

College Broadcaster

Winter 1995

Roseanne:
Final thoughts



Digital Audio



Engineering Advice
Vectorscopes, ANSI & EAS Updates



*Pursuit of
excellence*

*setting the standards
achieving the goals.*

Active • 8: The National '95 Conference edition

Glenn Gutmacher / Media Group Mgr
Collegiate Advantage
137 Newbury Street, 3rd Fl.
Boston MA 02116-2925

Your membership number is 000000

NON PROFIT ORG.
US POSTAGE
PAID
Birmingham, AL
PERMIT 706

NOBODY OFFERS YOU MORE OPTIONS FOR CAMPUS RADIO THAN LPB. PERIOD.

AM BROADCAST SYSTEMS - NO FCC LICENSE REQUIRED
FM STEREO BROADCAST SYSTEMS - NO FCC LICENSE REQUIRED


exclusively from LPB!

NEW STATIONS
CAMPUS SURVEYS
EQUIPMENT REPAIRS AND UPGRADES
UPDATING OLD SYSTEMS

LPB SIGNATURE III - Rotary Fader AUDIO CONSOLES
- The very **definition of reliable**, with over 3,000 sold worldwide!

LPB 7000 SERIES - Slide Fader AUDIO CONSOLES
- Reliable? How about switches rated for **5 MILLION** operations?!

THE MOST POWERFUL CARRIER CURRENT TRANSMITTER MADE (30 WATTS!)
- With the most **modern** design and **reliable** components.

ALL NEW LPB SALSA DIGITAL AUDIO SYSTEM
- for Satellite - Automation - Live - Studio Assistant
- **No more Cart Machines of any kind!**

If you need help, LPB can help.
If you don't understand the FCC rules, we'll explain them.
If your station signal sucks, we can help fix it.
Ask our customers - They're all around you!
Every year LPB brings you major innovations in Low Power Broadcasting.
Every year our "competitors" try to play catch up.
No hype, no crap, just the best equipment for your campus, always.

YOU CAN RELY ON LPB.

Want More Information?

LPBINC@aol.com

**SERVING COLLEGE
RADIO SINCE 1960**

LPB[®]

28 Bacton Hill Road, Frazer, PA 19355. Phone 610-644-1123. Fax 610-644-8651.

JoAnn Forgit Editor and Sales Manager
Sara Soskolne Design Director
Mark MacLeod Publisher

EXECUTIVE BOARD

Michael Black Hobart & William Smith Colleges, CT
Elaine Greene Ithaca College, NY
Glenn Gutmacher Past Executive Director
Jim McCluskey U. of Oklahoma, IL
Daniel Moldover Towson St. U., MD
Josh Motroni St. Joseph's College, ME
Joel Willer Northeast Louisiana U., LA

ADVISORY BOARD

Garth Ancier Warner Brothers Network
Robert Batscha Museum of Television & Radio
Walter Cronkite CBS
Michael Fuchs Home Box Office
Vartan Gregorian Brown University
Bob Guccione, Jr. SPIN Magazine
Marc Guild Interop Radio Store
Ralph Guild Interop Radio Store
Doug Herzog Comedy Central
Quincy Jones Quincy Jones Entertainment
George Lucas Lucasfilm Ltd.
Laura Mizrahi Communications Technologies
Robert Morton CBS
Oedipus WBCN-FM/ Boston
Bob Pittman Century 21
B. Eric Rhoads Radio Ink
Chuck Sherman NAB
Frank Stanton CBS Emeritus
Brandon Tartikoff New World
Cary Tepper NACB Legal Counsel
Ted Turner Turner Broadcasting System
Richard Wiley Wiley, Rein, & Fielding

FACULTY/STAFF ADVISORY BOARD

Larry Budner Rhode Island College
Nancy Kaplan Hofstra University
Ron Peshia Adirondack Community College
Tony Silva U. of Rhode Island

BOARD OF TRUSTEES

David Bartis HBO Independent Productions
Steven Klinenberg Digital Facades
Doug Liman Think Tank Entertainment

FOUNDING MEMBERS

The CBS Foundation
The Skirball Foundation
Sony Corporation of America
Time Warner, Inc.

SUPPORTING MEMBERS

Amblin Entertainment • Brown University
Foundations of the Milken Families
Horace W. Goldsmith Foundation
Home Box Office • The Interop Radio Store
Lucasfilm Ltd. • MTV Networks
National Association of Broadcasters • NATPE
National Broadcasting Company, Inc.
William S. Paley Foundation

CONTRIBUTING MEMBERS

A&E/History TV • All News Channel
N.S. Bienstock, Inc. • BMI • The Cartoon Network
CNBC • CNN Newsource • Comedy Central
E! Entertainment Television • ESPN
Laura E. Pels Foundation • Lowe Foundation
SPIN • Turner Network Television

NATIONAL OFFICE STAFF

Mark MacLeod Executive Director
Kristine Hendrickson Conferences & Member Relations
JoAnn Forgit Publications & Sales/CFO
Kelley Cunningham Development Director
[STUDENT STAFF]
Tom Brassil • Patricia Dierisseau • Rich Einig
Sarah Margolis • Jennifer Nast

College Broadcaster

the magazine of opinion and record for student electronic media

FEATURES THIS ISSUE

10

Student Media in the Limelight

Finalists in the National Student Radio & TV Programming Awards.

13

The WWW as Revenue Source

Link your listeners to advertisers.

17

May I See Your License?

Student radio license renewal guidelines.

18

Tools of the Trade

EAS equipment, ANSI compliance, vectorscopes; and digital audio: sound editing like they do in Hollywood.

28

Roseanne Answers All

Her thoughts on TV, fortune, fame and society.

IN EVERY ISSUE

Advertiser Index ————— 04

Classifieds ————— 26

Conferences & Events ————— 05

Don't Touch That Dial ————— 09

Feedback ————— 02

Final Thoughts ————— 28

Faculty Advisor ————— 23

Industry News ————— 05

Legal ————— 17

Music ————— 20

NACB News ————— 06

NACB OnLine ————— 13

Sound Off! ————— 08

Station News ————— 04

TestDrive ————— 12

Cover design by Bob Lukens. Interior design and layout by Sara Soskolne.

College Broadcaster (ISSN #1055-0461) is published four times per year (Fall, Winter, Spring, Summer) and copyrighted ©1995 by the National Association of College Broadcasters (NACB), a non-profit corporation. Offices: 71 George St., Providence, RI 02912-1824 • 401/863-2225 (fax 2221) • nacb@aol.com. Subscriptions through NACB membership only. All rights reserved; nothing herein may be reproduced without prior written permission from the publisher. All letters, articles and photos sent to College Broadcaster are eligible for publication and copyright purposes, and may be edited or commented upon editorially. Guest editorials are welcome. No photos or other material will be returned without a SASE.

THIS MAGAZINE IS PRINTED ON RECYCLED PAPER WITH SOY INKS ♻️

letters

The NACB experience

Hello NACB. I am Andy Tracewell, the station manager for ECTV, Student Television at Elon College in North Carolina. We sent a delegation to the NACB Southern Regional in Athens, Georgia [this past April]. This was our first experience with NACB and I feel that it was a positive one. We would like to join NACB and send a delegation to the National Conference. I would like some more information on NACB and I hope to see you in Providence.

Andy Tracewell, Elon College

ed: No doubt you'll meet the NACB staff and other members in Providence. Membership information has also been sent so you can network with members all year long.

Member networking

I'm John Barker from the beautiful and strange Iowa City. We're KRUI-FM, a 100 watt station at the U. of Iowa. I'm a big fan of *College Broadcaster* and hope to attend the NACB Conference this year. I was wondering how to apply for the Station of the Year, but I imagine the deadline has passed.

We recently purchased on optimod 8200 and a Digit Exciter with a digital line between the two. Have you any other radio stations you know of done this?

With several other big ten schools we formed the Big Ten Radio Network. We're having a small conference this fall, and we were thinking of sponsoring a national conference this next spring. Is this a worthwhile endeavor?

John Barker, General Mgr., KRUI

ed: Yes, the deadline for the 1995 awards has passed, but it's not too early to prepare for the 1996 awards. We have noticed a growing trend with the members to invest in digital equipment — learn from

KRUI's experience in this issue by flipping to the "Don't Touch That Dial" column. As far as planning conferences are concerned, we have sent our Regional Planning Guide to your attention. More NACB members have expressed meeting others in the area and hosting conferences, so we hope that we can expand the number of regionals we coordinate each spring. Planning a national conference is a long-term time and energy intensive project, as we know all too well. Therefore, we encourage you to think about hosting a NACB Regional Conference. We look forward to meeting you in Providence!

More magazines, please

Thanks for the [review] copy of *College Broadcaster*. The story about our sports program is wonderful. The kids who do it really need that type of support — they do the show for free, using their own cars, fuel, time and energy.

If possible, I would like to have additional copies of the magazine — one for each of the guys involved and some for our administration. Every article in a national publication can mean a lot to us when it comes to budget time.

Thanks again for the article.

Oscar Patterson, Pembroke State U.

ed: It's a pleasure to profile the excellent efforts of our members, so the thanks is ours. Additional copies for each student have been placed in the mail; however, we do ask for reimbursement of mail costs. If you need more copies, back issues of College Broadcaster are available to all members for \$3 per copy (including mailing costs).

It should be noted that the article to which Oscar is referring "First Down and Career to Go" from the Fall issue was written by William Fiore.

