbreak site. A second office will be located at the Division of Emergency Management, Department of Public Safety, in Austin.

● Department of Public Safety officers will permit properly identified news media representatives to the area surrounding the quarantine zone and the incident command post. Media briefings will take place on a regular basis when that post is set up.

● All one-on-one media interviews and requests must be submitted to the Public Information Office at the Incident Command Post.

● Further information on media policy is available from Carla Everett, director of public information for the Texas Animal Health Commission, (512) 719-0710.

Appendix 4
DRAFT NEWS RELEASE
(If it becomes necessary to have to say something to news media)

Date
SUSPECTED FOREIGN ANIMAL DISEASE CASE BEING INVESTIGATED
Writer: Carla Everett, Texas Animal Health Commission, (512) 719-0700, c-everett@tahc.state.tx.us; Edith Chenault, (979) 845-2895, e-chenault1@tamu.edu
Contact: Dr. Linda Logan, (512) 719-0700

AUSTIN -- The case of a possible foreign animal disease, as yet unidentified, is being investigated by state authorities near _____ in _____ County, according to Dr. Linda Logan, executive director of the Texas Animal Health Commission.

Animals at the location have been quarantined temporarily, pending results from testing at the USDA's

Foreign Animal Disease Diagnostic Lab at Plum Island, N.Y. That analysis is expected by (Monday, etc), Logan said.

"This is a routine, precautionary procedure," Logan said. "We handle many such investigations, with nearly all proving to be routine. Until we know the lab results, however, we use quarantines to prevent a disease from spreading to other animals."

"There is absolutely no risk to human health in the case currently under investigation," she added.

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Media Relations in a Wired World: MediaLink 2001

A Paper Presented to the Southern Association of Agricultural Scientists
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Background

MediaLink 2001 is a CD-ROM designed as a reference tool for members of the media. It is the latest version of what was originally a printed sheet of paper that listed topic specialists and their phone numbers. This list was updated annually and also included contact information about Mississippi State University's Office of Agricultural Communications. The goal of this information, then as well as now, is to be a ready source of information and story ideas on a wide range of topics, and to offer university specialists as experts on these subjects.

As the content of these information sheets grew, the task of fitting it all in the space provided became more difficult. And as media needs changed, we realized that what we were offering was no longer the most useful. We also wanted to provide more material for users.

Some organizations have begun offering information about themselves in electronic form on CD-ROMs. The idea for the project came from the Southeastern Conference's media guide, a CD-ROM that provides information about the sports teams in the SEC. The CDs have team rosters, photographs, stats and university information for each of the member schools.

A CD-ROM can be interactive, holds a tremendous amount of data, and can provide print quality images, hyperlinks to websites, sound and video files, and more. CDs are small and nearly indestructible. OAC has the in-house capability of burning mass quantities of these media, printing the front, designing the cover and compiling the content. The decision was made to proceed with the project and design a media resource on CD-ROM for 2001.

Method

Cost

We began with a cost estimate to see if the return on the project was worth the investment. The office traditionally sends our expert list to everyone on our news distribution list. We also hand out copies at the Mississippi Press Association and Mississippi Association of Broadcasters meetings, and anytime we contact members of the media. We decided that we needed 500 copies to meet our distribution needs for the year.

The in-house computer services department agreed to supply the media and cases, burn the CDs and print the fronts for $1.50 each. Cost for the actual CDs was $750. We received three bids for printing the fold-out front cover and the back cover. We accepted the bid of $540.35. When we began, no estimate was possible of how

much staff time this project would require.

Development
We determined that the project had five parts, and pulled a team together composed of one person in charge of each area. A graphic designer was responsible for developing the functioning CD-ROM. A photographer was charged with collecting the photographs and cutline information. Another graphic designer created the cover, an editor compiled the experts list, contact information and university data, and a special projects coordinator was responsible for gathering logos and word marks.

The graphic designer who created the program used Director, a CD authoring program. The designer was familiar with the software, but became much more expert in its use while she developed the CD. She began by choosing a color scheme and designing a unified look for the menu screens, buttons, layout and sections. Once the basic elements of the CD were in place, she began to add content.

What was originally envisioned as the centerpiece of the project is a searchable directory of 61 experts categorized by 75 subjects. The CD allows searches by first name, last name and specialty area. Each person's phone number and e-mail address is provided in this directory.

The searchable database was designed using V12 Database Engine, a database creation program. Director does not have the ability to create a database that was usable for this project, so our graphic designer found a program that filled the need and was compatible with Director. The designer had never used V12 before and had to learn the software as she worked.

Experts List
Specialists for the database were gathered through a variety of avenues. Each year the existing experts list is updated to account for such thing as retirements, phone number changes and new hires. Space limited the number of topics and specialists that could be included on this list in years past. With the experts list going electronic, space no longer was an issue. We sent the existing list to appropriate administrators with a request that they update it as necessary and add any other topics and experts as needed.

Compiling an inclusive database was difficult under deadline pressure. Some administrators sent lengthy lists of specialty areas and contact people, while other areas were less well represented. Decisions on who to include were made based on which topics have the most relevance to members of the media. The database is searchable by name, but to be useful to those who don't know who they need to talk to, we made the list searchable by topic as well. The challenge was coming up with common-sense topics for the specialists' areas of expertise.

Photo Gallery
The photo gallery is divided into three sections: logos, portraits and ag scenes. The portrait section offers photos of each specialist listed in the database. Color images were included when possible. Other portraits provided are those of administrators, university leaders and other staff that are more widely known throughout the state.

The ag scene section is a compilation of 103 stock photos shot by OAC photographers of the majority of Mississippi's agricultural enterprises. The photographer collected photos of the state's major crops in various stages of production and harvest, state scenery, noteworthy insects, farm equipment, forestry practices and MSU's College of Veterinary Medicine. These images are available in high and low resolution files for either print or web-based applications. Included with each photograph is cutline information.

The third section of the photo gallery includes the logos and word marks. Here users can find print-quality logos and word marks for MSU and several of its units, departments and colleges. Logos are provided in color

and black and white versions when appropriate. The CD also gives the university's policy and guidelines governing how these images can be used.

Background Information
An editor gathered a variety of information for the rest of the CD-ROM. The project begins with an overview of MSU's Division of Agriculture, Forestry and Veterinary Medicine. A summary of the Division and a description of each unit is provided, along with the name, phone number, e-mail address and physical address of each unit's dean or director.

One section offers a lengthy hyperlinked list of useful web sites within the Division. A news story and chart is provided that details the value of Mississippi crops in 2000. Another button takes users to a page where contact information for OAC staff can be found.

MSUcares.com
A final section gives a preview version of the website, MSUcares.com. OAC operates this website for the Mississippi State University Extension Service and the Mississippi Agricultural and Forestry Experiment Station. The site was downloaded for MediaLink on May 10, 2001, and a note was placed on-screen alerting viewers to this fact. The CD-ROM version is fully functional and allows users to pursue the website virtually without actually logging onto it. The actual website is updated on a daily basis, and users can visit the working site by following a link provided on the Web Links section.

The team discussed at length how to introduce users to the website in the best way. We considered providing a very limited preview, then linking users automatically to the actual site. However, this idea was not used because that would require users to launch a browser and go online. The primary audience for MediaLink is the members of the state's print media. Mississippi has hundreds of small newspaper offices, many of which have only limited access to the Internet. We chose to place a static version of the website on the CD rather than require viewers to tie up their telephone lines to view the website online.

Visual Design
A second graphic designer borrowed the look of the CD and carried it over to the cover. The same color scheme and graphical elements from the CD were incorporated in the design of this piece. The front cover was designed to unfold into an information sheet that lists subject area experts along with their phone numbers and e-mail addresses. Photos for the cover were taken from the image database provided on the CD-ROM.

Results

Staff and student workers spent 361 hours working on the project, at a value of $13,046. The total project carried a price tag of $14,336.35. Time was the biggest expense, and creating the functioning CD-ROM in Director was the single largest consumer, followed by collecting, sizing and writing cutlines for the photographs. Gathering names and contact information for the specialists directory was the next longest task.

Costs to produce this medium in future years should be much lower as it only will need to be updated and revised annually, not created again. The biggest savings will result from fewer staff hours spent working on the project. Photographs and the experts list will have to be updated annually, as will the agricultural statistics and overview story. However, most of the rest of the contents should change little each year.

Producing MediaLink 2001 was a tremendous learning experience for the team. The department had not done such a project before, and certainly not under such an ambitious deadline. Team members did not have many

examples of similar work to look at and learn from.

Before we released the CD-ROM, we tested it on several people, including the editor of a newspaper and the editor of a university publication. Team members provided very little information about the CD to these testers, and simply watched while they perused the piece. Our observations and their comments were valuable in helping us improve places where navigation became difficult. Their comments also affirmed our estimation of the product's usefulness.

Conclusions

Even as we completed our project, we noted things that we would have liked to have done differently or that we determined to change next year.

For example, many of our specialists are listed in the database more than once as they have multiple areas of expertise. Under the pressures of working with unfamiliar software, the only way we were able to make the database searchable by topic was to list these specialists more than once. These names were entered into the database once for each specialty area. In the update, we would like to eliminate multiple entries.

Team members assumed the database of experts would be the centerpiece of the project, but the photo gallery eclipsed it in popularity. Early feedback indicates users are pleased to have free access to these high quality images. Future editions may include more photos.

MediaLink was made to operate on either Macintosh or Windows platforms. The Mac interface works smoothly, but there are problems sometimes for Windows users. Designers bypassed this problem by printing a troubleshooting note on the front of the CD itself directing users where to find help.

Ideally, team members should have had more time to work on this project than they had. Because of the hurry, information was gathered quickly, but with as much thoroughness as possible. When an early version of the project was sent out for in-house review, it received mixed reviews. Future updates should allow more time for administrator input to avoid last-minute changes.

While team members are proud of MediaLink 2001, each saw areas where it could be improved. One such area is the images section. A characteristic of the software we used is that it does not allow images seen on the screen to be copied. Users must exit MediaLink and go to an accompanying file to download the photo they want. Ideally, users would be able to select an item and be given the opportunity to download on-site.

MediaLink is not self-launching, another item designers would like to change in future versions. Later releases also will be designed with a standard back cover and spine that will not change from year to year. The current cover lists the name MediaLink 2001, making it unusable for future generations of the project. The next design may change the name simply to MediaLink, but whatever is done, the back cover will be designed to be appropriate for the next few years.

As with any project dealing with large numbers of people and a large organization, some information was outdated even before MediaLink was released. Such things as turnover, retirement and new employees make it impossible to be 100 percent current with such a database. An update is needed at least once a year for the project to be mostly accurate.

Because of the capabilities CDs offer, future versions of MediaLink can include video clips and audio files that would highlight more of the services offered by MSU's Office of Agricultural Communications.

Print to Video: How Print Reporters Became Video Producers for the Internet

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
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Background

With the Internet already serving as the main source at Texas A&M Agricultural Communications for distributing news releases and digital photos, streaming video was identified as an additional way of delivering agricultural news from the Web site.

Streaming video incorporates the use of digital video, audio and the Internet to relay information from a personal computer.

This new feature expanded the offering of Web news presented to viewers. By offering video versions of print stories, it enabled both newspapers and television stations to link to the Web site, as well as offered additional presentation of news to non-media consumers.

This new innovation of delivering news about Texas A&M's Agriculture Program through video on the Internet reaffirmed A&M Ag Communications' commitment since 1994 to be a leader in Internet news dissemination.

However, delivering a steady flow of video stories would be a challenge for a team of writers. The unit has only one news video producer who could not cover all the stories generated from the print team. Additionally, equipment needs and the necessary training to produce the video news reports would need to be identified.

By providing streaming video news reports on our Web site, we would offer an additional method of pitching stories to a wide variety of audiences that included journalists, television producers, media representatives, or non-media consumers.

Method

Several factors were considered before attempting to produce video news stories for the Web. These included equipment expenses, training of news team members in technique and technology associated with using the video camera, editing software, and file compression and distribution for the Web.

Production Expense: To begin the production process, equipment needs were identified. First, the news team considered equipment already available within the department. This included:

- Sony DCR-X1000 video camera (mini DV) with Firewire connection (IEEE- 1394)

- Tripod
- XLR audio adapter to use professional Lavaliar microphone (these microphones are commonly used during television interviews clipped to the subject's shirt)
- Batteries, charger, headphones, videotape

Equipment used during the editing portion included a previously purchased Macintosh G4 computer with iMovie video editing software. Our only expense for initial production was additional 500 megabytes of RAM for the Macintosh G4. News team members during the initial production phase shared both the video camera and Macintosh computer.

Additional equipment was later purchased to provide two video cameras for the team. That included: a Canon GL-1 camera ($2,000), extra battery ($50), camera case ($250), tripod ($150), microphone ($100), audio adapter ($200), headphones ($50) and compression software (Cleaner 5, $299 educational discount price) for a total of $3,099.

However, several months later a news editor was in the process of upgrading their individual computer and opted for a PC platform Pentium 4 ($1,300) and a Firewire card ($99) that included video editing software.

It was later identified that additional equipment was needed for the field team communications members that are stationed at different research centers across the state to incorporate video streaming into their news reporting.

Training: Initial training was provided by the Ag Communications' video team. Training involved news team members learning how to use the video camera and learning how to shoot video. The training portion involved composition methods for shooting video, how to light the subject, choosing a microphone and microphone placement.

Composition instruction included using the one-third rule - a method that involves framing the subject in one-third of the video screen.

Using available light was an important part of setting up the camera interview. Since our news team didn't have an available light kit because of added expense, it was recommended that interviews be shot outdoors. These interviews were preferred to be shot either in the early morning or late afternoon because of sun angles. However, we were able to shoot some of the interviews indoors because of ample lighting.

The audio element was another component of the training. This involved using a Lavaliar microphone (these microphones are commonly used during television interviews clipped to the subject's shirt.) Another important element is to carry headphones to make sure audio is coming through the camera. (Some video cameras don't include audio meters to determine audio quality.)

One-on-one editing sessions with a video team member were also part of the training phase. These training sessions pointed out the many features that iMovie offered in video production. Additionally, the training session included techniques on editing video and audio including adding character generation (titling) to identify the subjects speaking in the news reports.

Implementation: After news team members worked with the camera on their own time capturing video on and off campus, they were ready to go to one of the video producers for critique and suggestions.

Once the individual felt comfortable enough operating the camera and its audio features, they were ready to take the equipment out into the field, shoot video footage, and conduct interviews.

Some of the challenges in capturing the first interview for a story included: forgetting to put the video tape inside the camera, not having the correct audio cables connected either to the camera or audio adapter, poor lighting, and most of all, subjects interviewed didn't provide short, quick sound bites which proved to be an exhausting editing process.

Editing: Once the interview was captured on tape, it was time to write the script and edit the video.