Write to us! *College Broadcaster* welcomes your comments and criticisms, about the magazine, NACB projects, or anything else on your mind! Send them to:
Feedback, NACB
71 George St. Providence, RI 02912-1824

from the disk of the editor...

Excellence in student electronic media: while some may find it an oxymoron, NACB has been witness and advisor to hundreds of stations in their pursuit. Based on the awards entries we received to the news stations provide, we can attest to the outstanding efforts from students nationwide. For examples of outstanding student stations, make a visit to members KRUI-FM and TV3 (on page 9).

NACB urges professionals to note these achievements and further support student efforts by lending their expertise. Our focus in this issue on production tools and resources — from sound editing to TV equipment testing, from new revenue streams to engineering and legal developments — provides you solid steps on your climb to excellence.

Follow in the path of an individual who has reached the zenith: Roseanne delights us with her views on power, media, creativity and ambition.

We encourage you to attend the one event that truly celebrates student radio and TV achievements and fosters new ideas: the NACB National. We look forward to meeting you there!

JoAnn Forgit

No Faster Access To 1,000 Cuts. Just Push.



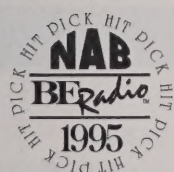
INTRODUCING
Instant Replay™
THE NEW HARD DISK
AUDIO PLAYER FROM
360 SYSTEMS

Push one of Instant Replay's 50 Hot-Keys™ and get instantaneous playback of your stored library of music samples, sound effects or spots—in superlative stereo quality—for on-air, news, spot and promo production.

Instant Replay is completely self-contained, sports a four or eight-hour hard drive and can store up to 1,000 cuts. Professional features such as sample rate conversion, analog and digital I/O, automatic head trims, and port for hard-copy printing make this machine agile and genuinely easy to use. There's no limit to the length of a cut, no waiting for floppy disks to load.

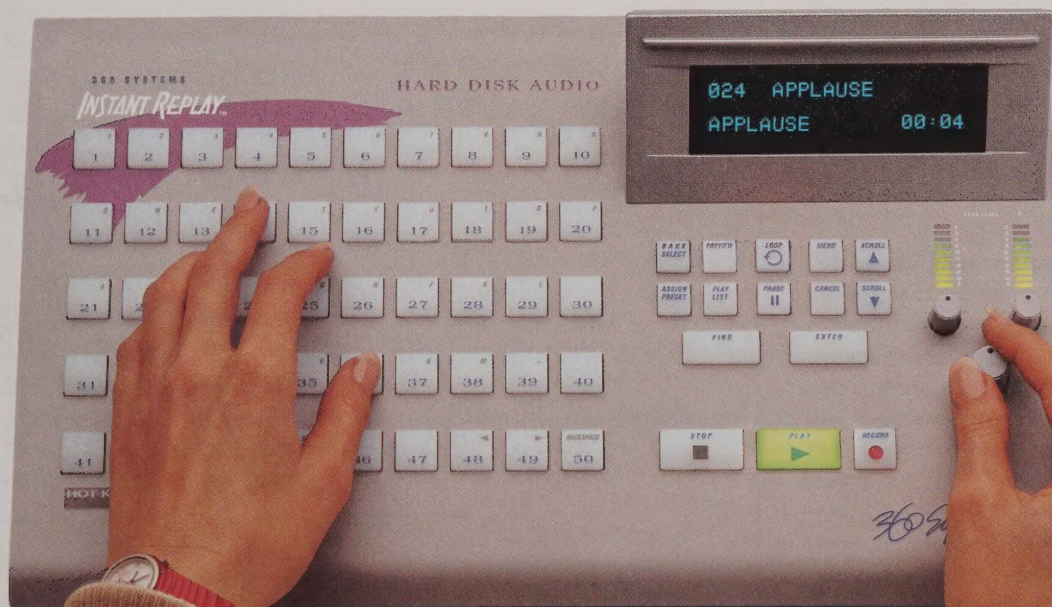
Best of all, it's only \$2,995.

Give us a call for more information,
including an informative 14-page Q&A.
Just dial 1 (800) 732-7665.



Bradley
BROADCAST

800-732-7665 FAX: 301-230-6526



360 Systems
PROFESSIONAL DIGITAL AUDIO

station news

ICTV sports in syndication

"The Gridiron Report", a weekly series produced by member ICTV/ Ithaca College, is now carried by the Empire Sports Network's twenty-seven affiliate cable systems. The Sunday night production combines IC football game footage with analysis by Ithaca Head Coach Michael Welch. Producers also select a player of the week, who is presented with a plaque.

"The Gridiron Report" has been an ICTV annual production for more than a decade, but this the first time ESN has picked up the series. The arrangement was made by Ithaca College's Sports Information department. Formerly, the students would make tape duplications of the show, which were then mailed to Upstate New York cable systems. Now, a second master tape is recorded, which Empire Sports Network transmits via satellite at 5:30pm Fridays to all affiliates.

A new set was created by Adam Kranitz '97, to put ICTV's best foot forward in the expanded markets. Two cameras are used for field footage at the away games, which producers Kevin Callahan '97 and Jennifer Milford '96 also attend. Travel expenses are mostly covered by an annual underwriting grant from the Cornell Federal Credit Union.

Cable 13 \$130K equipment upgrade

Boasting to be "the most technologically advanced student-run television studio in the country", Duke U.'s Cable 13 completed major renovations to their studios this summer totaling over \$135,000 in hardware and software. Recent purchases include Sony Betacam studio, broadcast and remote equipment, new edit controllers, a new switcher, a new intercom system and an upgraded character generator for the Mac. The financing was primarily obtained from the studio's depreciation fund. Other NACB members can attest to the frustration Cable 13 summed

up quite clearly in their funding proposal: "We spend far too much of our time jerry-rigging solutions to technological problems rather than producing creative programming."

KCSU-FM management changeover

Students have been given the management reigns at KCSU-FM/ Colorado State U. The station changed hands on July 1, ending seventeen years of management by a professional staff. Formed as a student station in 1964, KCSU-FM became a CPB-qualified public radio station in 1978. Although student fees were still collected for station operation funds, student involvement was limited. While KCSU-FM still maintains a Triple-A format (Adult Album Alternative) from the previous management, there has been more flexibility in playing local music and "college bands." The students have taken on the responsibilities with an aggressive commitment, even though as co-station manager Melissa Purdy states "It's a huge challenge because there are no footsteps to follow in." The listening audience has been somewhat skeptical of the students' ability to manage the station 24 hours a

day, 365 days per year. Promotions Director John Prendergast replies: "We have a lot of negative images to overcome. I just hope our critics have the courage to admit that we're overcoming them."

KRUA-FM wins four Goldies

Member station, KRUA-FM/ U. of Alaska-Anchorage has won four Goldie Awards from the Alaska Broadcasters Association in its annual awards program. KRUA garnered top honors in the following categories: Best Radio Sports News Story, Best Radio Breaking News; Best Radio Public Service Announcement (student division); and Best Radio Public Service Announcement Series (student division). Congratulations!

Source: member stations.

Send us your station news:

e-mail nacb@aol.com or fax 401-863-2225.

ADVERTISER INDEX

ATI	25	215 443-0330
Battison	27	419 994-3849
Bext	27	619 239-8462
Bradley Broadcast	03	800 732-7665
BSW	26	800 426-8434
CNN Newsource	IBC	619 239-8462
Career Connection	27	800 295-4433
Coarc Video	08	800 888-4451
Communications Technologies	27	609 985-0077
Computer Prompting Corp.	22	301 738-8487
Crown International	16	219 294-8050
Inovonics	20	408 458-0552
Leightronix	25	517 694-5589
LPB	IFC	215 644-1123
Museum of Broadcast Communications	27	312 629-6001
Radio Systems, Inc.	BC	800 523-2133
SONY	14	800 635-SONY
Tape Resources, Inc.	26	800 827-3462

Please feel free to contact College Broadcaster's advertisers directly to learn more about their products and services. **For advertising information, call JoAnn Forgit at 401-863-2225, fax 2221 or e-mail nacb@aol.com.**

industry news

Indecency & Safe Harbor

The law firm of Haley, Bader & Potts, on behalf of petitioners the Pacifica Foundation, NFCB, PRI, NACB, IBS, Pen American Center and Allen Ginsberg, has filed a petition regarding the constitutionality of the FCC's ban on indecent material. We'll keep you updated.

Researching recent radio history

Interested in how Radio has been shaped by recent regulatory changes and technology advancements as well as the future of the industry? Then check out Vincent DiTingo's *The Remaking of Radio* (Focal Press), a comprehensive look at recent radio history and factors that will impact the future.

Cable networking

Another potential mega-merger is making front page news. Time Warner Inc.'s plan to takeover the Turner Broadcasting empire is heading to the hands of the FCC regulators. Part of the problem: TCI owns stock in TBS which could potentially lead to monopoly issues. In addition, Time Warner would gain ownership of WTBS (the Superstation) — federal law prohibits common ownership of a cable system and a tv station in the same market.

Cable industry honors

Cablevision recently released the winners in its fifth Annual Innovator Awards, honoring distinction in local programming, community service, consumer marketing, advertising sales, PPV and technology. Top honors for Operator of the Year went to TCA Cable TV Inc. in Texas. The award for cable "Image Maker," a company that helped put a positive spin on the cable industry in 1995, was awarded to TimeWarner New York City Cable Group.