The first step in editing involved watching the full interview, marking down the recorded times of the sound bites for reference when putting the news report together. After this was accomplished, the next step included formulating an outline written down on paper with a sequence of sound bites in the order they are to be played.

Next, a script was written based on the sound bites that were selected to be used in the report. The biggest challenge was learning how to adapt from writing lengthy news stories to writing video scripts that run approximately two minutes.

Script writing involves short sentences that help tie together both sound bites with voiceovers. Voiceovers are pre-recorded narratives pasted over video footage.

The next step is narrating the script, which involves recording transitional sentences to use between sound bites.

To edit the story in iMovie video editing software, we imported the audio narration (pre-recorded narratives) and the soundbites. This is important because when editing the video, we found it was easier to start with the audio first since it determined the length of the video segment.

Because Firewire (IEEE-1394) connects the video camera to the computer, it allowed us to control the camera through the computer using the iMovie application. Through this connection, we were able to select and capture video simply by clicking a button once the audio and soundbites were placed in the timeline.

It should be noted that iMovie is one of the most simplistic programs to edit video. An individual with virtually no video editing background can quickly learn the skills needed to produce a video using iMovie in less than an hour. Its drag-and-drop features make this process easier than it sounds.

However, there is no printed manual that accompanies this software application, though the help menu within the program can assist with troubleshooting. Additionally, we would recommend purchasing iMovie 2: The Missing Manual, David Pogue, Pogue Press/O'Reilly & Associates, Inc.

We should also note that another software editing package was used on a PC platform. This package used the same principles found in iMovie and was used by a news writer to produce video news releases for the Internet as well.

Finishing the project : Video compression is the next step. This is important because this news video report will be viewed on the Internet and smaller, compressed files are needed to allow the end-user to download the file in a quick fashion. Cleaner 5 ($299 educational discount price) was the preferred and recommended software for file compression. File sizes range from 4 megabytes to 10 megabytes for a two minute story. However, compression software is needed to accomplish this since an uncompressed two minute story file would be as large as 30 megabytes.

After compression, the file was placed on our agnews server and a link was added to our newly designed Web page for viewing.

Results

This project began with discussion in December 2000, with the training portion kicking off in January 2001 with a session on how to shoot good visuals. All communications specialists both on campus in College Station as well as those around the state worked together in learning
this new technology.

By January, our first video news story was produced for the Web. Videos became a regular feature of the redesigned Web site, http://agnews.tamu.edu , in March with 24 provided in 2001.

Successes: We were able to launch this new technology with little training and expense since we had already owned some of the key equipment necessary to produce these Web video reports.

The following is feedback from users and Web statistics:

* After seeing one of the news stories produced for the Web, a local television station producer called and wanted to use the footage on the evening newscast.

* A producer in Henderson County was amazed he could learn about rangeland revitalization by both reading the news article on the Web and also viewing a video version of the news story using Real Player.

* Web statistics: The initial number of Web requests for the video stories accompanying print stories produced by on campus news writers placed one http://agnews.tamu.edu for 2001 was favorable:

- Out of 13 video stories produced by the two on campus news writers in 2001, a total of 1,554 hits were received for the year. This was an average of 120 hits per story. Web statistics indicate viewers of these video news reports are interested in news about horticulture, the agricultural economy, and scientific research.

Stories receiving the most hits included:

- A video story dated Feb. 16 headlined 'Flower Beds Should Rise To The Occasion^' received 244 hits. This was the first story that was produced for the year.

- A video story dated Oct. 10 headlined 'Terrorist Threats on Agriculture Being Studied at Texas A&M' received 167 hits.

- A video story dated March 29 headlined 'Value of 2001 Texas Agriculture projected $15 million' received 153 hits.

- A video story dated March 21 headlined 'Study: Farm Income Drop Projected Due To Increases in Fuel, Fertilizer Costs' received 124 hits.

- A video story dated March 1 headlined 'Scientific Discovery in Plants May Advance Human Medicine' received 169 hits.

The fewest hits received was a March 5 video story headlined 'United States Could See Increase In Beef Exports To Europe.' This story received 36 hits.

Conclusions

This new technology is another way to pitch stories to newspapers and television stations. It is uncertain at

this time if this technology will be embraced by both newspaper and television outlets across the country. However, by adding a visual element that accompanies a printed version of a news story, a journalist, television producer, media representative, or non-media consumer will be able to better understand the information being conveyed.

Suggested reading and Web links:

iMovie 2: The Missing Manual, David Pogue, Pogue Press/O'Reilly & Associates, Inc.

Digital Video magazine, http://www.dv.com

Turned On or Tuned Out? Examining Message Effectiveness on Awareness and Attitudes Toward Low-Level Risks

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
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Background

Introduction

During our life span we will spend countless hours perceiving, analyzing and employing behaviors that help us reduce our exposure to risks. While few occurrences can compete with events such as severe weather or human-induced catastrophes, the majority of the time is spent avoiding risks on a day-to-day basis such as washing our hands or looking before we cross a street. We have control over our exposure to some risks such as whether we choose to drink and drive. But we have less control over our exposure to other risks such as air pollution caused by others. Both of these types of risk are salient and demand our attention. However, there is a third category of risk perceived as low-level risks. Low-level risks are not viewed as salient and they do not have our attention. Environmental risks, such as invasive species, are examples of this type of risk.

Invasive species have become established as a result of both intentional and unintentional introductions, such as the introduction of meleleuca in the Everglades, the zebra mussel in the Great Lakes, and cheatgrass in California. Invasive species not only promote undesirable homogeneity of native wildlife and vegetation but are also costly to control or eradicate via chemical, biological, mechanical and ecological control methods. It can be assumed that the general public has a vested interest in this issue. On the other hand, awareness and understanding of the perceived risk associated with the introduction and establishment of invasive species is still fairly low, as compared to other environmental risks such as water pollution.

Low-level risks are frequently classified as social risks. Frequently these social risks come with built-in symbols such as homelessness. However, "Such symbols are not readily available for many ecological problems" (Wilkins and Patterson, 1991, p. 176). The responsibility of dealing with these social risks lay with "someone else." Because "someone else" is in charge and because we have so little perceived control, these risks merit little attention and in fact, we may not even be aware of many of the specific details that explain or accompany these risks. It must be kept in mind though that these low-level risks can become much more salient if circumstances change. For example if an invasive species overtook an ecosystem upon which we relied to earn a living, the issue would become more salient.

Risk perception research has primarily focused on lay persons "perceptions of technologically induced risk such as nuclear power plants. One evaluates and forms risk perceptions based upon 1) the level at which the individual perceives the risk has the potential to harm or effect the safety of the individual, and 2) the level of risk that are collectively acceptable as" one of the costs associated with the generation of a public benefit (Cole & Withey, 1981, p. 149). Other than participation in developing public policy, the risks evaluated in risk perception literature is outside of the control of the individual. Little research has been done on evaluating ones perception of risk in terms of economic benefits and losses to the individual. In terms of the invasive species issue, the public good is served by becoming knowledgeable about the risk and associated actions individuals can take to prevent the risk such as removing plant material from clothing and equipment and not

releasing exotic animals into a non-native environment.

How exactly do we determine if an issue or a situation presents a potential risk? Historically, "Risk perception methods were developed to improve our understanding of public concerns about risky technologies, products and activities. They are multi-dimensional and frequently messy because that is the way human cognition and judgment operate in the real world" (Gregory, 1991, p. 8). Some of our information is developed through first-hand experience or through conversations with others who serve as a credible source. A third avenue is through the mass media. Lacking a representative symbol for environmental problems and issues keeps the media at bay from and thus the public from becoming involved in policy making as it relates to these issues (Wilkins and Patteson, 1991). Stories highlighting risks are the very essence of successful media because they focus on the problem. However, this form of communication can leave the public with little sense of efficacy in relation to the problem other than dread.

Research suggests that information alone is sufficient to raise awareness, but not necessarily enough to cause individuals to perceive a risk as equally important to them. According to Heath, Liao, and Douglas (1995) "... scholars have recognized the importance of receiver-centered, cognitively oriented explanations of how and why people seek and use information" (p. 90). Indeed, the relevant literature has consistently shown that simple exposure to information, such as that which can be achieved through mass media, will not necessarily influence knowledge, attitude or behavior (Rogers, 1995). Risk communication can even create a distorted view of the risk for some individuals which "creates inequalities and unfairness in the decision making process" (Kemp, 1993, p. 115). This is a problem for risk communicators, who disseminate information both to inform the public about the serious nature of a specific risk, as well as provide instructions as to how to combat it. It is therefore important to understand how and why individuals differ in their evaluations and sensitivity to risk, so as to be able to better target information messages designed to achieve actionable outcomes.

Attitude Toward Risk

Grunig's (1983) situational theory suggests an explanation as to how people approach risk issues. Evaluation of a situation includes three independent variables (problem recognition, constraint recognition, and level of cognitive involvement) and two dependent variables (active communication behavior and passive communication behavior). Problem recognition is comprised of determining whether one's own actions, or the actions of others will result in negative outcomes. Constraint recognition is based on the perception as to whether the individual has any control over these actions. The level of cognitive involvement is the degree to which the individual feels a connection to the situation. Active communication behavior occurs when the individual becomes information seeking and is willing to expend sufficient effort to obtain information on the topic. Passive communication behavior results in information processing and determines the individual's willingness to pay attention to a message in its entirety.

Environmental risks such as the increased need for landfills, with high problem recognition (declining natural resources and declining landfill resources), low constraint recognition (individuals can recycle to prevent or reduce some forms of waste disposal) and high cognitive involvement (left unaddressed, the problem will only increase) lead to information seeking actions (what specifically can be recycled and what can be done with the recycled materials). Additionally, research has shown that the higher the perceived risk, the more willing people are to support regulations which reduce the risk.

Conversely, low level risks such as that posed by the invasive species issue have low problem recognition (it is not a problem around here), high constraint recognition (if there is no problem it cannot be dealt with) and low cognitive involvement (if it is not a problem, it requires no attention) leading to information processing

actions (message may or may not receive attention). Within this paradigm, there is no recognized need for either individual or regulatory action and intervention.

Previous research has implied "that facts learned change attitudes" (Johnson, 1993, p.196). Dunwoody and Nuewirth (1991) state that "information may have its greatest impacts on such intermediate variables as knowledge and attitudes, which in turn will influence behavior" (p.15). Attitudes can be defined as "evaluative tendencies regarding some feature of the environment and can typically be phrased in terms of like and dislike and favor and disfavor" (Eagly and Chiken, 1993). According to Sjoberg, (2000) "... attitude is a crucial factor in risk perception ..." (p.9). In terms of risk, the professionals who are involved with risk assessment use a technological approach to risk wherein the risk is defined as " . . . the likelihood (or expected frequency) or an (adverse) specified consequence. This level of cognition of the attitude object and salience with the attitude object determines their attitude toward the attitude object. Expert judgments of risk therefore are concerned primarily with risk as probability x consequences" (Kemp, 1993, p. 105).

Lay people, on the other hand, tend to use a subjective approach versus the objective approach employed by risk assessment professionals. Krimsky and Plough (1988) discuss the fact that there are two competing models of risk assessment: one technical for experts and one cultural for the lay public. According to Sandman (1987) "The public tends to dichotomize risk. Either the risk is very frightening, in which case the response is some mix of fear, anger, panic and paralysis; or the risk is dismissed as trivial, in which case the response is apathy" (p. 219). Some risks also have "signal value" because they serve as societal precursors to future similar events (Kemp, 1993). Events such as the Three-Mile-Island accident served as the signal value function to enhance the public's perception of, and sensitivity to, the risk of nuclear power, helping to portray the risk, in many people's minds, as being frightening. Thus their attitude toward nuclear power was one of dislike and disfavor.

Fishoff (1985) stated that "... people tend to overestimate dramatic and sensational events and underestimate the frequency of everyday causes of death. Such misjudgments may be influenced by the memorableness of events and by imagining future ones." Risk perceptions that are "high on the radar screen" of the individual can result in dread and can be a central factor in risk perceptions. However, this may be more true for some individuals than others. "Cognitively involved persons acquire, pause to consider and evaluate information" (Heath, Seshadri and Lee, 1998, p.41).

Humans also employ the "optimistic bias" (OB) framework when assessing risk (Joffe, 1999). The optimistic bias framework provides a reason for the risk assessor to respond in a self-protective manner when determining the level of risk. This unrealistic optimistic approach is also termed risk denial. Risk denial is the sense people have that they are less subject to a risk than others. "A fundamental determinant of OB is the perception that becoming affected by the risk is preventable by individual action" (Joffe, 1999, p. 58).

Reception of Risk Information

Fiske (199) describes people who do not like to think as cognitive misers (p. 153). Cognitive misers may lack either the motivation or the skill to process information. Truthfully though, one could not possibly process all the information one is exposed to on a daily basis at the same level. Certain messages are simply more salient and require a higher level of involvement. Initial views can be resistant to change because they influence the manner that subsequent information is interpreted. Information is reviewed as reliable and valid if it is presented in a manner consistent with ones' existing views and knowledge on a topic. Conversely, it is viewed as unreliable or even wrong if the information contradicts ones' existing views and level of knowledge. Due to the fact that some environmental risks lack symbolic representation, such as the invasive species issue, it is possible that messages pertaining to this risk are initially viewed as being inconsistent with the recipients' existing views.

Cacioppo and Petty (1986) developed the Elaboration Likelihood Model (ELM) to describe the process people undergo when receiving information. The model shows two main routes of processing; central or peripheral. It is believed that information processed through the central route result in attitudes which are relatively enduring and less subject to change at a future date. Conversely, information processed through peripheral routes may result in temporary attitudes subject to change or revert back to its original position at a later date.

Cacioppo and Petty (1982) state that "The likelihood that argument elaboration occurs can be viewed as being a function of separable elements of motivation and ability "(p.79). Weidmann (1993) supports the premise that "Perception presupposes a conceptual framework, i.e. interpretation patterns: it is these that make a viewpoint possible in the first place" (p. 55).
When risk, or the attitude object, is presented as a highly salient issue, then the need for cognition (motivation) increases. Coupled with the ability to process the risk issue, the information is processed through the central route. Conversely, when the attitude object is presented as a low risk, as is frequently done with the invasive species issue, motivation tends to be lowered even if the ability exists. Thus, the information tends to be processed through the peripheral route.
The need for information, and thus elaboration, can be determined by factors such as the perceived need to form one's own opinion or the need to understand the information well enough to participate in the communication process about the issue. Trigger events that bring the issue to the forefront can also play a part in moving the message recipient from the peripheral route to the central processing route.