The CableAce Awards will take place on December 2, televised on TNT. A gala will

follow the non-televised portion, which takes place on December 1, to fundraise for Cable Positive, a non-profit organization dedicated to AIDS awareness, as well as research and care funding.

College radio founder and friend dies

September 1995 marks the end of an era in college radio with the death of George Abraham. Mr. Abraham was the co-founder of WBRU-AM in 1936, the world's first student-run radio station (and also the first campus carrier current station). In addition, he was co-founder of the Intercollegiate Broadcasting System (IBS) in 1940. A leader in networking hundreds of student radio stations, Mr. Abraham will be greatly mourned by the scores of individuals he inspired over the years, and missed by the stations that operate today in part from his guidance.

Sources: Broadcasting and Cable, Electronic Media, member stations.

CONFERENCES + EVENTS

november

- 8-10: Billboard's Music Video Conference & Awards. Santa Monica, CA. 212-536-5002.
- 9-11: Loyola Radio Conference. Chicago, IL. 312-508-3727.
- 15-18: JazzTimes Convention. New York, NY. 800-866-7664x10.
- 16-19: National Association of College Broadcasters (NACB) 8th Annual Conference. Providence, RI. 401-863-2225.

december

- 4-6: WebINNOVATION. San Francisco, CA. 714-489-8649.

january

- 8-10: Society of Telecommunications Engineers (SCTE) Annual Conference. San Francisco, CA. 610-363-6888.
- 22-25: National Association of Television Programming Executives (NATPE) Annual Convention. Las Vegas, NV. 310-453-4440.

february

- 3-6: National Religious Broadcasters (NRB) Annual Conference. Indianapolis, IN. 703-330-7000x503.
- 16-19: National Federation of Community Broadcasters (NFCB). San Francisco, CA. 415-771-1160

NACB news

NACB National news

Gain insightful tips on managing your station plus information on careers in media in over 100 sessions at the National! Enjoy socializing with professionals and peers at the conference's networking events. Spin your favorite tunes at the BMI Best DJ Booth. Winners in our annual awards program will be announced during a dinner celebration. For finalists, see pages 10-11. To register contact NACBat 401-863-2225.

Executive Board update

NACB is pleased to welcome Michael Black, General Manager of WEOS-FM/Hobart & William Smith Colleges, and Eloise Greene, Staff Advisor to ICTV/Ithaca College, to the NACB Executive Board. Members subscribed to the listserv are no doubt aware of the significant updates these individuals provide. As E-Board members, their input contributes to the broad scope of projects and outreach NACB undertakes.

All NACB members are invited to shape the association and the future of student electronic media by attending the NACB annual business meeting and Executive Board elections at the National.

NACB welcomes new advisor

NACB is pleased to announce a new member to the Advisory Board. B. Eric Rhoads, is the publisher of *Radio Ink*, the leading radio sales and marketing magazine.

U Network®

Feeds for the 1995-1996 U Network season take place weekly during the academic year. Student TV outlets can still become affiliates for a pro-rated fee for the spring term. Outlets without access to a C-Band downlink can still receive the great student programming by ground service from Coarc Video.

Radio-Mercury Awards Fellowship

The Radio Creative Fund and NACB would like to announce the 1996 Radio-Mercury Awards Student Creativity Summer Fellowship. Individual students will compete to work on a national public interest campaign. The winner will receive a \$2,500 grant and a five week summer internship at NACB to work directly with other social responsibility organizations and develop a national campaign. The deadline to enter is March 15, 1996. See the accompanying ad in this issue or check the mail for details. Call NACB for further information about applying.

Seeking handbook submissions

It's almost a shock to think that 1995 is almost over. While most of you, we hope, will be relaxing during the winter break, NACB will be compiling information for the *NACB Station Handbook*. Submissions and topic ideas are encouraged as we look to update and expand the 1996 editions. Please contact NACB with your ideas.

BUMPER STICKERS T-SHIRTS & MORE

NACB has teamed up with Fox Marketing to provide premiums and promotional items at a discount to members — just in time for back-to-school and holiday events. Your purchase will also benefit NACB. Contact NACB if you have not received your catalog. Call Fox Marketing at 800-771-8250 for product information or to place an order.

Need help with your FCC license renewal?

The National Association of College Broadcasters offers a special NACB-member legal service to assist you with the preparation and filing of your station's FCC license renewal application.

For the special reduced fee of \$100, NACB's legal counsel will provide you with the following:

- Information on how to prepare all the license renewal forms, including all pre-filing and post-filing broadcast announcements
- A special memo to help you maintain a proper Public File
- A special memo to help you prepare properly Quarterly Issues-Programs lists
- All the required FCC forms
- * A complete review of your completed FCC license renewal application prior to filing
- Hand-delivery filing of your license renewal application with the FCC

These legal services will be provided by Cary S. Tepper, Esquire. Cary has served as NACB's legal counsel since 1990, and is now a partner in the Washington, D. C. communications law firm of Booth, Freret & Imlay, P. C. For further information call 401-863-2225.

1996

Radio-Mercury Awards
National Association of College Broadcasters

Student Creativity Fellowship

\$2,500 grant and a five week Summer internship at NACB

Encourage AIDS Awareness, Promote Literacy, Foster
Environmental Consciousness, Build Racial Harmony,
Treat Substance Dependency.

Your Issues.

Your Choices.

Your Airwaves.



The Summer Fellowship is open to all NACB individual and radio station members. To be eligible, simply tell us about a central social issue on your campus in a 90 second or less student-produced PSA which has been aired on a student-run radio station. Tape submissions must be a chrome dub of the master and be sent with the tear-off form below. A one page (250 word max.) essay which details the added awareness and insight the applicant has gained from the production of the PSA, should also accompany submissions. Programs must have been produced between March 1, 1995 and March 15, 1996. The deadline for submissions is March 15, 1996. The individual winner will be notified on March 29th, 1996 and publically announced at the Radio-Mercury Awards in New York City. The most innovative, informed program of technical merit will be awarded the Fellowship. The Fellow will be awarded \$2,500 and a five week Summer internship at NACB in Providence, RI to gain experience in the writing, production and broadcasting of public interest campaigns. If you have any questions, call NACB at 401-863-2225.

\$ 2 , 5 0 0 g r a n t

what are your station's most prized possessions?

TELEVISION

We just spent \$130,000 in equipment this summer. We now have a Sony PBW Beta-cam series editing decks, an Echolab MVS-5 production switcher, a RTS intercom system and a Videomedia super micro controller.

*Steve Zapotoczny, General Mgr
Cable 13, Duke U.*

We have a Video Toaster 4000. We plan to buy Avid edit setup when we have the money.

*Michael Ivy, Program Director
GSTV, Georgia State U.*

We plan to be digital in five years, starting with a Toaster Flyer.

*John Skogstoe, General Mgr
KHWK/ Northeast Community College*

We have a Betacam sp edit suite, a Power PC 8100 for a weather station. We also made a Video Toaster upgrade to 4.0 which greatly increased our graphics capability.

*Jason Kornweiss, General Mgr.
WTOP-TV/ SUNY-Oswego*

Digital special effects generator for editing and on-air production.

*Gene Frommelt, Media Specialist
VRJC-2, Vernon Regional Jr. College*

RADIO

Probably our Otari 5050B open reel decks. We are in desperate need to upgrade! Any suggestions?

*Craig Breit, General Mgr
KCEB/ Cerritos College*

Our Technics cd players. We're looking into upgrading to Mini-discs.

*Glenn Wiegand, General Mgr
KGUR-FM/ Cuesta College*

Our Arrakis Digilink which works well.

*Michael Black, General Mgr., WEOS-FM,
Hobart & William Smith College*

Digital 8 Track and digicart. We would love to invest in a new board.

*Lori Ross, Station Mgr
WMCR-FM, Moody Bible Institute*

Our Gateway 2000 to support our Web Site, audio vault, library contents, as well as being a mailserver/ dialup access net node. Other equipment includes an Otari 8 track, Soundcraft 16 channel board and Radio Systems console.

*Christopher Philips, General Mgr
WKNC-FM/ North Carolina State U.*

Ramsa audiomixer, Revox 2-channel recorder, Denon cd players.

*Teresa O'Hara, General Mgr.
WNMC/ Northwestern Michigan College*

Our Gateway 486, Teac 8 channel reel-to-reel and Symetrix telephone interface. We do all our editing and production on computer.

*James Reinleib, Station Mgr
WNSU/ Nova Southeastern U.*

Arakis Board, Yamaha 990 Processor for production, Otari reel-to-reel, Harris Marti sports equipment and a DJ headphone with mic attached.

*Tim Schulz, General Mgr
WDCR/ U. of Dayton*

Our solid, reliable, great sounding air-chain beginning with new Denon professional CD players, Sennheiser microphones, a top of the line Wheatstone console and Optimod processing equipment, continuing with a Marti aural STL, a new Energy-Onix solid state transmitter and a Shively directional antenna.

*Ajit Daniel, General Mgr.
KQAL-FM/ Winona State U.*

leave your videotape needs to us!