Information Seeking/Processing

In order to utilize the central processing route, certain pragmatic conditions must be present before the process can be employed (Crunkilton, 1996). The first condition is that a situation, problem or process must be available in order to be thought about. The second condition involves having something to think with such as background, knowledge and information resources. The third condition requires structures with which to guide the process. These can be obtained through previous life experiences or through interpersonal channels. The final condition is the demonstrated salience of the issue. The situation must be perceived as pertinent to ones self in terms of safety or in accordance/conflict with ones morals.

It can be assumed that with respect to risk perceptions the first condition can be met by becoming aware of a specific risk. The second condition can be met by pairing the new information with previous first-hand experience or secondary information sources. The third condition can also be met through utilizing previous experiences as a road map of how to evaluate the situation (or not). The final condition for the need to attend to the issue may be met by the person's attitude toward how immediate the risk is, how potentially harmful and how likely it is that the person assessing the situation might be affected by the risk as well as how symmetrically the solutions jive with ones social conscious.

Message Framing

There are a number of factors to be considered when framing a message. Among these are determining the target audience and hoped for outcome. Within the message there are additional features such as source credibility, intensity (strong or negative), and message sidedness (one-sided or balanced) that help persuade the information recipient to form a specific attitude. Prospect theory (Kahneman and Tversky, 1979) states that "people evaluate information regarding uncertain (risky) alternatives in terms of either potential gains (positive framing) or potential losses (negative framing) and that preferences can be altered by changing the way information is presented" (p. 257).
"Messages emphasizing losses associated with inaction are generally more persuasive than messages

emphasizing gains associated with action" (Davis, 1995, p. 286). Negative messages tend to be seen as more important or consequential. The mass media frequently frames its information in negative constructs because by the very nature of the situation or event having taken a negative direction is what makes it newsworthy. Additionally, messages framed using short-term and long-term context can influence the connotations of the information. Typically, environmental problems are deemed short-term if the impact of the problem will affect the current generation and long-term is the problem will affect future (unknown) generations. The time frame implies to whom the problem will occur and salience would be higher with short-term problems.

Maheswaran and Myers (1990) found that negative frames in their high involvement condition were more persuasive when the central processing route is utilized to evaluate the information. Conversely, when involvement was low, positive frames were more effective. This could be in response to cue effects. The extent to which the message focuses on potential costs of acting in a particular manner presented in negative messages might arouse more attention to the message than positively framed messages that focus on the benefits of behaving in a different manner.

Negatively framed messages which express costs or penalties may trigger a higher level of mental investment in decoding the meaning than positively framed messages that outline the benefits. Positively framed messages that reinforce ones existing views serve to reinforce ones attitude. By not causing any dissonance, the message requires very little cognitive attention.
Furthermore, research has demonstrated that "the extent to which a messages are elaborated can be increased by employing message framing that is unexpected" (Smith and Petty, 1996, p. 267). Therefore, it stands to reason that if messages that involve low-level risks such as invasive species that are typically framed in terms of benefits gained (positive frames) were to be framed in terms of costs (negative frames), the effect would be a greater need to process the information. This violation of expectancies seems to trigger a central processing route to evaluate the information to resolve cognitive dissonance.

Hypotheses

In order to test the effect of message frames on respondents' change in attitudes and level or awareness toward the invasive species risk, the following hypotheses were developed:

H1: There will be a significant change in attitude associated with the invasive species issue for respondents who receive the unexpected or positive message frames.

H2: There will be a significant change in awareness associated with the invasive species issue for respondents who receive the unexpected or positive message frames.

H3: There will be a significant difference in the number of arguments and the quality of arguments for respondents who receive the unexpected or positive message frames.

Method

To conduct this quasi-experimental study a 22-item risk attitude/perception questionnaire derived from the risk perception literature was administered to a random sample of college undergraduates to ascertain the level of risk sensitivity of the respondents to both general and specific risks such as invasive species.

The second part of the survey was comprised of six different message treatment conditions consisting of message frames that discussed the problems associated with water hyacinth, an invasive species that is

prevalent in the state of Florida. Each message, approximately 80 words in length, was categorized as either: strong-positive or weak positive (benefits of dealing with issue), strong or weak negative (cost of not dealing with issue), unexpected-positive (benefits of not dealing with the issue), and a control message addressing only the physiology of the plant. With the exception of the control message, all the messages presented the information with short-term ramifications. The various message frames were evaluated for face and content validity through the means of a pilot test administered to a sample of subjects similar to those used in the subsequent study and adjustments were made to ensure reliability and validity before final administration.

The third part of the survey asked the respondents to record thoughts they had while reading the message. Their thoughts were then coded to: (a) determine strength of response to message (argument quality) as being (1) weak, (2) neutral, or (3) strong; and (b) determine the level of elaboration in response to the message by enumerating the thoughts with (0) being no elaboration, (1) being one thought, and so on. This argument elaboration was patterned on standard thought listing techniques established by Petty and Cacioppo (1970).

The final part of the survey included a repetition of the 22-item risk attitude/perception questionnaire. Following exposure, subjects rated their attitudes toward invasive species on a series of five point bipolar scales ranging from 1 = good, like, appealing, beneficial, positive to 5 = bad, dislike, unappealing, harmful, negative. Additional survey items included demographic information about gender, major and race.

Results

Demographics for the subjects under study (n = 86) indicated that 52.9 % were female and 47.1% were male. Additionally, the respondents categorized their fields of study as 44.2% agriculturally related, 18.6% recreation, 8.1% hospitality, 5.8% building, and 22.1% were other which included majors in music, journalism, history, etc.

For hypothesis one, results of repeated measures ANOVA indicated no significant effects for change in attitude for any of the message conditions.

For hypothesis two, results of repeated measures ANOVA indicated no significant effects for change in awareness for any of the message conditions.

For hypothesis three, results of ANOVA indicated no significant effects for either argument elaboration (number of arguments) or argument quality (strength or arguments) for any of the message conditions.

However, a means comparison (see Table 1) indicated that there were a significant result for two of the attitude items (invasive species good/bad - $t(82) = 2.168$, $p<.05$, and invasive species positive/negative ^Ö $t(84) = 2.54$, $p<.05$).

Table 1. Means comparison for pre- and post- attitude and pre- and post-awareness.

Attitude item [1]	N	Mean	Std. Dev.
good/bad			
Pre	83	3.61	.88
Post	83	3.83	.79
like/dislike			
Pre	84	3.64	.87
Post	84	3.57	.87
appeal/unappealin			
Pre	83	3.43	.83

Post	83	3.41	.91
beneficial/harmful			
Pre	84	3.63	.97
Post	84	3.73	.88
positive/negative			
Pre	85	3.60	.90
Post	85	3.84	.81
Awarness item [2]	N	Mean	Std. Dev.
Very good/bad			
Pre	85	3.19	1.20
Post	85	3.26	1.18

1 Five point bipolar scales ranging from 1 = good, like, appealing, beneficial, positive to 5 = bad, dislike, unappealing, harmful, negative.

[2] Five point bipolar scale ranging from 1 = good to 5 = bad.

Additional analysis correlating pre- and post- attitude and pre- and post awareness based on demographic information (gender, major) indicated no significant results.

Conclusions

The problem with low-level risks is that there is always the potential for them to turn into high-level risks. Low-level risks such as invasive species could certainly benefit from the proverbial ounce of prevention instead of the pound of cure. This is only one of many such low-level risks that receive a limited amount of attention from a limited number of individuals until it becomes a big and costly risk.

Communicating low-level environmental risk information is difficult. There are few symbolic referents for the media to use and the public to understand. Therefore, understanding the risk message factors pertaining to receiving and processing risk messages is critical in developing strategies for communicating information about low-level environmental risks.

This paper has sought to outline the components involved in communicating low-level risks. Risks assessment on the part of the individual tends to be dichotomized as either an extremely salient issue resulting in an attitude of dread that requires intense attention to achieve a comfortable level of cognition, or, alternatively, the risk is perceived as a distant and non-salient issue which requires little to no attention. Highly salient risk issues tend to be centrally processed and low-level risk issues (such as invasive species) tend to be peripherally processed. Therefore, communicating about low-level risks is a difficult task because it lacks the salient characteristics needed for unassisted central processing.

Smith and Petty's previous results suggest that the extent to which messages are elaborated can be increased by employing message frames that are unexpected. Those results were not duplicated in this study and there were no significant effects in which to determine the subjects' level of response based on any of the message frames.

Future research efforts should focus on the effect of repeated positively framed message exposure to this low-level risk. A singular exposure to a message about a low-level risk, even an unexpected message, may not provide the pragmatic conditions (background knowledge, life experience, interpersonal channels) needed to utilize the central processing route. However, repeated positive messages targeted to specific audiences incorporating specific actions the individual can employ to prevent the risk can actually provide the background knowledge and perhaps induce exploration through interpersonal channels. In effect, repeated

messages can become the squeaky wheel that needs attention. Through repeated exposure, the risk may be cognitively elevated from a low-level risk to perhaps a persistent, day-to-day, risk that requires our attention.

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ASSOCIATED PRESS WIRE SERVICE COVERAGE OF AGRICULTURAL ISSUES

A Paper Presented to the Southern Association of Agricultural Scientists
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Background

Introduction

The fact that the American society is "agriculturally ignorant" has drawn a considerable amount of attention (Terry & Lawver, 1995). Coon and Cantrell (1985) state "today, the public's image of agriculture is a kaleidoscope of leftover attitudes and images of what agriculture was in the '40s, '50s and '60s" (p. 22). The first step in improving the agricultural literacy level of a population is to determine the current literacy level (Frick, Birkenholz & Machtmes, 1995).

The many changes occurring in agriculture during the past decade have made the need for agricultural literacy increasingly evident. It is vital that the general public has accurate perceptions about agriculture because of the industry's impact on society, the economy, the environment and personal health (Terry & Lawver, 1995). Terry, Dunsford, Lacewell, Gray (1996) stated that the impact agriculture has on society, economics, the environment and public policy decisions in our democratic society makes understanding agriculture imperative to making good policy decisions. Consumers, as well as policy makers, need to be "agriculturally literate" in order to respond appropriately as issues arise (Frick et al., 1995).

"Despite the importance of agriculture to America's economic, environmental and cultural growth, agricultural news is a surprisingly neglected topic in the mass media" (Stringer & Thomson, 1999, p.1). According to Whitaker and Dyer (1998):

Journalists have a responsibility to report news both accurately and fairly. If they fail in their duties, responsible reporting and consumption of

agricultural news will not occur. Likewise, misinformed individuals may make important decisions affecting the food and fiber industry (p. 445).

Journalists have opportunities to reach the general public through newspapers, television, Internet and radio. According to Farrar (1997), daily newspaper circulation exceeds 60 million and more than 8,000 weeklies are published in the United States, adding millions more readers to the total. He found that television sets operate in 99 percent of all American households and that 96 percent of all Americans report they listen to the radio regularly.

Research has shown that agricultural literacy means different things to different people. Leising and Zilbert (1994) describe agricultural literacy as possessing the knowledge and understanding of our food and fiber system. A basic knowledge of agriculture is especially important when it is the major industry in a state and the lack of agricultural knowledge and experience impedes economic development (Williams & White, 1991). The importance of the agricultural industry to society increases the need for agricultural literacy. Law (1990) stated:

Americans know very little about the social and economic relevance of agriculture in the United States, and agriculture is too important a subject to be taught only to a relatively small proportion of students enrolled in vocational agriculture. As special interest groups revolving around issues such as animal rights, pesticides usage, soil and water conservation, and other environmental concerns gain more media and public attention, it becomes even more important that the general public have some background and understanding of not only what agriculture is all about, but on how it affects each person's life on a daily basis (p. 5).

Achieving the goal of agricultural literacy produces informed citizens able to participate in establishing the policies that supports a competitive agricultural industry in this country and abroad (National Academy of Sciences Committee, 1988). Frick and Elliot (1995) designed a conceptual framework to explain the factors that contributed to knowledge and perceptions about agriculture. Their study measured and assessed two components that are integral to one's agricultural literacy knowledge base and opinions. This framework includes three factors: personal, education, and participation in agricultural activities. These factors show the underlying forces that contribute to the formation of one's knowledge base and opinions.

Statement of the Problem

With the need for increased agriculture production comes the need for agricultural literacy (Blackburn, 1999). Individuals need this knowledge to communicate basic agricultural information. Americans gain most of this knowledge through the news media. According to Farrar (1997), television sets operate in 99 percent of all American households and daily newspaper circulation exceeds 60 million, with only 14 percent of all adult Americans saying they rarely or never read a newspaper. Considering

these numbers researchers should study the coverage of agricultural issues to evaluate the literacy of the reporters.

Purpose and Objectives

The purpose of this study was to identify articles written about agriculture on the Associated Press wire service in the Fall of 2000, categorize the articles into agricultural literacy concept areas and determine the level of bias in each article. This study also sought to compare the coverage of the agricultural industry available through the Associated Press (AP) wire service to a previous study (Hess, 1997).

Method

Methods/Procedures

The study enlisted content analysis methodology, based on the Hayakawa-Lowry news bias categories (Lowry, 1985) to code all of the identified articles taken from the Associated Press wire service.

The sample for this study included agricultural stories taken from the Associated Press wire service for the month of November 2000 (N= 177). Stories were gathered five times per week using the Associated Press wire service located at the KLBK-Channel 13-television station in Lubbock, Texas. The results from this particular month should not be inferred to other months of the year. For this study, a trained panel of agricultural education and communications experts coded all of the identified articles to ensure coder reliability. Each sentence of the identified articles was coded using the Hayakawa-Lowry news bias categories. The coding sets were compared and any discrepancies were noted. The panel reviewed the discrepancies until consensus was reached on the code assigned to each sentence. Each story was categorized into an agricultural classification such as the plant industry, farming or disease. The stories were then placed in the proper agricultural literacy concept area using the same procedure as Terry et al. (1996).

Results

Results

Results revealed a 22% increase in the number of agricultural articles posted on the wire service (145 articles in 1997 and 177 articles in 2000). The daily average of articles during the month of November 2000 was 8.85 and the daily average of sentences was 64.7.

Generally, there were more than eight articles posted per day. On average, the Associated Press agricultural articles read were relatively short (M= 7.31). The number of sentences written per day in 1997 was 1,182 (daily average = 59.1) and in 2000 it was 1,294 (daily average = 64.7). This indicates a 9.5% increase in the three-year period between 1997 and 2000.

Table 1 indicates that reporters have more than tripled their coverage of agricultural policy issues as the primary theme. This category had a 250% increase between 1997 and 2000. As far as secondary themes (Table 2), reporters have tripled their coverage of animal science (228.57% increase), the plant industry (230% increase) and natural resources (200% increase).

Table 1: Comparison of Concept Areas (primary) between 1997 and 2000

Table 2: Comparison of Concept Areas (secondary) between 1997 and 2000

Reporters are writing more factual sentences compared to 1997 (Table 3). The number of report sentences in 1997 was 503 (42.6%) and in 2000 it was 597(46.13%). This indicates an 18.69% increase in the number of report sentences found in the Associated Press wire articles.