MEETING ALL YOUR TAPE STOCK NEEDS: SVHS, UMATIC, BETACAM
PROVIDING NEW AND RECYCLED TAPE AT LOW PRICES —
PERFECT FOR STUDENT TV BUDGETS

FOR MORE INFORMATION OR TO PLACE AN ORDER
CALL 800-888-4451 OR FAX 518-672-4048

 YOUR COARC PURCHASE ALSO BENEFITS NACB!
ORDER BACK FEEDS THROUGH OUR
U NETWORK GROUND SERVICE

CoarcVideo

the equipment upgrade advantage

KRUI

KRUI is the premiere college station at the University of Iowa in Iowa City. We're 100 watts and we cover the Iowa City community and nearby towns. Broadcasting on FM since 1984, KRUI boasts 110 staff over 10 departments with 10 directors who receive a small stipend.

Over a year ago I created the 'KRUI 2000' plan, which was to ensure that KRUI had the facilities, foundation and support to make it well into the next century. The crux of the plan is the move to digital.

We reached a point this year where we were working with 11 year old equipment, and the University was moving us. We had a depreciation fund to improve our equipment should something fail. We looked into improving our broadcast chain for the following reasons: to obtain equipment that was dependable and would work for a long time; to have duplicity in most of our broadcast chain in case of component failure; and to use cutting edge digital equipment. The University buried cable to our new home, and it was only time the digital transmission cable could be put in. We will move in two months, at which time our digital Optimod will send a digital signal 150m to the Digit Exciter, which will then send the signal to an unsuspecting Iowa City, though our digital equipment is currently in operation at our tower site.

In the station itself, an upgrade to digital would also allow our staff to interact and have a greater impact on the listeners. A few staffers had been doing Mac-based production, so we bought a PowerMac and the 'Deck 2' recording software. The result was professional sounding production, the opportunity for staff experimentation and creativity with new technology (no classes at UI are available on this topic).

The change-over to digital-based production and delivery was relatively easy because everyone was excited to learn about the new technology and production. Now, after a few training sessions and lots of hands-on experience, most of our production is done on the Mac and put on the 'Instant Replay' hard disk delivery system. The main drawbacks lie with problems learning the software interface and the technical end of it.

There's plenty on the positive side. Production quality has gone through the roof. Theft is non-existent. We created the paid position of Production Director who coordinates all production, whereas before the entire staff contributed to production tasks. It is more effective to have one person in charge, so now the Production Director supervises all of the computers and facilities and runs regular training sessions.

Digital has made a big impact at KRUI. From the way the DJs are able to do their show, how the listeners perceive the station, how the station is managed, and the foundation being laying for future improvements. Broadcasting via the web is a goal down the road, but the current technology is costly and doesn't sound very good. But with our move to a brand new facility, we are still working to optimize the use of digital equipment within our station.

*John Barker, General Mgr,
KRUI-FM, U. of Iowa*

TV3

Pepperdine University, a small, private university in Southern California, has a lot on its plate. Students not only have access to 25,000 viewers in Malibu, but they also have the opportunity to program four additional channels on campus. Being a fully student-run station, there are seven paid student staff members and several assistant positions which are unpaid. Our flagship TV-3, broadcasts 24 hours a day and is programmed primarily with the community in mind (i.e. city council meetings, educational programming and news). TV-6, which was reborn during the 1994-95 school year is a solely student channel, with programs produced by students like NewsCenter 3, The Last Word, Malibu Magazine, Good

Morning Malibu, National College News, Trailers and many more. Channel 6 has also added for its viewer's enjoyment uncut motion pictures broadcast three times daily. TV-6 broadcasts over 50 hours of programming per week. Beginning this year, the Pepperdine Radio Sports Channel was introduced as a means of covering Pepperdine sports on the road. PRSC, will provide full play-by-play coverage of all men's basketball, baseball, and volleyball games.

All of these opportunities truthfully presents a problem in both staffing the master control center and in the area of programming. The use of automation in switching was once only reserved for our community channel. However, as student programming increases, the use of automation is slowly beginning to be utilized in the student production area. One of our most widely viewed programs, NewsCenter 3, a nightly news program produced and directed by students for the campus and Malibu communities, got a technical and physical face lift this year. The donation of a new news set and the purchase of computerized newsroom and teleprompting equipment have increased the efficiency and quality of the program. The student television station serves also as a satellite downlink center for the campus. With five satellites, students have access to live interviews via satellite, not to mention news feeds and the hundreds of programming opportunities that lie in the sky. Students have conducted live interviews via satellite with such notables as Ross Perot and Shelley Long.

TV3 truly prepares students for work in the professional arena. With our up-to-date production facilities, students are encouraged to understand the concepts before mastering the procedures. There is no pre-requisite to being able to participate or even produce at the station. While the quality of some programs produced by beginners is nothing to write home about, by the second or third program things really begin to shape up. Through instruction and mentorship of one of the station's student directors, students begin to depend on and learn from each other — once this is accomplished, the quality that we come to expect soon follows.

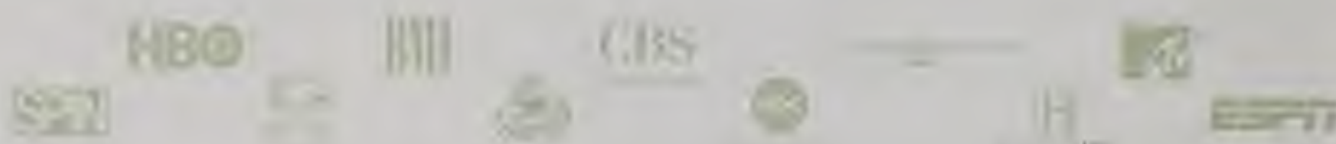
*Chris Koble, Programming Director
TV3, Pepperdine U.*

RECOGNIZING

EX

THE 8TH ANNUAL NATIONAL CONFERENCE OF STUDENT ELECTRONIC MEDIA IS
GRATEFUL FOR THE GENEROUS SUPPORT OF **THE WILLIAM S. PALEY FOUNDATION.**

Sponsors of the 5th Annual Student Radio & TV Programming Awards include:



NACB NATIONAL STUDENT RADIO AWARDS FINALISTS

DJ Aircheck

KTCC-FM/ Colby Cmty. College, "Mike Tippits Show"
WRHU-FM/ Hofstra U., "Morning Wake-up Call"
KALX-FM/ UC- Berkeley, "Mo Show"
KJHK-FM/ U. of Kansas, "Jazz in the Morning"
WKNC-FM/ U. of North Carolina, "Tear Scott Show"

Long-Form Production

WBWC-FM/ Baldwin-Wallace College, "Remember for Them"
WPHS-FM/ Cousino High School, "Jack Luxley"
WRHU-FM/ Hofstra U., "Fry One On"
WMUL-FM/ Marshall U., "From U Boats to Few Boats"
KRUA-FM/ U. of Alaska, "Winter Camping"

News/Sports Reporting

WMUL-FM/ Marshall U., "Sports 5pm edition"
WMSV-FM/ Mississippi State U., "Campus Housing"
KBLZ-FM/ U. of Central Oklahoma, "Slaughter Trial Preview"
WUEV-FM/ U. of Evansville, "Ryan Priest report"
KJHK-FM/ U. of Kansas, "Report 2/16/95"

Play by Play

WMWA-FM/ Glenbrook South High School,
"Titans vs. Spartans Basketball"
WMUL-FM/ Marshall U., "Football Quarterfinals Playoffs"
KJHK-FM/ U. of Kansas, "Kansas vs. Kansas State Women's Basketball"
WXCI-FM/ Western CT State U., "Western vs. Coast Guard Basketball"
KUGS-FM/ Western Washington U.,
"Western Washington U. vs. Seattle Pacific U. Basketball"

Promo/PSA

WSFX-FM/Luzerne County Cmty. College, "Monk Promo"
KDLX-FM/ Northwest Missouri State U., "Don't Be a Dope"
ACRN-FMca/ Ohio U., "Springfest '95"
KRUA-FM/ U. of Alaska, "STD Hotline: Guess the Disease"
KJHK-FM/ U. of Kansas, "Hip Hop Rap"

Talk/Magazine Program

WMSV-FM/ Mississippi State U., "Colorful Expressions"
WMCR-AM/ Moody Bible Inst., "C-53 Radio Magazine"
WNYU-FM/ New York U., "Feature"
WJPZ-FM/ Syracuse U., "Focus"
KALX-FM/ UC-Berkeley, "Northgate Magazine"

Community Service

WBZC-FM/ Burlington County Cmty. College,
"Oklahoma City Fundraiser"
KTSW-FM/ Southwest Texas State U., "Political Forum"
KWTS-FM/ West Texas A & M U., "Ribbonfest"
WMUL-FM/ Marshall U., "Programming & Outreach"
KJHK-FM/ U. of Kansas, "Can U Jazz Benefit"

Marketing/Promotion Campaign

WBZC-FM/ Burlington County Cmty. College, "Station Open"
WERS-FM/ Emerson College, "Annual Auction"
WMUL-FM/ Marshall U., "Asheville Experience"
KKSM-FM/ Palomar College, "Guest DJ"
WMUC-FM/ U. of Maryland, "Earth Day"

Faculty/Staff Recognition

WBZC-FM/ Burlington County Cmty. College, Drew Jacobs
WMUL-FM/ Marshall U., Charles Bailey
WMSV-FM/ Mississippi State U., Steve Ellis
KKSM-FM/ Palomar College, Rob Branch
KJHK-FM/ U. of Kansas, Gary Hawke

Station of the Year

WFAL-FM/ Bowling Green State U.
WBZC-FM/ Burlington County Cmty. College
WMWA-FM/ Glenbrook High School
WMSV-FM/ Mississippi State U.
ACRN-FMca/ Ohio U.