Table 3: Comparison of sentence categories between 1997 and 2000

Even though reporters are writing more report sentences, the majority of the sentences are unattributed. Between 1997 and 2000, report unattributed sentences increased 20%, whereas, report attributed only increased 14.84%. Reporters are also writing significantly more inference sentences. In 1997 there were 214 (18.1%) and in 2000 there were 323 (24.96). These sentences had the largest percent increase between 1997 and 2000 with 50.93%. The majority of these sentences contain no "tip-off" words to let the reader know the information is subjective to some extent. The occurrence of inference unlabeled sentences doubled with an increase of 117.43% and the occurrence of inference labeled sentences decreased by 55.67%.

Reporters are writing slightly less judgment sentences than in 1997. The number of judgment sentences declined from 303 (25.6%) to 299 (23.11%) within three years resulting in a 1.32% decrease. Although reporters are writing less judgment sentences, the majority of the ones that are written are unattributed. Judgment unattributed, favorable sentences more than tripled to 218.18% and judgment unattributed, unfavorable sentences more than doubled with a 160% increase. However, the study does show that Associated Press reporters are writing more favorable sentences with judgment attributed, favorable sentences increasing 40% between 1997 and 2000 (Table 4).

Reporters are using fewer lead, introduction and concluding statements, so there were a relatively low number of ^Óother^Ô sentences in this study. Experts coded 5.80% of the total sentences as "other." Between 1997 and 2000 there was a 53.70% decrease. After accounting for "other"

statements, approximately half of all sentences coded were inference or judgment sentences indicating that Associated Press reporters are not writing enough factual statements.

Table 4: Comparison of number of sentences occurring in each sentence category between 1997 and 2000

Conclusions

Conclusions/Recommendations

The results of this study emphasize the importance of continued educational efforts by agricultural communicators to increase the agricultural literacy of reporters. Making reporters aware of their bias statements may encourage them to include more factual and verifiable statements. Greater frequency of fact-based articles and decreased use of inference statements will result in an increasingly accurate picture of agriculture.

Agricultural literacy efforts also need to be continued for the general public. It is important that they be aware of the possibility of bias in articles. This study concurs with the recommendations of Peper-Sitton (2000) in that citizens should use newspapers as a source of information, but they should not consider every sentence to be factual information stated in a purely objective manner.

It is also recommended that those within the agricultural industry be educated continuously on the new issues that arise. Commodity groups and the Cooperative Extension Service should develop media training programs to teach those within the industry how to talk to the media. Greater access to and use of knowledgeable and reliable sources in the agricultural industry will help reporters write more factual and verifiable statements.

Researchers should investigate whether other industries, such as the health industry, experience reporter bias. A review of the articles covering the various industries will determine where the weaknesses lie. The findings of this study provide a benchmark for comparison to results of future studies inside and outside of the agricultural industry.

Future researchers should look at the articles posted on the Associated Press wire service during a different month. The results are likely to change according to the different seasons of the year as well as with the different seasons of the agricultural industry.

It is also recommended that future researchers conduct a study using agricultural publications. It is important that those within the agricultural industry are agriculturally literate and are not writing an excess of bias, favorable statements. Researchers should also look at the coverage of agriculture in other countries. The findings of this study would show how agriculture is reported in foreign countries and help to determine

agricultural literacy of those reporters. This type of study could encourage the expansion of agricultural literacy efforts internationally.

A longitudinal study should also be conducted in the future to make sure the number of agricultural stories posted on the Associated Press wire service and the number of factual statements in these articles continue to increase.

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The University of Florida's Distance Education Faculty Training Program

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Background

Background
The rapid growth of distance learning technologies designed to deliver academic programs has had a major influence on most facets of higher education over the past decade. However, as institutions of higher learning have come to embrace the increasing use of technology in the classroom and at a distance, it has become apparent that providing the tools is only half the battle. Certainly, the number of faculty innovators on the cutting edge of using technology in the classroom has grown in recent years. But providing new services for instructors who want to develop more technologically sophisticated course projects, but may have limited background in the high-end technologies and instructional design expertise typically needed to do so, is often a challenging and complex task. And while instructional designers can avail themselves of formal course preparation or immerse themselves in on-the-job training, faculty instructors often enter the technology-mediated ! cl! assroom with little in the way of preparation and training specifically designed to facilitate the distance learning experience.

Agricultural institutions and the land-grant system, as a whole, have an especially important stake in this issue, due to their institutions' emphasis on utilization of course-enhancing technologies and distance education methods as efficient mechanisms to deliver formal and non-formal education. As one of the tenets of their mission to provide "life-long learning", the 75+ land-grant universities and other agricultural institutions have been at the forefront in developing extensive infrastructures to facilitate distance education delivery of courses to a diverse community of learners, both traditional and non-traditional (Miller & Pilcher, 1999). Most of these academic programs involve technological delivery of distance education coursework in a variety of majors at both the graduate and undergraduate levels using such tools ! as! teleconferencing, videotape, and the Web.

However, the efforts of colleges of agriculture at universities across the country to develop systematic and strategically focused distance education development plans have not always kept pace with the evolution of new delivery technologies. As might be expected, technological infrastructure alone is not necessarily enough to encourage faculty members to teach at a distance. Providing incentives, instructional design support, and training on how to use emerging technologies has been shown to be essential to creating successful distance education training and development programs.

Indeed, many researchers have identified that new teaching techniques are necessary in the distance education environment and that training is essential for instructors to be able to use these new techniques (Thach, 1993; Willis, 1993; Wolcott, 1993). King (1999) said distance education training helps provide faculty with a "reserv! oi! r of ideas" to teach and encourage critical thinking skills in students (p. 170). Moskal, Martin, and Foshee (1997) indicated that faculty at Central Florida colleges and universities have an

interest in learning to use a new educational technology, given sufficient time and resources to do so. Few of the faculty members involved in the study, however, had any formal training in instructional design, indicating they would perhaps benefit from more training in this area, specifically as it relates to distance education. The authors stated, "University faculty receive little or no formal training in the art of teaching; such training may improve teaching in both distance education and traditional courses" (p. 20). Spotts (1999) indicated that if instructors are expected to use instructional technologies - including distance education technologies - they need technical support and training support. But what should a distance education faculty training program loo! k ! like? What topics should be covered, and how should training be conducted?

Method

Method
In 1998, the University of Florida's (UF) agricultural distance education program, which has been in existence since the early 1990s, initiated an interactive two-way audio and video videoconferencing network composed of ten sites throughout Florida. Currently, nine sites are located at agricultural research centers, and one is housed in the Institute of Food and Agricultural Sciences' Communication Services facilities on the university's campus in Gainesville, Fla. (IFAS encompasses UF's agricultural teaching, research, and extension programs.) In addition to videoconferencing, distance education instructors at UF also have the opportunity to use a variety of other interactive media for their courses, including online Web-based applications such as discussion forums, bulletins boards, chat, and multimedia.

In late 2000, the associate dean of UF's College of Agricultural and Life Sciences (CALS) approved a plan to develop a comprehensive training program ! fo! r faculty teaching courses at a distance. The idea of a training and development program had been suggested in the Institute of Food and Agricultural Sciences' Distance Education Task Force Report (Telg, et. al, 1997). Up to this time, although individual faculty training courses, primarily focused on technology training, were available at both the college and the university level, a structured training plan had not been developed. The project, primarily conducted during the spring and summer 2001 semesters, was designed to develop a comprehensive distance education training program, focused on faculty development for the college. A secondary objective was to develop enhanced support information for distance education students themselves.

The products generated during the spring semester as a result of this project included the following:
· Three studies to help determine how a CALS faculty training program should be structured. (Research findings of these studi! es! are outlined below.)
· An interactive Web site and CD-ROM detailing the instructional design and technological elements necessary to develop an effective distance education course. The site and CD-ROM also include video segments from instructors who have taught distance education classes. The Web site for the project - titled the Distance Education Faculty Training (DEFT) Program - is found at http://training.ifas.ufl.edu/deft.
· A revised and updated IFAS Videoconferencing System Handbook to be used by site facilitators. (This is in a print-reproducible format accessible from the interactive Web site and CD-ROM.)
· A training plan for suggested courses/workshops for faculty to learn more about distance education topics. Many of these workshops currently are offered through IFAS Communication Services and UF's Center for Instructional Technology and Training.

Given the above, the purpose and objective of this study was to utilize a case study approach! t! o describe and document the DEFT project elements and findings, in an attempt to explore its evolution and provide a model for development of similar programs at other institutions engaged in distance education. As such, the methodology utilized was an exploratory case study research design that combined field analysis and data collection in the form of preliminary survey data (Berg, 2001).

Results

Survey Research Findings
Specific project elements evolved from the findings of three descriptive survey studies conducted in spring 2000. Essentially needs assessments, the three studies were conducted in attempt to benchmark other land-grant institutions' practices, as well as gather information from institutional stakeholders (UF/CALS faculty and students), necessary to develop a training program at UF. The research objectives of the three surveys were as follows:
· Survey distance education developers in colleges of agriculture at other land-grant universities (n = 14 institutions) to determine how they conduct faculty development/training.
· Survey on- and off-campus CALS faculty (n = 65) to determine what they want to know more about - in terms of distance education theory, practice and technology - and what distance education/technology-related training they would like to receive,
· Survey currently enrolled students in CALS distance education cours! es! (n = 32) to determine what they liked/disliked about the distance education experience and what they would have liked to have known about the distance education experience.

Summaries of the findings from the distance education developers and CALS faculty studies follow:
Land-grant Universities' Distance Education Developers
· The primary form that distance education training takes is a formal, regularly scheduled prescribed course or set of training materials (46.2%). Training also takes the form of informal, "brown-bag-style" meetings (15.4%) and a combination of formal, informal, and self-paced (CD-ROM-, Web-, or video-based) programs (38.4 %). No training program is entirely self-paced.
· Program content across all universities surveyed consists of instructional design methods; training on the use of particular technologies, such as videoconferencing, and training on the use of specific software. Technology training emphasizes computer mult! im! edia, digital photography, and videoconferencing. Software training focuses on presentation software (PowerPoint) and Internet-related functions: Web page development/editing (FrontPage and Netscape Composer), Web course tools (WebCT), and interactive online elements (chat rooms and electronic bulletin boards). More than half of the respondents noted that the most important technology or software for faculty to master is Web course tools.
· All respondents noted that if faculty members at their universities choose to teach a distance education course, they are not required to take distance education training prior to teaching the course; training is completely voluntary.
· Training is offered at most institutions at basic, intermediate, and advanced levels or at the basic and intermediate levels.
· Respondents indicated that the length of the training program was quite varied. No programs are full days or self-directed/self-paced. They consist of two- to four-! ho! ur workshops; short, multiple sessions held once a week over many weeks; or personal sessions at the faculty member's discretion.
· Instructional designers - with no faculty appointment - conduct most of the distance education training at respondents' universities.
· Most universities have a distance education coordinator for the entire university. Universities also have a facility on-campus where faculty can get one-on-one help on distance education training. At most universities, the facility does not charge for its assistance.
· Training also is shared across the institution; in few instances is training done solely in one unit or college. Although most universities have a distance education coordinator or center, distance education training is not coordinated by one person or center. Multiple training programs are offered by different colleges across the university, without coordination from a central location.
· Respondents indicate that their institu! ti! ons provide incentives for faculty who teach distance education courses. Incentives include monetary compensation, teaching assistant support (during the development of and implementation of a distance education course), release time (reduced course load) to develop a distance education course, software, and hardware.

· Respondents indicate that training has resulted in improved teaching methods and better interaction with students being taught at a distance.

UF/CALS Faculty
· Sixty-five faculty responded, of which 53 said they would participate in a distance education training program. (The remaining results are based on the 53 respondents who indicated they would participate in a training program.)
· Nineteen (35.8%) said the training should take the form of formal training - a regularly scheduled prescribed course or set of training modules; four (7.5%) said informal sessions - "brown-bag-type" meetings; 24 (45.3%) said self-paced/self-dir! ec! ted (CD-ROM-, videotape-, or Web-based); and six indicated "other," including a combination of formal, informal, and self-paced training.
· When asked which of these formats most appeals to them, 12 (22.2%) said formal, four (7.4%) said informal, 20 (37%) said self-paced, and 15 (27.8%) said a combination of self-paced, informal, and formal formats.
· Faculty would like training sessions that occur occasionally and are held over several weeks or are self-directed. Few wanted day-long or full-week sessions. The 23 faculty members not on the main university campus overwhelmingly said that they would prefer a self-paced training program, by CD-ROM, the Web, or videotape.
· Faculty were almost evenly split when asked if the training should be mandatory, with 51.9% saying it should be mandatory, and 48.1% saying it should be voluntary.
· Faculty indicated that training should include instructional design, technology use, and software use. When asked ! wh! ich technology or software was most important for faculty to master, respondents indicated that Web-related software was most important.
· In terms of adeptness with the primary technology they plan to use to teach at a distance, 34 said they were beginners, 15 considered themselves intermediate, and only three considered themselves advanced.
· Faculty members said, if given an option, they would prefer to receive graduate assistant support as an incentive to completing distance education training.
· Faculty members believe the university receives benefits - better interaction with students at a distance, better teaching methods, and more students accessing courses result from distance education training - as a result of faculty completing training.
· The primary benefit for individual faculty members to complete training ranged from being able to reach more people, reducing their teaching load, and making a greater impact across the state to issues of per! so! nal satisfaction and professional development - "being more comfortable with the technology," "promoting education," "improving my abilities teach in general, and in distance education in particular," "increasing my skill^Åmeans job satisfaction," and "allowing me more opportunity for professional development."
· Regarding the primary, critical issue to distance education training, faculty provided two primary answers: lack of time and resources. Faculty members also indicated that incentives, motivation, and control over the distance education class were concerns.

The DEFT Program - A Self Paced Hybrid CD-ROM Faculty Training Tool
From the results of the survey, it was recognized that faculty workload demands and time considerations would be a key challenge in terms of developing an effective training program that faculty could utilize efficiently. Initially, meetings with project team participants resulte! d ! in the idea of developing self-paced training that faculty could access at their own time and pace, supplemented by voluntary face-to-face training which could be taken at the faculty members' discretion. For maximum utility and faculty access, it was decided that both CD-ROM and Web versions of the instructional materials would be developed.

Development of the DEFT Program was assisted by the fact that project elements were built on the foundation of a previous text-based faculty distance education handbook, which had been written and revised by the co-authors over the past five years. Project development was divided between the faculty co-authors who wrote and updated the existing text materials, and the IFAS Communication Services' Distance

Education Unit, which handled technical development for the Web and CD-ROM versions.