GOOD
SHOW

CELLENCE



Jeffrey Ross will be the awards host for the 5th Annual National Student Radio Awards and the National Student TV Programming Awards ceremonies on Saturday, November 18.

A Boston U. graduate, Jeff has a number of writing, acting, theatre and standup credits to his name. His numerous TV appearances include "Short Attention Span Theater", "Comedy Product" and "Comics Who Kill" on Comedy Central; "Comikaze" and "Half-hour Comedy Hour" on MTV; "Caroline's Comedy Hour" on A&E; "Late Show with David Letterman"; and an appearance on "Star Search". His screen credits include: Jeffrey, LA Woman and Celtic Pride.

NACB NATIONAL STUDENT TV PROGRAMMING AWARDS FINALISTS

Comedy

Center for Contemporary Media/ DePauw U., "My Education"
MSU Telecasters/ Michigan State U., "The Show: Episode 16"
GSTV/ SUNY-Geneseo, "Nocturnal Transmissions"
UNC Student TV/ U. of North Carolina, "Off the Cuff #123"
NTTV/ U. of North Texas, "Who Said What?"

Documentary

GSTV/ Georgia State U., "Independence"
ICTV/ Ithaca College, "Heroes We Grew Up With"
UTVS-6/ St. Cloud State U.,
"Husky Harcourts: History of St. Cloud Basketball"
NTTV/ U. of North Texas, "Generation X: We Have Nothing to Say"
WTV Channel 13/ Wartburg College, "Media Spotlight"

Drama

Columbia College, "Glass Roots"
ECTV Channel 40/ Elizabethtown College, "The Prof"
ICTV/ Ithaca College, "Semesters: Vol. 5, Episode 1"
WNYF-TV/ SUNY Fredonia, "Credit Hours"
UNC Student Television/ U. of North Carolina, "General College"

Experimental/Animation

WARG-TV/ Argo High School, "Animaction"
Center for Contemporary Media/ DePauw U.,
"S's the nineteenth letter"
ICTV/ Ithaca College, "The Creature Chronicle"
i ear Studios-WPRI/ Rensselaer Polytechnic Inst., "el naftazteca"
LVTV-3/ U. of La Verne, "Blue"

Music Video Program

CTV/ Colorado State U., "Backyard Videos"
Columbia College, "Music Alive"
WO5BV/ Mississippi State U., "Believe"
KOCU-TV/ Oklahoma City U., "Country Style"
WNPC-TV 6/ SUNY-New Paltz, "Fiebre Latina"

Newscast

CUTV/ California U. of Pennsylvania, "CUTV Newscenter This Week"
CTV/ Colorado State U., "CTV News 4/25/95"
ICTV/ Ithaca College, "News Tonight"
K.M.A.C. Productions/McAllen High School, "KMAC News 5/19/95"
KSCU-TV/ U. of Central Oklahoma,
"The Edmond Report 10/26/94 Sportscast"

News/Sports Report

CUTV/ California U. of Pennsylvania, "Wood Street Fire"
CTV/ Colorado State U., "Halloween in the 90's"
ICTV/ Ithaca College, "Broken Families"
Norwich Today/ Norwich U., "Paintball"
Studio One/ U. of North Dakota, "Emus"

Play by Play Coverage

CUTV/ California U. of Pennsylvania, "Vulcan Basketball"
CUTV/ California U. of Pennsylvania, "Vulcan Football"
DUTV/ Drexel U., "DUTV Sports"
NYU-TV/ New York U., "Live Basketball Coverage"
RMC-TV/ Robert Morris College, "RMC Football: Duquesne at RMC"

Promo/PSA

NYU-TV/ New York U., "Air Raid Dancer Promo"
WNPC-TV 6/ SUNY-New Paltz, "Be Loud, Be Heard. VOTE!"
WB61-TV/ Towson State U., "Jesse Jackson Promo"
Channel 12/ U. of Mississippi, "Regan Seybert Promo"
Studio One/ U. of North Dakota, "Studio One Promo"

Talk/Magazine Program

CUTV/ Cal. U. of PA, "Pride and Progress: Stories from Fayette City"
Columbia College, "600 South"
Dept. of Journalism/ New York U.,
"New York Windows: A Closer Look"
Norwich Today/ Norwich U., "Mt. Washington, N.H."
Studio One/ U. of North Dakota, "Studio One, Show 131"

surfing the net

A whole lot has happened in the past four months is becoming the common opening statement for this column. But what a four months it's been: the passing of Jerry Garcia struck as a complete surprise and within a day or so Netscape Communications Corp. began trading publicly. I have to admit that the "not guilty" verdict in what must be one of the country's longest running murder trials resolved in an unexpected manner as well.

This "TestDrive" is going to seem all over the place, but bear with me, we only get to do this four times a year and the silicon is soaring.

If you are using Netscape as your browser you probably have come across some of the first animation on the Web. The movement is accomplished through HTML tags that instruct the client or server to "pull" or "push" the data flow. When a short duration is specified in a script, pages appear to become animated. Several great examples integrating these tags are seen at:

`<http://www.razorfish.com/">razorfish>`

`<http://www.mmrcorp.com/feats/">Netscape Feats>`

`<http://www.batmanforever.com>`

The evidence continues to mount that the Net will become a viable delivery mechanism for video and audio. Realization is not terribly far in the future; and with new partners and investments, it's likely that Netscape will become one of the major vehicles to drive that movement.

Since our last "TestDrive," more has been learned about the future plans of the Macromedia and Netscape association. While Netscape has shipped its 2.0 beta the promised integration of seamlessly playing Director files is not yet available.

As originally described, Director would

enable synchronized graphics, sound, animation and local interactivity locally on a page. While it's unknown at press time when we'll have these capabilities that Macromedia has now deemed, "Shock-wave" Netscape 2.0 at least presents some promise in that direction. Importantly, the new browser begins moving more of the scripting capability to client software. That's certainly where you need it when your system administrator is just too geeked out to speak or if you are like me and rely on POTS (plain old telephone service) and a commercial Net provider.

2.0b1 is looking more and more like an integrated package like ClarisWorks. Improved e-mail and Newsgroup capabilities exist, but I'll probably continue with Claris EMailer and NewsWatcher. There are some new extensions to HTML. For better or for worse, one which I believe will become popular amongst pagemakers is Frames. Frames enables the displaying of multiple documents — think of it as the coming of an ad on every page.

Another major Netscape partner, Adobe refuses to be outdone in this new publishing paradigm. An update for Acrobat, code-named Amber, will integrate Acrobat docs for searching and linking on the Web. By "this fall" Acrobat Player will be released. Acrobat Player is a portable version of Acrobat that can be implemented in silicon in a wide range of information appliances including set-tops and LCD projection units. It is reported that many multimedia file types including audio and video and compression formats will be available for display from the Player.

@Home, the six month old startup that promises high speed (10-megabits-per-second) Net connection via cable television, has put all of its software eggs in Netscape Communications Corp's basket. One way to get Netscape's undivided attention is to tap their President, James Barksdale for a slot on their board. For those out looking next year for an exciting new place for a job keep your eyes on this site. Incidentally, @Home is a John Malone, aka TeleCommunications Inc., collaboration/brainchild so selling the required cable operators on the idea is virtually a done deal. To strengthen this further is TCI's far reaching relationships with the content development community. I would say @Home is a good place for investment.

DirectTV, the Hughes all digital direct-to-home satellite operation, is also claiming a leg up in the broadband Net business. Apparently DirectTV has had telephone modems build into each of their Digital Satellite System (DSS) receivers so that all a user has to do when their Net delivery system is launched (next spring) is plug the 18" dish directly into the computer. However, and now for the shadow, they do anticipate shipping new cards before then that will replace the already existing phone jacks. While I and others have some real questions with regards to using direct from satellite communications for Net delivery, there is a potential of shipping a gigabyte of info in only a few seconds.

We plan on having several machines with browsers set up at the NACB National, so get yourself there and say hello. I am always open for feedback, so please suggest what you would like to see more of in "TestDrive". To make the sites we mention in our columns convenient to get to I have started putting "TestDrive" on my page. That way you can simply copy the column in HTML and throw cyberdarts at it. My page is: `<http://www1.usa1.com/~palombo>`

More sites to stop in on:

Motion

`International MPEG Bizarre 1st Film Festival <p> <p>`

`WAXweb, Waxweb 2.0 Beta (1675) <p> <p>`

`LOW RES Film Festival <p> <p>`

Art

`GRAFICA Obscura <p> <p>`

Fun

`The Dilbert Zone <p> <p>`

Misc

`American Communication Association WWW <p> <p>`

continued on next page ►



◀ continued from previous page

Cool Edit Useful Links <p> <p>

Virtual Radio Home Page <p> <p>

Communication Resources on the Web <p> <p>

Macintosh WWW Information <p> <p>

Macintosh Catalog of Mac Resources <p> <p>

Space Age Bachelor Pad Music <p> <p>

 Combustible Edison's Home Page on SubPop <p> <p>

Philip Palombo is an Associate Professor of Communications at Rhode Island College and an advisor to NACB. He is no longer a principal of Abbate Video since it was acquired by Videonics.

Money from home (pages)

Paying for college has often meant getting financial support from parents back home. A college radio station can also look toward its home for support. In this case, home is the radio station's World Wide Web home page. Your home page, if well developed, promoted and maintained, can generate needed revenue from local and national advertisers.

College students comprise a significant portion of the 18-24 year-old demographic that advertisers covet, yet find hard to reach. College radio is a magnet for these consumers. The question is how to (and whether one should) leverage a home page for the operating expenses of the station. I am not suggesting the commercialization of the on-air product. It is off-air resources, such as a web page, that can bring revenue into your station.

Colleges offer students the best access to the Web, and yet college radio Web pages are underdeveloped. Creative broadcasting has not spawned creativity on the Web. Let me assure you that if you build it, the listeners will come, and so will advertisers. Hot links on a Web page that take a listener to the advertiser's website turn that listener into a customer. Advertisers will pay you for bringing their customers to them. If a local advertiser has no web page, you can create one for additional revenue. Let's remember where Mosaic started, after all.

Here is a plan to develop revenue from a web page:

- Establish one, if you haven't already.
- Put someone in charge of the site. It's probably someone who's not already working at the station. Recruit someone with artistic and publishing credentials.
- Make sure you include a method of counting discrete users. Documentation of users will be crucial. Advertisers have already dismissed total hits as a measurement device.
- Create a voluntary "sign in" page that can be used to establish a database of listeners. Loyal listener follow up can be quite rewarding.
- Stay away from large graphics. Downloading time is like dead air. Listeners tune out when nothing is happening, and so do web surfers.
- Integrate on-air promotions with on-

web promotions. Can the winner of the Indigo Girls double-live CD be the 10th browser instead of the 10th caller?

- Ask your listeners what information and resources they want on your page. You must keep them coming back by serving their need for information. Without an audience stream, there can't be a revenue stream.
- Keep the content fresh. Putting up a web page means you're in the magazine business. You need new content every time a listener visits your site.
- Promote the web address often. Use your air staff and all printed materials to get people to visit the site.
- Relate to the community at large. Your site must be more than just the station. It is about the listeners and their world. Replicating the on-air product is boring.
- Don't rely on sound files for downloading. Many users still don't have sound capabilities on their machines. It's frustrating to offer the John Lennon "Free As A Bird" demo if the listeners can't hear it.
- Surf the web for good ideas. Go to the MIT list of radio station home pages and adapt good ideas to your station's page.
- Each link to an advertiser site can mean hundreds of dollars per month in revenue. On-air solicitations for funding can be minimized if this alternative revenue stream is developed.

Our company, the Interep Radio Store, sells over a half-billion dollars of air time each year. We believe that there is a market for advertising on individual station web pages, and look forward to working with you to generate revenue in this manner. Please contact me for further information sharing via e-mail: Bob_Lion@interep.com.

Bob Lion, The Interep Radio Store

Key you there!

NACB will be live on-line on eWorld for upcoming conferences. Please join us. Topics are subject to change.

Nov 9: Real Student Media Uses for the Internet

Nov 30: Simple & Accurate Audience Surveying

Dec 7: A Thing or Two About Media Internships

Contact NACB for an eWorld sign-on kit.

OUR FAMILY OF S-VHS EDITING THAT CAN MAKE ANY (NOT THAT YOU'LL



Some video projects are

thrilling from the moment you roll tape, while others could use a little help in post. Which is why Sony offers an entire family of S-VHS editing systems sure to make any video sensational.

For starters, our SVO-5800 and SVP-5600 editing decks have the sophisticated features required for a professional editing job.

With built-in digital time base correction, RS-422A serial interface, digital noise reduction and four

channels of audio. There's even an optional component output board so you can easily edit your footage onto a Betacam SP® VTR.

For the ultimate S-VHS editing system, our FXE-100 is the perfect match for truly stunning

creative effects.

The FXE-100 is an integrated editor/switcher/audio mixer/digital effects device. With 99 edit memory and an RS-232C port for importing/exporting your edit deci-



The ultimate system. Our SVO-5800 and SVP-5600 editing decks with FXE-100 editor/switcher/audio mixer/digital effects device.

sion list to a PC. Plus, it's interformat capable.

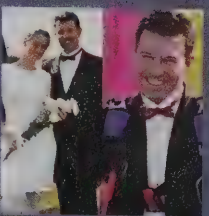
A highly versatile choice is our frame accurate, cuts-only system that's perfect for industrial applications. The SVP-9000 player and SVO-9600 recorder are multi-purpose VTRs that you



*A variety
of video
patterns at
the touch*



*of a button.
Combine
multiple
effects*



*to create
striking
images.*



*Special
effects from
above.*

SYSTEMS OFFER TECHNOLOGY VIDEO MORE EXCITING.

ALWAYS NEED IT.)

can easily
configure to your needs.

Optional interface boards like RS-232C,
RS-422A, SMPTE time code and 33-pin are
available. Coupled with the RM-450 editor
with separate player and recorder machine con-
trols, it's a system that's efficient and easy to use.

Our SVO-2000 is an S-VHS Hi-Fi editing
VTR with convenient features like a cable-
ready tuner, VCR Plus+™ and adaptive
picture control for optimum balance of picture
sharpness and detail. Marry it with the RM-250
editing control unit and the result is a basic,



*The versatile SVO-9600 recorder,
SVP-9000 player and RM-450 editor.*

departments and independent videographers
doing cuts only and simple editing projects.

So you see. No matter what kind of
S-VHS editing your project calls for,
there's a Sony S-VHS system that's right
for you. For more information, call
1-800-635-SONY, ext. SVHS.

While your next video may find
you up in the air, at least it won't be
because you can't decide on your next
S-VHS editing system.



*For basic two machine editing, the SVO-2000
VTR with RM-250 editing control unit.*

SONY



I now



pronounce



you



husband and



wife.

Cover the Campus (and beyond)



with fully integrated FM Transmitters by Crown

With a complete line of FM transmitters, Crown Broadcast can help you cover your campus and your community. Each of our models include a full set of **integrated system components** including:

- ☐ FM Exciter (digitally tunable)
- ☐ Audio Processor (with compressor/limiter)
- ☐ Stereo Generator
- ☐ RF Amplifier
- ☐ Lowpass Filter

In addition, **optional components** offer expanded capabilities:

- ☐ New, optional FM Receiver Module
- ☐ New, optional FSK IDer

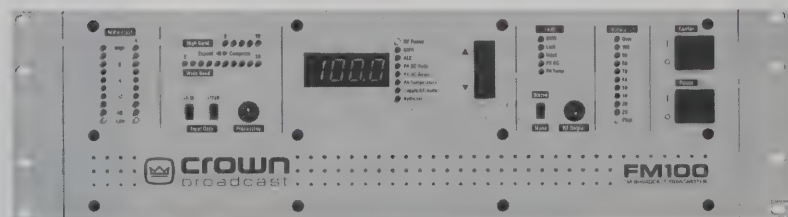
For more information, contact Crown Broadcast Sales at (219) 294-8050 or fax (219) 294-8302 or E-mail mpotterbaum@attmail.com

Models

- ☐ FM30, adjustable from 3 to 33 watts output
- ☐ FM100, adjustable from 20 to 110 watts output
- ☐ FM250, adjustable from 20 to 250 watts output
- ☐ FM500, 50 to 500 watts (available 3rd quarter '95)

Features

- ☐ Excellent signal quality and reliable performance
- ☐ Lightweight, compact, easily shipped worldwide
- ☐ 110/120 VAC, 220/240 VAC or DC powered
- ☐ Built-in digital metering and diagnostics
- ☐ User tunable from 88 to 108 MHz
- ☐ Modular, flexible design
- ☐ Fully illustrated and detailed user information
- ☐ Type notified for FCC part 73 & 74; meets FCC, DOC, and CCIR requirements
- ☐ Quick setup; designed for easy installation even by non-technical people



 **crown**
broadcast

A Division of Crown International, Inc.

1718 West Mishawaka Road

Elkhart, Indiana 46515-1000

Phone: (219) 294-8050; Fax (219) 294-8302

E-mail: mpotterbaum@attmail.com

legal

License renewal application procedures

Between now and the end of 1997, every FCC-licensed radio station must apply for a renewal of its broadcast license. The preparation and filing of your license renewal application is one of the most important tasks that you will undertake. The longer you have operated your station without serious complaint from the public, the more you are entitled to a "license renewal expectancy" as a reward for a job well done. However, since the FCC does not regularly monitor broadcast stations, your internal files and regulatory paperwork are vitally important components to establishing the justification for a renewal of your broadcast license.

If your license renewal application is not prepared properly and completely, there may be substantial delay in getting your FCC license renewed. Incomplete applications are occasionally challenged by your competitors, persons in your service area or special public interest groups. If your license renewal application is challenged, the FCC may require you to attend a Hearing before an FCC Administrative Law Judge. Such hearings are often time consuming and costly. The purpose of this special legal column is to briefly summarize the steps you must take for the renewal of your broadcast license.

Pre-filing compliance

You will be required to broadcast a series of pre-filing license renewal announcements to inform your audience that you will be applying for a renewal of your FCC license and that members of the public are permitted to file comments with the FCC regarding your application. The FCC Rules require you to prepare a written certification of compliance regarding your actual broadcast of such announcements, and a copy of the certification must be placed in your station's Public File within

7 days of the last pre-filing license renewal broadcast announcement.