The DEFT Program was designed to be a comprehensive Web and CD-ROM based training tool for faculty engaged in teaching at a! d! istance. The information was arranged in a modular format, so faculty could access and complete the components most needed in their distance education development. (See Figure 1.) Specific content areas included:

· Instructional/course design
· Course development
· Distance education technologies
· Copyright issues
· Library resources and campus help
· Suggested training courses available around campus
· Videoconferencing network handbook for site facilitators

Figure 1. Home page screen from the DEFT Program.
Figure 1. Home page screen from the DEFT Program.

Interactive course "shell" format. The project team members agreed the training materials should be designed in interactive modules, so faculty could have a "finished shell" of a course template when they completed the training. The DEFT Program layout, therefore, was designed with online form boxes, so faculty members taking the training could input data (course goals and objectives, media! p! lanned for the course, etc.) as they interacted with the online materials and then have the data sent to them electronically. (See Figure 2.)

Figure 2. DEFT Program online form box.
Figure 2. DEFT Program online form box.

Recipes for Success. The Recipes for Success were adapted form the text-based faculty handbook. Initially developed in the handbook as a series of questions to which faculty could "fill in the blanks" with their answers, the interactive format of the DEFT allowed for this technique to be realized even more successfully. Faculty users could respond to the set of interactive questions with their answers, which would be collected into an online database that could be compiled and disseminated later to the faculty members via electronic mail, or printed out in hard copy form.

Teaching Points. The Teaching Points were developed as a set of digitized video clips showing interviews with fellow faculty colleagues who commented on their experiences with d! is! tance education, as well as provided guidance and tips for how to use the distance environment successfully.

Distribution and Reaction. IFAS Communication Services mastered the CD and made copies available to faculty who expressed an interest in teaching a course at a distance in late summer 2001. In addition to the self-paced training, a face-to-face training plan was outlined and is located on the distance education training Web site and CD-ROM. Faculty members are encouraged to take the listed courses.

Initial reaction to the DEFT Program has been very favorable, with featured faculty calling it a "great resource," college administrators saying it "was needed," and UF faculty outside the college commenting, "This is something UF has needed. It can be seen as a model." Based on the reaction, a decision has been made to implement the DEFT university-wide, an extension of the initial project which has received full institu! ti! onal support. In addition, the university has agreed to fund a second project for development of a hybrid CD-ROM focused on providing support services and information to all UF distance education students. This project's design will be similar to the DEFT, incorporating Web and CD, as well as digital video

"teliographies" of interviews with distance education students, links to support service information, online forms etc. Development of the "virtual distance education student survivor" CD is currently underway. As in the DEFT project, the conceptual foundation will be provided through analysis of the results of the survey of UF/CALS distance education students, using data that was collected for the initial project.

Conclusions

Discussion and Recommendations

The results from the distance education developers' study showed that while IFAS Communication Services' Distance Education Unit's faculty training and development was on-track with other similar units across the country, UF faculty needed to be able to access the services more efficiently and effectively. The primary objective of this project was therefore to develop training materials for UF/CALS faculty interested in developing distance education courses that would meet this need. That objective was met for UF with the development and implementation of the DEFT Program. However, to adequately provide effective distance education courses to students, training materials and programs must be in a constant state of evaluation and improvement. New technologies call for continual updating of materials. To this end, it is important for all of those interested in distance education faculty training and development to continue to support faculty ! wh! o teach courses at a distance. As has been noted in the project's research findings, incentives are important to faculty. And since faculty members' time and resources are in short supply, support - especially in the form of support that maximizes limited time and provides flexibility in terms of access and content - may be worth considering for many, if not all, faculty who teach distance education courses.

Based on the experience of researching and developing the DEFT Program, it seems clear that emphasis on training and support services, for both faculty and students, will continue to be an important need for institutions of higher learning engaged in distance education programs. Developing sound strategic planning and creative and innovative training and support services is, however, an ongoing challenge, one that could undoubtedly benefit from the collaborative sharing of good ideas. Finding an effective and efficient forum for such cross-institutional coll! ab! oration could be a logical next step in terms of advancing the capacity for agricultural institutions to continue to achieve programmatic success in their distance education efforts.

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How to Distribute Daily News Updates to a Web Site

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
February 2002

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Background

The news team of the Texas A&M Agriculture Program has been distributing news stories via email and on the web since 1994. Each news story had to be written into HTML to post on the web. The writers did not have the time required to write the stories and learn the necessary technology to put the stories on the web so a student worker fluent in HTML was hired. The job soon became too much even for the student working 20 hours a week so a new process had to be developed. The original agnews web site was hosted on a Macintosh server which did not allow the type of programming required. The news team made the switch to Linux.

Method

The Linux/UNIX Operating System

Linux is a version of the UNIX operating system that was designed to run on the Intel x86 architecture, more commonly referred to as a PC. The advantage of using Linux on a PC is that Linux gives you all of the power of UNIX, a true multitasking operating system. Another advantage of Linux is that it does not require the purchase of expensive software. UNIX can be quite costly, and Linux can be obtained for no cost. Most UNIX operating systems also require expensive server hardware designed specifically to run UNIX. Linux is capable of running well on old 486 hardware, and has revived the life of many old PCs. It can even run on Macintosh, and the expensive hardware designed to run the expensive UNIX systems. With no budget the news team took this approach. Since then the server has been upgraded to a Pentium II.

The only other aspect of Linux important to this paper is the directory structure. The structure is similar to that of a PC running DOS, Windows, or Macintosh, but does not refer to drive letters or names such as "hard drive." It is commonly referred to as a tree growing upside down. The first level is referred to a "root." The "root" directory is referred to as a "/" by the operating system. All other directories are subdirectories of root and can have subdirectories of their own.

The agnews server stores all of its news stories under "/home/www/agnews/dailynews/stories." Under the stories directory there are 29 of subdirectories, one for each story beat. Each beat subdirectory contains three of its own subdirectories: photos, audio, and video. These subdirectories store the various forms of multimedia and associated files that go with the news stories.

Programming in Perl

Perl is a powerful programming language that comes with Linux and can also be made to run on other platforms. Perl is good to use for complex tasks that would be too complicated to code in other programming languages such as C. The same thing programmed in Perl will not be executed as quickly as it would in C, but the development time can be significantly less...and in most cases where Perl is the appropriate tool the execution time difference is measured in nanoseconds.

Perl allows for easily searching for patterns in text files. For example, if a user wanted to find the word "abc" in a piece of text he could issue the Perl command: . Perl will also allow the substitution of one pattern for another. If the user wanted to change the word "abc" to "xyz" he could issue the Perl command: . This is a very brief explanation of these commands. Depending on what type of text pattern the program is looking for the patterns can be very cumbersome and look like gibberish to the untrained eye. Regardless, they allow for the easy transformation of text to HTML if the format of the text is known to follow certain protocols.

To post a story to the agnews web site is as simple as cutting and pasting the story into CGI programs called "posters." A CGI program is simply a program that allows a person to enter data via a web browser. The web server can then manipulate this information to produce the desired results. In this case the CGI program is written in Perl. The CGI program takes the entered data and writes a special email message. When this email message arrives at its destination it starts the process of updating the web site. To post a story, complete with photos, audio, and/or video to the web site requires two main steps: multimedia poster and story poster.

Multimedia Poster

First the necessary photo, audio, and video files must be placed in the corresponding category directories via FTP or any other method the user desires. Then the multimedia poster, a CGI program, is brought up in the web browser. In this program the names of the multimedia files are entered. There are also areas to enter information such as captions for any pictures and scripts for audio and video. The category of the story is also entered so the program knows how to create the links that are required for the HTML pages. When this information is entered a specially formatted email is sent. This email contains "triggers." Other Perl programs are watching a special email box and when an email arrives with the correct triggers the appropriate files are written to the web site.

Story Poster

Once the necessary multimedia files have been written the web page that contains the whole story must be created. The story poster, another CGI program, completes this task. The text story is entered with certain information like story title, writer, contact, etc. being marked with simple tags. These tags will be used later to format the HTML. For example, "Writer: John Doe, jdoe@tamu.edu" gets changed to "***Writer:*** *John Doe, jdoe@tamu.edu.*"

The category of the story is also entered. Typically there is a single category, but the program is able to handle multiple categories in case the story is relevant to multiple story beats. The names of the files created by the multimedia poster must also be entered. Then the email is formatted and sent.

Parse and Sort

Once the email is received several things happen. First, a program called "parse.pl" takes the email message. It begins by striping away all of the email header information, i.e. From, To, Subject, etc. Next it scans the remainder of the email in search of the simple tags that the story poster uses to mark special information. These tags are replaced with the HTML tags to highlight the story title and writer information as mentioned above. Parse also makes sure that special characters that do not translate directly into HTML (for example, "&" is represented as "&" in HTML) are formatted correctly. Next parse takes the file names of any associated multimedia and writes them into links so anyone viewing the web site can look at the pictures, listen to the audio or watch the video. Parse then attaches the appropriate HTML header information and the appropriate end tags. The result is an HTML page that contains all of the story information ready to present to an Internet reader.

Once parse is finished the only step left is to place the story on the web site and the links to the various index pages. Several archives are kept on the agnews web site. Each beat keeps an archive of all of its stories. Stories are also stored by month of the year they run. Lastly, stories are archived by the types of multimedia they may contain. A program called "sort.pl" does this housekeeping procedure. Sort takes the HTML page from parse and determines which category the story belongs in and writes the file to the proper story category directory. (Parse wrote the category of the story into the body of the story as an HTML comment) Sort names the file containing the story by the date it runs. Next sort writes the link that will go on the archive pages. Each link contains the first graph of the story as a summary. Once all of the links are written to the archive pages sort checks for the special "TOP" marker. This marker means the story should also appear on the front page of the web site. If the TOP marker is present sort rewrites the front page of the web site to feature the story.

Conclusions

The process may seem complicated but it only requires intermediate programming skills. The program simply automates each of the steps previously performed by a student worker. The known structure of the web site (managed by the Linux operating system), and the simple formatting done by the writers along with the power of Perl allows for non-technical personnel to update the web site without having to understand the underlying technology. Not only does it allow the writers to focus more on their writing, but it also eliminates student worker positions and the funding that goes with them. Before the poster programs were developed the news team employed a student worker to devote 20 hours per week to put their stories on the web site. Now the only student to work on the agnews web site also works on several others web sites and sometimes has to actively search for extra work to fill a 20 hour work week.

Appendix

Story Categories/Beats:
4-H and Youth
Agricultural Communications
Agricultural Economics
Agricultural Education
Agricultural Engineering
Agriculture Program
Animal Science
Anthrax
Biochemistry and Biophysics
Consumer and Family Sciences
Entomology
Food and Nutrition
Foot-and-Mouth Disease
Forest Science
General
Health
Horticultural Sciences
Plant Pathology and Microbiology
Poultry Science
Rangeland Ecology and Management
Recreation, Park and Tourism Sciences
Rural Sociology
Soil and Crop Sciences

Texas Agricultural and Natural Resources Summit Initiative
Texas Crop and Weather Report
Texas Drought
Texas Forest Service
Veterinary Medicine and Science
Wildlife and Fisheries Sciences

When the Media Throws A Slow Curve, Get Ahead of It: Marketing Biotechnology to Georgia Media

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
February 2002

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Background

While other states across the nation were facing heated attention from the media and the public over biotechnology, Georgians didn't seem to be weighing in on the discussion. Communicators at the University of Georgia College of Agricultural and Environmental Sciences became aware that UGA researchers were about to make a major breakthrough in biotechnology -- the birth of the first Angus cloned calf.

The group began to develop a marketing strategy to help make maximum use of the media and favorable public opinion climate, to create a positive image of the work UGA scientists were developing.

Following the Tennessee model, the group began developing a media plan to announce the research.

In the meantime, a group of communicators and researchers was charged by the college's dean to develop a media program on agricultural biotechnology for the Georgia media. This offered an opportunity to lay the groundwork with local media, to introduce them to the major biotech researchers at the university and to familiarize them with the work going on in the field.

Method

The biotechnology media committee developed a plan to bring media to the university to see firsthand the research being conducted. The program included a morning session of overview presentations by some of the university's leading researchers to set the stage and address the issues in plant genetics, animal biotechnology and environmental issues. The session was followed by lunch with the scientists. The scientists sat one or two to a table, and the reporters could pick whom they wanted to have lunch with.

Following lunch, the reporters toured the researchers' laboratories and got a hands-on experience.

To market the program, the groups developed a Web site and on-line registration form. We also partnered with the Atlanta Press Club and the Georgia Press Association. These groups offered free publicity to our target audience and gave media credibility to the program.

The second part of the plan was to introduce the cloned calf. The calf was born shortly before the media day event, and some consideration was given to introducing the calf there. However, the health of the calf was in some question, and there were some patent problems the researchers needed to work out, so the announcement was postponed.

This allowed the communicators time to develop a detailed media plan for the announcement. (See Appendix 1.)

By the time the researchers were ready to announce the research, they had not one, but eight cloned calves. Using the target list developed during the Biotechnology Media Day event, the media was alerted to the pending press conference.

Results

The Biotechnology Media Day was by all measures a success. We had representatives from our key media present, plus other secondary media and industry representatives. We did lose our television participants to an unscheduled visit by President George W. Bush, but we made valuable contacts at each network affiliate.

Postevent evaluations from participants got a 60 percent response rate. All of the respondents said the event exceeded expectations and they would attend another similar CAES event. Many went so far as to suggest a topic for another event they would like us to host.

The highest-rated segments were the presentation on animal biotechnology, the tour of the cloning lab (where the researcher let the reporters actually use the equipment to extract and insert DNA into an egg) and lunch one-on-one with the scientists.

The reporters attending each published at least one story they learned about during the day. One newspaper did a three-part series covering each of the areas presented. All of the stories were positive and reflected well on the university's research.

Just as the media swell following the media day was dying down, the announcement of the cloning was ready to go.

More than 80 people attended the announcement, including crews or individuals representing Atlanta affiliates for CBS, ABC, NBC, Fox, CNN, Atlanta Journal-Constitution, Associated Press, Southern Broadcasting, Athens' CBS affiliate, National Public Radio, Athens Banner-Herald, UGA News Service, Georgia Farm Monitor, Red and Black and CNN radio. Many more media outlets picked up the story from our Web site.

The story was also fed to the national network news programs and morning shows. It appeared on Good Morning America and the Today Show.

Analysis showed all of the coverage to be positive.

Conclusions

These two programs helped the University of Georgia get positive coverage for agricultural biotechnology and cutting-edge research being conducted at the university. They also established our communicators as reliable sources of biotechnology information.

One lesson learned through the press conference is the value of a complete walk-though and mock question-and-answer period. This exercise helped us establish with the researchers who would answer certain questions if they arose, helping the media questions flow quickly and easily.