Preparing the FCC Application Forms: The complete license renewal application procedure involves the preparation and filing of the following three FCC application forms: (1) FCC Form 303-S Application for Renewal of License; (2) FCC Form 396 Broadcast Equal Employment Opportunity Program Report; and (3) FCC Form 323-E Ownership Report.

FCC form 303-S

This is the primary application in the license renewal process. The FCC Form 303-S application consists of a series of questions about your broadcast operations and overall compliance with FCC regulations. This form also requires you to evaluate the station's compliance with RF Radiation guidelines, and to certify such compliance at this time.

FCC form 396

Broadcast licensees are required to afford equal opportunity to all qualified persons and to refrain from discriminating in employment and related benefits on the basis of race, color, national origin, and sex. On an annual basis, the FCC asks each licensee to file an Annual Employment Report, which is supposed to be a representative two-week "snap-shot" of the station's employment recruitment, hiring and promotions practices. During the license renewal process, the FCC asks each licensee to file an EEO Report that is substantially similar to that which has been filed on an annual basis.

FCC form 323-E

The third and final FCC application form that must be submitted during the license renewal process is a current FCC Form 323-E Ownership Report. Even if there has been no change in the ownership structure of the station's licensee since the last license renewal, or since the last submission of an FCC Ownership Report, you should submit a complete report at renewal time.

FCC fees & filing location

Noncommercial licensees do not have to submit any filing fees. The entire package of renewal forms should be sent to the FCC's Office of the Secretary, Washington, D. C.

Post-filing obligations

Once your license renewal application has been filed with the FCC, you must broadcast post-filing announcements to once again advise the public that your license renewal application has been submitted, that it is available for public inspection at your studios, and that anyone may file a petition with the FCC regarding the merits of the license renewal application.

Automatic renewals for STL's and other auxiliaries

Many of you who have already begun preparing your FCC License Renewal applications have asked me how to apply for the renewal of your Studio Transmitter Links, Remote Pick Ups and other Auxiliary Licenses. Although the AM/FM/TV license renewal forms are silent about these matters, it is FCC policy that all your station's Auxiliary Licenses automatically renew when the broadcast station license is renewed.

Believe it or not, these are just the basics regarding the license renewal process. Many license renewals raise new and unusual questions, which cannot be addressed in this legal column. If you would like assistance with your station's license renewal application, NACB is offering my direct assistance at a special NACB-member rate. Please call NACB at (401) 863-2225 for more information.

Cary Tepper is a partner with the firm of Booth, Freret & Imlay in Washington, D.C.

As NACB's legal counsel, Mr. Tepper will respond in this column to selected questions submitted to him in writing to: NACB Legal Column, 71 George St., Providence, RI 02912-1824. Even questions we cannot print in the column will be answered. If you think that you may need to contract the services of a communications attorney, Mr. Tepper can be reached at 202/296-9100.

Of course, not every legal situation is the same, and Mr. Tepper strongly advises that you call NACB concerning your particular case before taking any legal advice. If you think your station's operations may be in violation of any FCC, federal, state or local regulations, please contact your attorney or consultant for specific advice.

T O O L

t e c h n i c a l t i p s t o i m p r o v e y o u

SOUND EDITING: A GUIDE WHO WHO HEARS

At the beginning of the movie *The Usual Suspects*, one of the actors talks about the killings on board a ship, the explosion, and the fire that ensues. The terror of the tale is made more chilling by the treatment of the soundtrack. During the actor's discourse, the ambient background sound fades away and the crystal clear sound of one-voice-talking comes to the forefront. As the clamor of the movie's office din subsides, the audience is left with the actor's words alone, nothing else except for his voice. It is a chilling, powerful experience. The soundtrack alone carries the message and, also, the secret to the story's dramatic ending.

Digital audio recording hardware and software for radio, television and film are useful tools for creating commanding soundtracks, as in *The Usual Suspects*. The love affair with technology to make sound appealing, dramatic and powerful is now both affordable and easy to learn. For far less than the price of one two-track reel-to-reel Otari or other high quality sound recording and editing system, one can have a 4, 8 or 16 track state of the art computer-based, digital recording system.

If you own a Mac computer, sound design and audio editing can be a snap. Most later Macs which include the Quadras, the AV and the PowerPC machines all have built-in sound processing capabilities. Most Power Macs, except for the 5200 and the 75LC can record and play 48kHz, 16-bit sound. Although these specifications match those of digital audio tape recorders and exceed specifications for CD audio, people in the know suggest that the Mac right out of the box doesn't match the sound quality found in pro audio recording gear. But with the addition of software and hardware the Mac can be the CPU of choice for audio editing, as well as for multimedia production and graphics design.

ground sound beds, sound editing and construction for television, multimedia, radio and film require a ready supply of sound files. Copyright issues aside, for the moment, perhaps the most overlooked source of sound files is other people's file folders available over the Internet. By using Fetch or other FTP (file transfer protocol) programs you can download just about anything if you have the tenacity to plough through the information and if you have the time to download.

Try starting with some of these WWW sites in your exploration for both digital sounds and information on hardware and software sound solutions.

Digital Audio Labs offers software and hardware for the IBM side of computing. Try their site at <http://www.digitalaudio.com/>.

Digidesign at <http://www.oz.is/digidesign/>, and Electrosonics at http://www.leeds.ac.uk/music/Menu/mus_e_sonic.html to name just a tiny few.

If you use WebCrawler, type in keywords like *digital audio*, *audio recording*, *sound editing* and others and you'll find thousands of WWW home pages on audio recording, software demos and more. Use the keyword *sound effects* and you'll find WAV and MIDI files all for the downloading. But downloader beware: most if not all of these files are protected from their use by US Copyright law as amended in 1976 and International Copyright laws.

The Mass Communication Learning Center at Texas Wesleyan U. has a rich home page describing Gold Wave which is a sound recording and editing program that will allow you to cut, paste, insert, delete, mix, filter and much more on your PC. You can even create your own effects and filters and apply them to a part or all of a sound file.

U S I N G A Vector Display

This entire article is based on viewing color bars, the most standard test signal for vectorscope viewing. It is not all that important as to whether they are full field, split field or SMPTE bars, it is important that they are good, accurate color bars.

I know it might be dangerous to assume that every reader is well-versed in the operation of a vectorscope, so the best I can hope for here is that the reader has followed the installation information for his specific vector or combination display and has everything hooked up correctly. It will be real helpful to be certain that the input signals are properly terminated, and that the display is centered on the vector display screen. The display intensity should be set to an appropriate level for viewing. The operator should also confirm that the phase is adjusted properly. If you did all that and the color bars don't look correct, then this article might have some suggestions for making real use of the vectorscope.

Saturation is indicated, on a vectorscope, as the distance from the center of the screen, in any direction, to the display dot in question. The greater the distance any given dot is

What's on the Net

From sound effects to music things to back-

continued on page 24

continued on page 22

S

O F T H E T R A D E

u r s o u n d s a n d v i s i o n s

ENGINEERING REGULATIONS YOU NEED TO KNOW

It has been some time since the last engineering column appeared in *College Broadcaster*. A number of important new developments and concerns have occurred in the interim, a few of which I would like to address in this column.

New EAS equipment + modification of existing equipment

As of July 1, 1995 all existing Emergency Broadcast System (EBS) decoders were required to be replaced or modified to the specifications of the new Emergency Alert System (EAS) requirements. Existing EBS decoders can be modified by a qualified contract engineer which can eliminate the need to purchase new equipment at the outset, particularly if the present equipment is relatively new.

Stations need to plan ahead for the July 1, 1996 planned implementation date for the new EAS decoding and encoding equipment. Class D stations are not required to purchase the encoder portion of the EAS. However, there are several worthy improvements to be gained at an approximate overall new system cost of \$2,500. Among these are the option to operate the equipment by remote control, the ability to target specific emergency information to an "at risk" geographic area (regarding emergencies such as tornadoes or nuclear accidents) and not alarm unaffected areas, and the reduction of confusion or failure due to human error. The multiple input system is a significant improvement as participating stations will no longer have to rely on just one station to receive an alert. Additionally, the ability of non-operating devices (such as televisions, car radios, stereo receivers, etc.) to receive a warning, even when the device is not on, is a significant obvious improvement over the previous technology.

Specifics related to the implementation requirements of the new EAS should be addressed by your FCC legal counsel, qualified contract or chief engineer or consulting engineer.

ANSI Compliance and License Renewals

As many of you whose station licenses were renewed since 1986 already know, the standards and requirements with respect to addressing potential radio frequency exposure are becoming more and more stringent. The standard which is still being applied to all new applications and license renewals at this time was adopted in 1982 by the American National Standard Institute (ANSI). This standard limits exposure to 10% of known thermal danger levels, or the power level that individuals can safely be exposed to based on time and frequency. As a result of the increased public awareness of this potential hazard, the Com-

mission now requires an in-depth evaluation of potential radiofrequency radiation to be submitted with all license renewal applications.

In 1991, a new ANSI standard, based on significantly more research data, was published in conjunction with the Institute of Electrical and Electronic Engineers (IEEE). This standard differs from the earlier one in three main areas: (1) much stronger language is used to define maximum permissible exposure levels; (2) it distinguishes between "controlled" and "uncontrolled" environments; and (3) standards have been added for currents induced by low frequency sources of energy. Most important to broadcasters, the maximum allowable percent of potential exposure in uncontrolled environments is 5 times more stringent than the 1982 standard, and this new standard could be adopted as early as the end of 1995 by the FCC. The new ANSI standard defines an "uncontrolled environment" as one in which there is no knowledge of the potential to exposure. Conversely, a "controlled environment" acknowledges this potential as a likely condition of employment. In this case, steps should be taken to implement a safety program regarding any potential exposure.