Appendix 1

Preserving the Best: Georgia's First Cloned Calves

A Communications Plan

Developed by

Education, Communications and Technology
College of Agricultural and Environmental Sciences
The University of Georgia

Friday, March 9, 2001

Executive Summary

As biotechnology faces resistance in some areas of the country and outright condemnation is parts of the world, we have been spared in Georgia. Talk of biotechnology in the state's media has been limited and mostly positive. It is crucial that we take advantage of positive opportunities presented to us to showcase the work University of Georgia researchers are doing in the field.

One such opportunity is the recent birth of cloned Angus calves.

The successful cloning and birth of the calves will allow the UGA College of Agricultural and Environmental Sciences to present this story to Georgia's news and trade media in the best possible light, while highlighting the beneficial collaboration between the CAES, the Georgia Research Alliance and ProLinia.

The following is a media plan developed by the public affairs team of the CAES Education, Communication and Technology unit. The plan will outline our recommendations for how to best promote the professional strengths of the scientists involved in the cloning work, using the expertise available in ETC.

Communication Goals

* Release news of the first successful cloning of Angus calves at the University of Georgia. The news will be released to the Georgia news and trade media through a press conference, listserv releases and Web page announcement.

* Prepare faculty and stakeholders to present the results of their work in the best possible light to mass media and agricultural trade press reporters.

* Anticipate and prepare for concern expressed by organized opposition groups.

* Recognize researchers involved in the cloning project.

* Elicit a positive impression of this new technology.

* Frame success for an agricultural audience by showing how the technology can be used to improve the industry.

* Showcase cooperation between the CAES animal and dairy science department, the UGA College of Veterinary Medicine, Georgia Research Alliance, industry (ProLinia in particular), the cow's owner and other stakeholders.

Press Conference Format

ECT will plan and facilitate a press conference to announce the research results. The conference will be on a Thursday (TBA) between 10 and 11 a.m at the Animal and Dairy Science Building or Coliseum in Athens.

To begin the conference, Stice will lead out the calves with the mother to a holding pen. Stice, inside the holding pin with a wireless microphone, will give a review (five minutes) to conference attendees, introducing the calves by name.

Benyshek will give a two-minute briefing on the benefit for Georgia agriculture.

The veterinarian(s) who delivered the calves should be available for interviews.

The briefings will be followed by an open question forum.

Recommendation: We strongly recommend staging a mock press conference the day before the event, with conference presenters and ECT reporters asking questions to help give an idea of what to expect. ECT staff can help researchers frame responses to anticipated questions. Advance questions would be sent to presenters at least two days before the mock press conference.

ECT's Contribution

(The approved communications plan will become a reference document of agreement for CAES and ProLinia.)

* Organize and support a press conference announcing the research results.

* Provide editorial, video, graphic and Web support for the effort. (See details in Public Affairs Team Section)

* Coordinate with University Communications News Bureau in promoting the story.

ECT Public Affairs Team Contribution

* Disseminate media alert about the press conference 5 to 7 days in advance.

* Prepare a comprehensive press kit for the media attending the event.

* Write, edit and release the announcement of the cloned calves.

* Write, edit and release a story on how this new technology will benefit Georgia's agricultural economy and the cattle industry in general.

* Promote the overall success of the cooperation between ProLinia, Georgia Research Alliance and UGA CAES.

* Provide CAES-related content for Web site shared with ProLinia.

Ancillary Suggestion

* We suggest organizing a viewing of the animals with Stice immediately after the press conference for industry representatives, special guests, faculty members and political officials.

Evaluation

* The initial faculty and staff members involved should evaluate the effort within seven days of the event. Evaluation will be based on the quality of media placements and a content analysis of the coverage, supported by a survey of journalists' attitudes toward the event and the technology.

Animal and Dairy Science Support/ProLinia

* Access to animals and to researchers involved.

* Funding for noncustomary expenses such as clipping service and press conference equipment needs.

*Provide ProLinia company and biographical information for the press conference materials and Web site.

As luck would have it, the cloning press conference was held the day before the annual meeting of the Georgia Press Association. We had already developed a biotechnology exhibit to display at the meeting. The story of the cloned calves appeared on the front page of the Atlanta Journal-Constitution on the opening day of the meeting. The publicity and the exhibit helped us extend the reach of the story to smaller papers who couldn't travel to Athens for the press conference.

Also, the two events helped us familiarize the local media with our biotech experts. When President Bush announced that the federal government would continue to support stem-cell research for a limited number of existing lines, our cloning expert (owner of three of the lines getting federal support) was primed for the media attention. He was quoted across the nation in the stem-cell research debate, helping bring even more attention to the work at UGA.

The events also helped us get good publicity for new public-private partnerships that help fund much of the biotech research at the University of Georgia. (See Appendix 1 for details).

There is nothing more valuable to a media relations program than getting in on the front end of public debate. The programs outlined in this paper helped the University of Georgia do just that with the biotechnology debate in Georgia.

AGNEWS: A New Look Meant Visuals for this Web Site

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
February 2002

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Background

The Texas A&M University Agriculture Communications news team has been a leader in computer assisted reporting since 1994. That year, the team conducted the first Internet survey of Texas dailies and weeklies and used those results to launch into Internet news dissemination, journalist training, and web design - all prior to the large-scale adoption of these Internet practices by the state's media clientele. That leadership enabled the news team to advance information about Texas A&M's Agriculture Program as never before.

But in as much as the Internet enabled the news team to quickly adopt new communications techniques and train journalists, it just as quickly and continually changed. New computer technology and the widespread acceptance of Internet usage both by the traditional media clientele and by non-media consumers meant not only keeping pace but once again jumping ahead of the technology to retain the leadership role.

An example of such technolog y is Internet visuals. A followup Internet survey of Texas newspapers in 1999 found that 80 newspapers (of more than 500 questioned) expressed an interest in more digital photos and videos. Though that seems like an insignificant amount of interest, the news team believed that response paralleled the 1995 survey in which few expressed knowledge of or interest in e-mail. Therefore, exploration of this technology was merited.

Method

Prior to beginning any work on the AgNews Web site (http://agnews.tamu.edu) redesign, 45 of the 80 newspapers that had expressed an interest in visuals in the December 1999 survey were contacted in the Spring of 2000 to find out how many were already using video on their Web sites. (It was obvious from looking at Texas newspaper Web sites, that more were using digital photos. Less obvious was the use of or desire for video).

About 75 percent (33 Texas papers) said "not yet," "yes," or "interested." The news team saw these answers collectively as positives and an indication that the team should prepare to offer this service. In brief phone surveys of the 45 papers, most newspaper spokespeople said they wanted to stream from the AgNews site

rather than download to local disk; there was a split vote on what type of video player software to use (RealPlayer or QuickTime); most said once a week would be the best frequency for delivering a vi de o; and, more than half said they would like to be notified by e-mail that a video is available with a story.

Although the news team had been considering an update for more than a year, the concerted effort began with a casual mention of interest between colleagues followed by a meeting between members of news team and video team. The news team felt capable of adding digital photos to the Web site but knew that involvement from the video team would be vital to incorporating digital videos.

A proposed Web site outline was written in July 2000 and revised in August 2000. At this point, open meetings were called to allow anyone interested to attend the planning sessions. These meetings had from 7-12 people. The proposal linked visuals to stories and allowed users to select stories by medium, in addition to date and topic which had been available on the Web site since 1994. The proposal also offered better interaction between users and the news staff. Redesign su ggestions originally was done by a graduate-level student worker with Web experience, under the direction of our computer specialist. When the student left, the computer specialist took full responsibility for the design and technical operation of the new site.

Work continued through Autumn 2000 with the goal of launching the site after the November elections. However, since the November elections continued through December, the news team decided to wait until after the 2000 Holiday break.

Prior to the full launch, a pilot group of journalists were asked to look at the site and complete an online form with their comments. The old site continued as normal, but a version of the new site was available as a different URL for review. The online critique asked for a 3-minute evaluation because we knew it would need to be quick and easy for journalist participation. This request was e-mailed on Jan. 5, 2001 to 500 subscribers of AGNMORE (the team's e-mail news di st ribution service), 49 additional newspaper reporters or editors who had expressed interest in videos in our 1999 survey, 34 broadcasters with whom our video team worked, and 120 members of North American Agriculture Journalists.

The pilot site had five stories each with some sort of visual: drought, wildlife, fireants impact, pearls and wildfire. The team picked a variety of stories by topic to demonstrate the vast range of expertise that would be of interest across any given newsroom.

Comments from that survey included "... a good source of agricultural information to the news media and agribusiness ... Overall it's pretty good ... I especially like links from current subjects such as drought to other sites and to experts who can answer questions ... Format is very easy to use and responds quickly ... very aesthetically pleasing, user-friendly ... a great web site, well designed, easy to navigate, lots of information ... I will continue to visit in t he future to find anything I can tie into Illinois agricultural issues ... I liked your web site ... it is very colorful and full of interesting issues and topics."

Suggestions for improvement included having a link to Agriculture Program directory, having links to places outside of TAMU like Texas Department of Agriculture and the futures markets. We already had a link to the Ag Program directory on the site, but we declined to have links to other agencies and markets because we want to maintain our credibility and didn't want to risk linking with political/controversial issues beyond our own.

We got no response from the radio or television stations.

As a news team, with this positive feedback, we as a team considered how to meet the expectations. Two campus-based news writers learned to use a video camera and all writers on campus learned to use a digital camera. Two digital video cameras and two digital photo cameras are available to the fou r campus-based

news writers.

Through June 2001, we had regular video and audio contributions from the video news person. With the hire of a new person in that position, we hope that this will pick back up to supplement what the writers are doing. Several of the nine field team members also have digital video cameras and are in the process of learning how to use them and how best to send the files via e-mail. One field team member is very skilled and able to provide links to his videos on the Web.

At the end of December 2001, we began a promotion to all the state's journalists, with a list of some 2,000 writers and editors mostly at the state's dailies and weeklies. Sturdy laminated placards were printed with a view and brief explanation of the Web site on one side and contact information for all the on-campus and field writers on the reverse side. About 1,400 were mailed and 400 were distributed regionally by the field staff. The cost of this promotional pie ce was $600 for the four-color printing. Mailing was handled through penalty mail at no cost to the news team.

Results

Since March 8, 2001 when the new Web site was fully launched, we have posted digital photos with 52 stories. We have no figures to compare with previous years, but very few stories had photos with them in the past. That is a significant increase but one we want to continue to grow as all the writers become more accustomed to using digital cameras and preparing the photos for the Web.
The number of videos posted since March 8 totals 24, or about half of what the survey indicated would be acceptable by newspapers. Much of the year was spent on a learning curve for the two writers who have begun creating news videos.
The audio offerings on our Web site have received less attention. There were only nine audio stories posted after the launch, all of them prior to June when the former news video specialist moved to a different position. The audio portion of our Web site is something we will consider in 2002.
The new Web site was enabled with existing technology whic h only included progressive download of videos rather than the streaming version that most of those surveyed said they preferred. The news team is in the process of converting to a streaming Web server and will complete that task in early 2002.
The number of web pages accessed and the total number of hits showed a 65 percent increase over the previous year with 2.2 million page requests (6.2 million total hits), up from 1.45 million pages (4.4 million total hits) in 2000.
About 40 percent of the requests are for news stories while the remaining is spread over the other features offered through our web site. Most of the traffic is from U.S. domains, but we also served people from 150 other countries (compared to 145 in 2000).

Conclusions

Supplying a steady stream of images, both still photos and video, will continue to take a concerted effort by writers. Now that we've been through one year of perfecting the system, we know that continued marketing and use of technology will keep our news Web site among the most used by our journalist clientele.
We hope to add more from the video news specialist and from the field team members.
We plan to work with newspaper Webmasters in 2002 to increase the linkage from their sites to our videos and news stories.

What do you know? An Organized Method for Increasing Science News

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
February 2002

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Background

Agriculture communicators at universities are pulled in many directions. For most, their tasks include news, publications, and graphics to meet the needs of internal and external clientele. Even for those who are strictly assigned to news and media relations, job duties typically stretch into committee work, joint projects with other specialized communicators, increasing direct contact with the public through the Internet, and a host of other time zappers.

What tends to filter to the bottom of the to-do list are science stories. Yet these are the type of stories that administrators often look for as indicators of public acceptance and elected officials approval of the university's performance.

A process is needed to enable communications specialists to write and pitch science stories regularly while maintaining quality coverage of day-to-day news topics and other job tasks.

Method

One half day was spent away from the office in late-February to provide uninterrupted creative thinking on the problem of finding more time to cover science stories while maintaining existing work expectations.

Four academic departments assigned as one news beat to one communications specialist were examined to determine which faculty have Texas Agricultural Experiment Station appointments. These are the faculty who conduct research, for the most part. About one-half of the 117 faculty (58) in Biochemistry/Biophysics, Forest Sciences, Horticulture, and Wildlife and Fisheries Sciences have Experiment Station appointments.

A list of the 58 Experiment Station faculty was compiled by department on a table with two additional columns for "Date" and "Results." The date column provided space to enter either a time of an interview or other interaction with the researcher. The results column provided the entry of a story, media referral or other outcome.

This list revealed that of 58 Experiment Station researchers in the four departments, 27 were researchers who had been actively involved in media efforts with the communication specialist on that beat. The remaining 31 scientists had not been involved with the news media via the communication specialist. Some scientists were hard to categorize for various reasons such as a long passage of time since any media effort was provided or because the researcher handles considerable media on his/her own. Therefore, the criteria used to determine which column to put those scientists in was "Would Dr. X know who to call for media assistance?" If the communications specialist didn't think a particular scientist would know how to reach her at Ag Comm, that person was put into the category of not having been involved with news media.

How to reach this considerable list of researchers still loomed. How could one communications specialist

develop a relationship with 31 additional scientists while maintaining working arrangements with the 27 existing partners AND continuing with the other 59 with Extension appointees and a multitude of Agriculture Program projects and unit responsibilities?

Realizing that "meeting the scientist" was a necessary first step, a solution had to be found for learning about each of the 31 new researchers. Visits likely would turn up stories to be written. Stories would need to be pitched. And the communications specialist also would have work travel, personal days off and holidays taken out of the routine work day mix. Thus a schedule was devised to alternate these tasks over a 16-week period (March 5-June 22) in the initial test of this plan.

Using a block-style monthly calendar (available in most word processing software or schedulers) the tasks were delineated in color. First, the days of work travel, personal leave and holidays were designated with pink highlights to signify days on which no interviews or writing should be scheduled. Next, every other week was highlighted in green to designate those days that would be spent interviewing and scheduling appointments. The alternate weeks were highlighted in blue to designate days for writing, shooting video and taking photographs to accompany stories.

To accommodate pitching time, the Monday of each blue (writing) week was highlighted in yellow. On those days, no writing would be done because stories that had gone through the process would be pitched beyond the traditional dissemination methods. Likewise, to keep the process going, the Friday of each green (interviewing) week was adorned with a large "S" to include scheduling time as part of that day's efforts. Notes were kept on the printed block calendar as to which researchers had been e-mailed, times and locations of interviews scheduled, what stories were to written, and what stories were to be pitched. (Graphic 1)

Highlighted calendar

Realistically, to factor in interviews of new researchers while maintaining the existing workload, it was determined that a maximum of four meetings, estimated to be at one hour each, could be scheduled during each green (interviewing) week. That schedule would cover eight weeks over a four-month period, because interviews would be done every other week. To avoid having stories from the same academic area during the same week, the proposed schedule of interviews selected one researcher from each of the four weeks as much as possible.

To maximize time, scheduling of meetings/interviews with the 58 researchers would be handled by e-mail rather than phone calls. A generic message requesting an interview was drafted for this purpose. (Attachment 1 below) A master list for the eight weeks of interviewing was created to include which four scientists would be contacted for visits for each of those weeks.

A record of this effort was maintained online to keep our unit head informed of the progress. (Graphic 2).

Screenshot of Ellen's page

Results

The first four researchers were e-mailed March 5. One responded. The interview with that researcher did not yield a story. That seemed like a slow start, but the plan continued. Over the 16-week effort, 20 researchers were receptive to interviews on the first e-mail, two had left the Experiment Station and nine did not respond. A followup e-mail in July and August to the nine who didn't respond to the first e-mail brought responses from two more for a total of 22 (71 percent) reached through this effort. No additional followup requests were made.

Five stories were written immediately for release (see appendix below). Four of the stories were accompanied by photographs and two also had videos. Additionally, one story was written but rejected by the researcher, one story was written and is on hold pending acceptance of the research in a journal, three stories pertaining to research in progress are planned when results are complete, and two stories are agreed to by scientists who are writing papers for publications. When these stories have been disseminated, one-half of the scientists reached will have placed a story. All 22 scientists provided information that was useful for the communication specialist for handling media queries.

All of the stories that were released received some type of play in the media. Here is a synopsis for each story:

* Wildlife parasite collection - received the most limited coverage in print media but has continued to get hits on the Web site (http://agnews.tamu.edu) where it is archived..

* Rice DNA - ran in a couple of Texas daily newspapers as well as several rice publications and two general agriculture or science news Web sites. It continues to receive at least one hit a day on the Web site.

* E. coli - have clips for 31 placements including daily newspapers both state and national, television stations, news wires and services, magazines, international newspapers, and internet news sites. In the first month of its posting on Eurekalert, got 1,008 viewings of the full release and continues to receive about two hits a day on the Web site.

* Copper disease - released just three weeks after Sept. 11, this story received limited play in the media but was picked up by an international wire service and a health news Web site. It continues to receive about two hits a day on the Web site.

* Crayfish and the environment - released about four weeks after Sept. 11, this story's use was primarily in agriculture and environmental media. Several magazines used it as did several Internal news sites. It currently is receiving an average of eight hits a day on the Web site.

Five of six researchers with whom stories were done expressed gratitude and a positive experience from having their research exposed to the public through the media. The sixth research did not like his work written in lay terms, so it was never disseminated. All but that researcher expressed positive feelings about realizing that a news organization exists to publicize their work, and all expressed a desire to be interviewed by the media on their subject of expertise should a such query be made.

During the green (interviewing) weeks, the total time spent with researchers including travel time to and from his/her office or lab was no more than eight hours of a 40 hour week. The remainder of time during green weeks would be spent researching additional information about their topic, if a story was to result, and in doing other tasks such as Extension stories, Ag Program project work, media queries, etc. But the interviewing time was careful guarded and not changed unless requested by the researcher.

During the blue (writing) weeks, time was specifically set aside, and strictly guarded, for writing. Sometimes this meant closing the office door or working at home for a day. Enforcing writing time was fairly easy since a total of six research stories from this effort were written during the eight writing weeks.

On pitching days, every other Monday, a story written the previous week would receive full attention for attempts to place it with media that had not used it through our typical methods of dissemination (e-mail releases and Web site). To do this, research of printed clips and online searches was done to determine where the story had run. Next, thought was given to the type of audience that would be best served by the story. A

specific list was then created from the online service Vocus that Texas A&M's Ag Comm subscribes to for this purpose. Initially a large list would be made, but later it was felt best to "Target 10" media outlets per news release for the pitch. Most pitches were done by e-mail, some were by fax if an e-mail address was not know, and a few were phoned. In addition to specific publication pitches, the three of the five releases also were put on Eurekalert, an online service that journalists look to for news releases. Those stories all received more placements. Pitching is a time-consuming process to which the full day was spent every other Monday.

Scheduling days were less time consuming. This entailed looking at the proposed schedule of interviews to see which researchers were next, personalizing the generic message with their name and proposed time for the interview and e-mailing each individually. This step took less than 30 minutes every other Friday during the 16-week trial.

The total time spent on each story completed varied, but it should be noted that sometimes months passed from the interview to the story. The typical time spent from interview to story release was six weeks, the shortest time was four weeks and the longest was 24 weeks. (Attachment 2)

Just when all is working well with the initiation of a new project, one can expect kinks in the plan. About halfway into the16-week effort to reach scientists, the unit and administration decided to launch a new slick magazine. Yet another demand for writing was placed on news team and field team members. This took time from the effort to reach scientists and was a primary reason for putting at least two of the stories on hold (one has since been written). Story assignments or other obligations that are heaped on a writer have to be worked into the scheme if scientists are to continued to be reached. In this case, about two weeks of every four month period are now consumed by writing for the magazine.

Conclusions

This plan had many advantages and virtually no disadvantages. Foremost among the advantages, even if the interview produces no story immediately, the visit most likely will reveal expertise that can be pitched to the media, or the capability of a researcher to be interviewed by the media.

Also, though the schedule may seem rigid, it actually helped to schedule other stories developed. If a researcher or Extension specialist called with a story idea, the communication specialist could take a glance at the colored calendar and suggest a day and time during a green "interview" week, then place it on schedule for writing in the following blue week. That helped protect writing and pitching time. Most stories are not of urgent nature, so can be scheduled in a more organized manner to make most efficient use of a writer's time. Obviously, if a breaking news story should happen, it would take priority.

During the interview, scientists can be told about the Ag Comm news process which further educates faculty about our services. The scientist also should be told the likelihood of his/her information being a story immediately or some time in the future, or if their expertise is not a story at this time but might be useful in the event of media calls about the topic. If a story is to be developed, the scientist should be given a description of what to expect.

Though this was always the process in an interview during this effort, one researcher apparently wasn't given a clear understanding of what to expect from the media following the release of his story (which appeared in Science magazine). He left on vacation the day of release so numerous media called the communication specialist to find out how to get quotes from him. Finally he was tracked through his secretary who knew his cell phone number and he agreed to do interviews from a lake. The expectation of the scientist's obligation following release was thoroughly discussed and agreed upon with each researcher thereafter.

Of some concern are the seven researchers who have never responded. One thought is to call each of them to attempt to set up an interview. The other thought is to accept that they were given the same opportunity to respond as the others. Not all researchers want to be involved with media coverage. Some would not be good at it. Finding that out through a project such as this also is an advantage.

Getting to know more about the research of these scientists has been a positive experience for the writer. A goal for 2002 will be to expand upon this project to include visits to the other 27 researchers with whom a working media relationship already had been established to update their research and see what new stories may come from such visits. Also, visits will be scheduled with new researchers in those four academic departments who have joined Texas A&M since March 2001 when the project began.

APPENDIX

- News article, October 03, 2001, Research Targets Deadly Copper Disease In Infants, Dr. Ed Harris, Biochemistry and Biophysics, (http://agnews.tamu.edu/dailynews/stories/BICH/Oct0301a.htm)

- News article, June 21, 2001, Virus Found To Carry Antibiotic Against E. Coli, Dr. Ryland Young, Biochemistry and Biophysics, (http://agnews.tamu.edu/dailynews/stories/BICH/Jun2101a.htm)

- News article, May 08, 2001, Rice DNA Finds Breeding Traits to Hasten Better Varieties, Dr. Bill Park, Biochemistry and Biophysics, (http://agnews.tamu.edu/dailynews/stories/BICH/May0801a.htm)

- News article, October 08, 2001, Crayfish In Sam Houston National Forest Illustrate Environmental Health, Dr. Fran Gelwick, Wildlife and Fisheries Sciences, (http://agnews.tamu.edu/dailynews/stories/WFSC/Oct0801a.htm)

- News article, April 16, 2001 Parasites Inventoried Worming Their Way into Texas Wildlife, Dr. Norman Dronen, Wildlife and Fisheries Sciences, (http://agnews.tamu.edu/dailynews/stories/WFSC/Apr1601b.htm)

Attachment 1

Hi,

I'm a science writer in Agricultural Communications. I'm setting up a series of meetings with the scientists I haven't worked with in departments I cover. I'd like to come over, meet you and let you tell me about the type of research you do. It's mainly so that I will know more about the important work you do. Of course, you might even tell me something that would make a wonderful news or feature story. I write both for print (newspapers and magazines) and for broadcast (TV and web videos). If you have any time during the week of March 19-23, please let me know. It would take about an hour.

Cheers
Kathleen Phillips

Attachment 2

Developing an Institutional Marketing Program

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
Februrary 2002

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Background

INTRODUCTION
The UF/IFAS organizational commitment to institutional marketing is broadly outlined in the long range planning document Putting Florida FIRST (November, 1999). According to the commitment, " . . . IFAS must therefore develop and implement an analytically sound institutional marketing plan, the objectives of which include creating awareness, developing preferences, and securing support commitments."

Method

BASIC INSTITUTIONAL MARKETING PLAN
Research Component—The institutional marketing plan included a major research component to understand levels of awareness, preferences and commitment among audiences, and provide the benchmarks for measuring the progress of the institutional marketing effort.

The research component commissioned a general audience study in July, 1999. The study demonstrated there is a fractionalization of the IFAS identity and a very low general awareness of the parent organization (IFAS) as well as its sub-units (College of Agriculture, Extension Service, Experiment Station, etc.). There is little or no UF/IFAS branding of programs.

Results

The institutional marketing plan's short term objectives therefore include developing awareness of sub-unit linkages to the IFAS parent and creating IFAS brand awareness among IFAS supporters and clientele.

Long range objectives include positioning IFAS as the provider of choice among those clientele with an awareness of the IFAS linkage; helping public decision makers develop a commitment to support IFAS with necessary resources at local, state and national levels; and helping secure a private sector commitment for helping generate public support of programs.

Beyond the initial research project, the basic elements of an institutional marketing plan include branding, message and positioning, audience identification and external relations/communications tools and projects.

The IFAS Brand---Branding, or the clear differentiation and provider identification of values, impacts, and benefits of specific products and services is a major factor inconsumer awareness and preferences for those products and services. The provider must clearly link its values and consumer benefits to its products and services. For IFAS branding, the key lies with linking the values of the organization with the potential benefits of the program imperatives identified by the long range planning process. In the Putting Florida FIRST long range planning document, the values of the IFAS brand are as follows: commitment to excellence; through diversity ensuring gender, racial and social balance; building world-class programs that are responsive and

accountable to Florida citizens; and a commitment to developing a global perspective in programs. The planning document further defines the impacts of IFAS program imperatives as protecting and enhancing water quality; protecting humans, plants and animals from pests; reducing the human impacts on natural ecosystems; promoting global competitiveness; advancing food safety and developing new food products; enhancing human resources; providing society-ready graduates; and providing public policy analysis for decision making. The cumulative effect of tying the organizational values to the program benefits defines the IFAS brand. The values and the benefits define the IFAS brand; they are the IFAS message.

Message and Positioning---As has been indicated, Putting Florida FIRST defines the IFAS basic thrusts. Those thrusts describe an effort to accelerate an institution, industries, communities, and a state and its people to the very top position among counterparts throughout the nation. Those thrusts and their effort to accelerate provide the necessary institutional positioning message as follows: IFAS IS PUTTING FLORIDA FIRST. Every sub-unit within the IFAS organization can position itself through one of more Florida FIRST imperatives. In some cases, the best positioning will incorporate geography and program area as in (local) IFAS County Extension Office is putting Florida FIRST in protecting our (local area) natural resources. In others, the reference may be more general such as the IFAS Florida Medical Entomology Laboratory is putting Florida FIRST in reducing the threat of mosquitos. In both cases, both statements provide the basis for expanded dialog on specific ways the units are putting Florida FIRST. The statements position IFAS as advancing the causes of the state and its citizens. While there may be latitude in selection of which benefits/thrusts are used by each of the sub-units, there can be little latitude in the adoption and use of the basic positioning statement itself. The statements must be used consistently among all sub-units of the organization otherwise the identity fractionalization documented by the initial research will not be resolved. The key is message consistency and the need for each of the sub-units to build their local/discipline/benefit images consistently within the IFAS family, under the IFAS umbrella. While individual sub-units have goals and impacts which make them strong and viable parts of the IFAS organization, these goals must be communicated within an overarching mission and position as a part of a multitude of voices, each a variation of a common theme.

Audiences, Marketing Objectives and External Relations/Communications Tools---The previously described positioning statement is easily adaptable to the IFAS sub-units, and to each of the institutional marketing objectives, which range in desired audience behavioral change from creating awareness to securing resource commitments. Therefore, audience and objectives play an important role in determining specific tools to be employed. However, each type of audience has its own characteristics and must be approached in a manner consistent with the desired objective to be accomplished. Further, all audiences both internal and external must be considered and a strategy for accomplishing the desired behavioral change for each audience must be developed. The basic tools may range from full publications, multi-media presentations and exhibits to specific media pieces, speakers' presentations (power point /slides/ overheads) and media training kits/manuals.

Internal audience types range from internal audiences of our own faculty and staff to colleagues throughout the campus. External audiences reflect diverse characteristics and strategies and range from colleagues at other institutions and agencies to stakeholders, resource providers, the media and general public. A specific strategy for accomplishing a specific objective should be developed with specific tools designated for use.

Specific tools which were adapted with the special characteristics of each of the several major target audiences included major Florida FIRST publications including base papers and executive summaries; special Florida FIRST inserts for IMPACT and industry publications; a Florida FIRST video and written supporting brochure; television programming including PSA's and video news releases; Power Point for overhead slide presentations; an interactive web page; a portable exhibit for special events; development of a Florida FIRST Speakers Bureau; and initiation of a mini-grant program designed to promote the adoption and implementation of Florida FIRST linkage strategy and other parts of the Institutional Marketing Plan.

The UF/IFAS Institutional Marketing Plan focuses on four major goals as follows: impact data base development; constituent/decision-maker relations; strategic communications development and implementation; and crisis communications planning.

1) Complete data-base of UF/IFAS impacts (by county and by legislative and congressional districts as appropriate). Impacts include major local needs/issues, academic program information, alumni members, extension program types and impacts, research programs and impacts, office footprints, UF/IFAS dollars spent and multipliers, volunteer impacts, jobs (FTE^Áfs) generated, faculty awards, program rankings.

2) Constituent and decision-maker relations. It is critical to conduct volunteer/ clientele, identification, engagement and mobilization workshops at extension and research facilities throughout the state.

3) Strategic Communications. Basic tools developed during the first year continued to be upgraded. Strategic communications programs were focused by media and by audience and included a special emphasis on student and faculty awards and recognition publicity, staff and faculty training, media days, and other special events.

Extra effort has been made to broaden the use of the UF/IFAS positioning (UF/IFAS is Putting Florida FIRST) to include the development program and state governmental relations. Interaction between the External Relations Office and the Development and Governmental Relations Offices should occur on a regular basis.

The IFAS message of Putting Florida FIRST, must be linked to every unit and subunit within the state. In all parts of Florida, county offices, research centers, departments, and other units were asked to link themselves directly to IFAS and position themselves as examples of how IFAS is Putting Florida FIRST.

An important way to accomplish the linkage and positioning is to emphasize key programs and impacts within geographic regions of Florida. The theme IFAS is Putting Florida FIRST in South (Central, North, and West) Florida spotlights IFAS units and faculty who are conducting high impact/profile programs that are indeed Putting Florida FIRST in each region. In addition to conducting local training programs and developing local promotions, events, signs, and other tools to advance the basic message, four statewide vehicles now being produced within IFAS offer continuing tools for projecting the message and the linkages, as follows:

a) IMPACT Magazine . . . Special regional issues will continue tracking broad Florida FIRST imperatives by highlighting programs, facilities, and faculty who are Putting Florida FIRST. Additionally, there are special issues that are part of the Florida FIRST imperatives and cornerstone capabilities, such as biotechnology, public policy issues, and precision technologies that can be emphasized in statewide terms along with a reprise of the eight imperatives. In all cases, the thematic glue that holds it all together is IFAS (people, units, processes) is Putting Florida FIRST. A content schedule for 2000-2001 IMPACT is as follows:

Spring, 2000: UF/IFAS: Putting Florida FIRST in South Florida
Fall, 2000: UF/IFAS: Putting Florida FIRST in Central Florida.
Winter, 2001: UF/IFAS: Putting Florida FIRST in North Florida.
Summer, 2001: UF/IFAS: Putting Florida FIRST in West Florida.

b) UF/IFAS NEWSLINE . . . The Newsline tabloid highlights impacts on a regional basis. The value of Newsline is that it provides a means for communicating projects and programs that may not offer profile levels required for IMPACT magazine. This publication should continue and follow the same thematic emphasis of IFAS is Putting Florida FIRST.

c) VIDEO NEWS . . . Of all the active television products now offered by IFAS, the video news program is

enjoying the most success. During the month of December 2000 alone, IFAS stories used by television media accounted for 66 percent of all those used in total from the University of Florida. Individual stations used 90 IFAS stories; networks used 1,200 IFAS stories. The return on investment and effectiveness as a generator of awareness is high. What must occur next is that all video releases must be pitched to the theme IFAS is Putting Florida FIRST. In selecting subject matter, video producers should use the IMPAC T magazine as a tipping source to gain multiple exposure for programs in the manner of a campaign.

d) PRINT NEWS . . . The UF/IFAS print news program seems to be enjoying as high a level of success as the video news activity, with solid use of major releases through the UF News Desk by major dailies and the wire services increasing during the past year. In the future, a more aggressive approach to targeting weeklies should occur along with increases in specific commodity support stories to the trade/industry press. In all cases, the Putting Florida FIRST theme must be emphasized and utilized at a higher incidence than in the past.

4) Crisis Communications . . . Crisis communications plan development, including potential crisis identification and mitigation, crisis remediation, media relations, spokesperson training, and risk communications were important tasks for 2000-2001. Specifically, work with research and education centers continued and was expanded to include county offices within the sphere of influences of the centers for spokesperson training programs.

Special effort was made to openly, factually and purposely discuss biotechnology issues through op ed pieces in newspapers, media events and workshops, and public forums on "News you can use" in biotechnology. Other "risk" communication subjects for which UF/IFAS should plan include public health menaces and food safety issues.

Other activities conducted during the first two years of Florida FIRST included the formation of the UF/IFAS External Relations Advisory Committee and the UF/IFAS External Relations Council, development and implementation of an official UF/IFAS identity policy, the creation of a UF/IFAS cadre of spokespersons, and the deployment of institutional marketing grants among UF/IFAS faculty teams throughout the state.

5) The UF/IFAS External Relations Advisory Committee was formed and charged with an advisory function on issues related to the UF/IFAS external relations effort, as related to:

-- Public relations and communications marketing.

-- Institutional marketing programs including positioning, identity programs, press relations and crisis communications.

-- Federal relations liaison/communications.

-- Decision maker educational programs.

-- Constituent relations and communications.

-- Strategic communications planning.

-- Internal communications strategy and coordination.

6) The UF/IFAS External Relations Council is comprised of key UF/IFAS communications personnel throughout the state. Its mission is to support UF/IFAS by initiating and implementing marketing strategies that are consistent with the UF/IFAS Institutional Marketing Plan, including communicating UF/IFAS

excellence and its goals, and facilitating access to UF/IFAS by all audiences.

With guidance from the UF/IFAS External Relations Committee, the UF/IFAS External Relations Council focuses on two major goals: strategic communications planning and development, and crisis communication planning.

-- Strategic Communications Planning includes participating in public awareness research; developing positioning themes and strategies for advancing the UF/IFAS identity; developing communications tools (external and internal); assisting with UF/IFAS-wide media activities, special communications projects, and media relations; and participating in projects of the University of Florida Communications Network.

-- Crisis Communications includes crisis communications plan development; potential crisis identification and mitigation; crisis remediation; and spokesperson training.

7) UF/IFAS Identity Standards were also codified into an official policy statement contained as a UF/IFAS Internal Management Memorandum (IMM). The policy is based on the UF/IFAS External Relations Manual for Public Accountability, the ^Ágofficial^Áh UF/IFAS identity manual. The IMM statement incorporated the basic information in both the UF/IFAS manual and the UF manual and included suggestions from the UF/IFAS External Relations Advisory Committee regarding consistent identity standards for all resources, including web pages of UF/IFAS units and sub-units.

8) Continued developing the data base of UF/IFAS impacts by county and by legislative and congressional districts as appropriate. Impacts include major needs/issues, academic program information, alumni numbers, extension program types and impacts, research programs and impacts office footprints, UF/IFAS dollars spent and multipliers, volunteer impacts, jobs generated, faculty awards, and program rankings.

9) Deployed five institutional marketing mini-grants. The first round of institutional marketing mini-grants were awarded on a competitive basis to five teams throughout the state. Each grant totaled $ 8,000 and were awarded to projects as follows: Developing Marketing Tools for Research and Education Center and Extension faculty; Marketing Florida First Through Creative Television Programming; Using Volunteer Contact Programs for Institutional Marketing; Enhancing Research and Extension Outreach Programs Through Digital Audio Visual Equipment and Techniques; and Using Exhibits to Showcase UF/IFAS Research and Extension Programming.

Conclusions

ROAD SIGNS AND BENCHMARKS

The success of the IFAS institutional marketing program will be measured by the success of the Florida FIRST effort itself. Obviously, the success of IFAS in attracting new resources from local, state and federal sources could be considered a measure. Given the first round of research conducted in 1999, benchmarks exist for future utilization in determining how well the program progresses and more research will be replicated at periodic intervals. Measures might include reduced fractionalization of UF/IFAS identity and trends toward UF/IFAS program branding. Of equal importance, periodic ^Áglistening^Áh sessions may be used to monitor program progress and these sessions could also be utilized to gather and sort anecdotal information on the institutional marketing effort. As a result of the events of September 11, 2001, State of Florida budgets have been slashed to accommodate a $1.3 billion general revenue shortfall. Thus, attraction of resources cannot be considered a valid measure. However, it should be noted that legislators did provide UF/IFAS some reduction relief not afforded other educational institutions in the state by reducing its 2001 budget cuts by more than

half the originally proposed amount. On the branding issue, Counties and Centers are appointing "brand" managers who are responsible for unit compliance with the braanding objectives.

Hosting a State-level Agricultural Communications Career Development Event

A Paper Presented to the Southern Association of Agricultural Scientists
Agricultural Communications Section
Orlando, FL
February 2002

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Background

The FFA was founded in 1928 and for more than 70 years has focused on bringing classroom instruction to life through various activities (National FFA Organization, 2001). Today, there are more than 300 career opportunities in agriculture (National FFA Organization, 2002). FFA CDEs allow students to explore many of these careers including environmental and natural resources, livestock selection and agricultural communications. CDEs provide students the opportunity to work with peers, teachers and community leaders as they prepare for these events (National FFA Organization, 2002).

FFA contests are designed to complement classroom and laboratory instruction. According to the Official FFA Manual (as cited in Johnson, 1991), "All FFA contests are to be a natural outgrowth of the instructional program. The contests help make classes more interesting and encourage the development of special skills."

Competitive events also can serve as a mechanism for agricultural educators to motivate students to perfect and advance their occupational skills (Gamble, 1986). The advisor is the most influential person in helping students to choose a CDE area, and teachers should engage in activities that enhance classroom instruction and career opportunities (Deeds and Thomas, 1999).

The National FFA Career Development Events Handbook (2000) indicates in the philosophy statement that the role of career development events is to "motivate students and encourage leadership, personal growth, citizenship and career development." (p. 3)

High school agricultural education programs began including agricultural communications in its curriculum in the late 1990s, according to L. D. Tilley (personal communication, January 23, 2002), assistant state program administrator for agricultural education in Oklahoma. When there is an interest in a career area, the National FFA Organization develops an area of application for those skills taught in the classroom. The agricultural communications event was added in response to industry and high school student interest (L. D. Tilley, personal communication, January 23, 2002). The FFA added the agricultural communications career development event in 2000. One of 23 competitive CDEs, the agricultural communications CDE provides students the opportunity to compete in areas such as editing, news story writing, press release writing, radio broadcasting and graphics/photo editing (National FFA Organization, 2001).

The purpose of this paper is to discuss the development of the agricultural communications career development event in Oklahoma. The paper focuses on the evaluation and subsequent evolution of the

contest since its inception in 1999. The paper is designed to share obstacles, discuss strategies and ultimately provide an example for hosting an effective agricultural communications career development event.

Method

Time can be one of the constraints to conducting any career development event. While the National FFA's agricultural communications career development event can take place over more than one day during the association's convention, state-level events may not have that luxury. In Oklahoma, the CDEs are limited to one specific Saturday morning. Therefore, state-level coordinators may find it necessary to select specific portions of the national CDE to conduct rather than conducting all areas. The Oklahoma State University coordinators selected the editing exercise, communications quiz, and practicum as their qualifying competition. OSU chose to leave out the communications project proposal/presentation due to time constraints.

Preparing for the CDE

The easiest areas to prepare for are the communications quiz and the editing exercise. Quiz questions are written based on identified texts, including the Associated Press Style Manual and an agricultural communications CDE guidebook (originally written by faculty at Kansas State University and revised for use in other states). In the first year of the contest, Oklahoma FFA members had difficulty with the editing exercise, in some cases earning negative scores. To make this exercise easier to take and to score, faculty at OSU redesigned the editing exercise. Rather than looking at a news release to locate errors, students are directed to 25 selections in the text that they must identify as "correct" or "incorrect." When a selection is determined to be incorrect, the contestant must use appropriate editing marks and AP style to correct the error.

For the practicum, coordinators must first identify an agricultural issue to use as the news/press conference topic. Once the topic is selected, a speaker or source about the topic must be identified. At OSU, the press conference topic has focused on such areas as new product development (low-fat pecans) and critical issues (foot-and-mouth disease), and the speakers have been either on-campus scientists or commodity group representatives. When these areas are in place, coordinators prepare a press kit for the contestants. At a minimum the press kits should include background information on the speaker and the topic as well as some numerical information for the students competing as graphic designers. Specific assignment sheets are prepared for each practicum area. No new information is needed for the news and news release writers; however, a sheet with "soundbites"; should be prepared for the broadcasters to use in their story. In addition, the graphic design participants receive a sheet with approximately four photographs about the news topic.

Conducting the CDE

The timeline can vary, but the competition will last approximately two hours and twenty minutes. The contest superintendent and one or two other "officials" (this can be reliable undergraduate or graduate students) need to arrive at least one hour prior to the scheduled start time to register the FFA teams. An additional six or eight college students are needed to supervise the practicum preparation rooms. At least one judge, in this case a professional communicator, will be needed to critique (judge) the contestants' work from each practicum area. Because the contestants' work is ranked from best to worst, multiple judges in each practicum area are preferred; judges can be used for more than one practicum area, especially if the number of contestants is small. Judging the 45 contestants' materials (including their quizzes and editing exercises) takes about two to three hours.

Competition arrangements should include: 1) a large room for introductions and examinations, 2) at least one room for each practicum area, preferably computer labs for the news writers and news release writers, and 3) rooms for a scorekeeper and judges. Judging can be conducted in one room or multiple rooms as desired by the judges.

Cost of conducting the contest can be minimal. At OSU, the judges and students volunteer their time (although the Agricultural Communicators of Tomorrow has provided them with lunch for their assistance). Other costs include paper, photocopying, telephone calls, and an occasional miscellaneous expense.

Results

When OSU conducted its first agricultural communications CDE in 1999, 40 FFA members participated, including two three-member teams, seven four-member teams and six individuals. Participation increased to 45 FFA members in 2000 (11 four-member teams and one individual). In 2001, a total of 38 FFA members competed (eight four-member teams and six individuals). The steady participation is expected to continue in 2002.

One of the most important benefits of hosting this competition is that there is an opportunity to increase awareness among high school agricultural education students about career opportunities and skills needed in agricultural communications. In addition, the high school students can learn more about the hosting university and other potential majors while on campus during the event.

Conclusions

Departments/service units who host the agricultural communications CDE can benefit in a number of areas. By hosting the CDE, agricultural com munications professionals have the opportunity to give students hands-on experience on campus. Through the feedback they provide to students, pro fessionals are helping to foster the next generation of agricultural comm unications majors/professionals.

States conducting the agricultural communications CDE should also host a workshop for the state's agricultural education teachers to help them prepare students for the competition. The process of fostering students begins with nurturing the students in their efforts to prepare for the competition. It is vital that the agricultural education instructors have the resources and knowledge base to adequately prepare students for the competition.