It would appear obvious that the new standards may pose a significant problem in terms of compliance for a number of stations, particularly higher powered facilities, those where the antenna is located on the roof of a building (as on a campus) and stations that just barely met the earlier, less restrictive requirements. In such cases, if a showing of compliance cannot be made by utilizing "worst case" calculations or by employing actual radiation characteristics, the actual taking of RF measurements may be required. Additionally, it is necessary for all stations to initiate a worker safety program which contains at least some of the following elements:

- 1 Utilize RF equipment which meets current industry standards.
- 2 Identify and control potentially hazardous areas and have a competent individual in the field periodically assess for compliance.
- 3 Employ warning signs, barricades and floor markings to reduce the likelihood of inadvertent exposure.
- 4 Take appropriate precautions during routine tower repairs and maintenance.
- 5 Take periodic measurements to document continued compliance,

After 15 years, the CMJ Music Marathon is bigger — and one could argue better — than ever. Though helped by the collapse of the once-mammoth annual New Music Seminar, also held in New York City during the summer, CMJ's breadth and depth of new music offerings make it a must-go for college radio and other music industry types.

According to CMJ conference head Joanne Abbot Green, college radio still represents the majority of registrants, putting me in a crowd of about 4000 of you and 3000-plus others trying to get you to play their music and/or get signed by a label who could sell.

Most attendees went for the bands: some 400 of them, known and unknown, played on site at Lincoln Center and at clubs around the city during the 4-day event. Since musical performances don't convey much in the print medium, I'd like to focus on some worthwhile tidbits from a few panels.

Where college radio's headed

"The Blind Leading the Blind" panel, subtitled "Commercial alternative and college radio: Who's leading the way?" was the ironically appropriate name for this session, since no one seemed to know who is. However, panelists did agree that commercial stations, regardless of format, never allow as much freedom as college stations. In fact, label reps. and commercial programmers on the panel, such as Arista's Sharon Joffe and WFNX-FM/ Boston's "Boy" Troy Smith concurred that college DJs should enjoy their on-air time by exploring and experimenting with music rather than playing what they already know. Smith says that broader musical knowledge makes DJs more likely employee candidates, even though most commercial stations won't let them satisfy their musical wanderlust on the airwaves. It's this lack of adventure on college and commercial stations, complained Sean Maxson of Mammoth Records, that prevents many of their lesser known artists from getting the exposure they deserve.

Therefore, college alternative's strength and uniqueness comes from staying ahead of, and being broader than, their commercial counterparts. Peter Schaeffer of WNUR-FM/ Northwestern U. said his station drops artists' tracks as soon as Chicago's commercial alternative station



picks them up, but will continue playing their older records if deemed underexposed. But some adventurous stations find themselves unable to play that music because some faculty prohibit certain songs, said Roadrunner Records' Tom Gates, who believes that action is wrong.

A somewhat more conservative element in the audience felt that playing songs just appealing to the DJs tastes would lead to no listeners, and then "what good are we?" Veteran jock at WFDU-FM/ Farleigh Dickinson U., Jerry Rubino, replied "for every listener you lose, you'll gain more than one" if you stick to what you think is cool and not cater to perceived mainstream audience desires. Perhaps it's time, as one America On-Line subscriber commented to a panelist in advance of the session, that college radio push the envelope again and redefine itself now that commercial radio has caught onto and genre-dized alternative music.

College radio survival skills

While the "Surviving as an Independent, Non-Commercial Radio Station" session included many practical suggestions to cope primarily with funding problems, panelists also presented the unique option of becoming independent from one's college! WFMU-FM's license had been held by Upsala College until the summer of 1994. The station's full-time manager, Ken Freedman (and panel moderator), spearheaded the transfer process, who mentioned similar conversions at several colleges over the past few years. He said many administrations consider their station to be "a pain" and might be open to the idea. However, cautioned Freedman, "it can't be done in an antagonistic way. The college must be supportive of dropping the station."

A L O N E
A T T H E
T O P

WFMU pays its bills through annual pledge drives, semi-annual record fairs (netting \$15-\$20K each) and regular events, such as benefit concerts. For station preferring to remain under the university umbrella, these ideas still work. Pledge drives are probably the "best single fundraiser," Freedman believes, while benefits can still be risky because you have to provide an expensive cash guarantee when you rent clubs. Dave Chaos, Development Director of community station KNON-FM/ Dallas, countered that guarantees are unnecessary. His station does five benefits a month, each in a different music genre. They only do door-revenue deals with the clubs. Because the station has great relationships with bands, it's easy to get them to play. Cybil Augustine, a panelist from another community station, said clubs have slow nights when they'll offer space free or at least make great deals. She also recommends getting fundraising ideas from other non-profit organizations in your area outside the radio industry. Direct mailings to your community, alumni, etc. is one good method. "Don't just solicit over the air," she advises.

But it was the significant money raised from such station-organized concerts back when Freedman was a student DJ at WCBN-FM/ U. of Michigan that instigated his frustration with administrators. They denied that money was the station's to spend, claiming it all went into the school's general fund. "If you bring in money, you have a right to say how it's allocated," Freedman claimed. He said that most student managers are unaware that precedents exist to challenge schools on this basis.

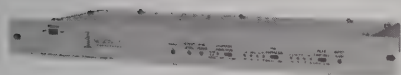
T-shirt sales ranked as another fundraising vehicle, but big-ticket items call for big-money ideas. WHUS-FM/ U. of Connecticut financed their new broadcast tower by getting the state police to co-locate their emergency repeater on it, and paid the costs. Muzak providers, reading-for-the-blind services, other subcarriers and other broadcasters can also share your tower to pay for it.

John Vernile, promotion director of Windham Hill Records and newly-named president of the Intercollegiate Broadcast System (IBS), said that publishing program

continued on page 25

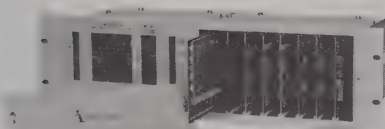
A cast of performers.

For more than 20 years, Inovonics has met the everyday needs of broadcasters the world over with sensible, top-quality broadcast products at down-to-earth prices.



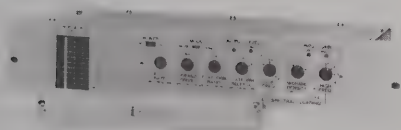
222 Asymmetrical AM Low-pass Processor

Guarantees U.S. NRSC compliance, or is available in several versions for international shortwave service.



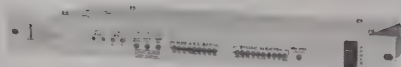
250 Programmable 5-band Stereo Processor

Gated AGC, 5-band Compression and EQ, split-spectrum Limiting—all with colorless PWM gain control. Manually pre-program 4 processing presets, or place entirely under computer/modem control via RS-232 bus.



255 "Spectral Loading" FM Processor

Triband-PWM Stereo Processor for contemporary music formats. Gated AGC, 3-band Compression and Limiting; unique "Spectral Loading" feature for a very aggressive sound.

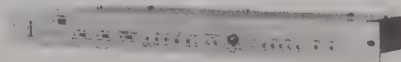


260 Multifunction FM/TV Processor

Stereo AGC—Compressor—Limiter ideal for TV-aural and budget FM's. Split-spectrum dynamic control.

715 "DAVID" FM Processor / Stereo-Gen.

AGC—Compressor—Limiter, plus clean Digital Synthesis of the multiplex baseband signal. Internal RBDS/SCA combining; amazing performance at low cost!



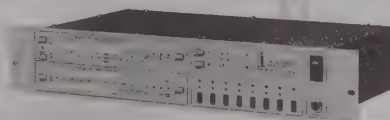
705 & 706 Digital Synthesis Stereo Generators

Choice of a no-frills, basic Stereo-Gen., or a full-featured unit with metering and remote control. Both have patented overshoot compensation and a clean sound.



530 Off-Air FM Modulation Monitor

Tunable Mod-Monitor gives accurate measurement of total mod., pilot injection, stereo separation, etc. The peak flasher, metering and alarms may be remotod.



550 The "Sentinel" Monitor Receiver

All-mode radio tunes AMAX-spec C-QUAM® Stereo, FM/FMX® Stereo and all analog and digital RBDS/SCA subcarriers. Comprehensive audio diagnostics permit off-air evaluation, comparison and analysis.



Coming soon: An easy-to-use RBDS Encoder, and a Monitor/Decoder for use with any FM Mod-Monitor.

Inovonics, Inc.

1305 Fair Ave., Santa Cruz, CA 95060 • TEL: (408)458-0552 • FAX: (408)458-0554



Vector Display cont'd from page 18

from the center, the greater is the saturation. Every vectorscope has a graticule with marking to locate the primary vectors, plus I, Q and burst. Burst is located on the horizontal axis, and points towards the "9:00 o'clock" position. Most vectorscopes have markings to indicate 100% and 75% saturation at burst. Usually, especially in the U.S., burst should be at 75% (normal saturation). The boxes for all of the bars (YI for yellow, R for Red, Mg for magenta, B for Blue, Cy for cyan and G for Green) also indicate the saturation as well as phase relative to burst. Notice also that R, G and B are the primary colors and YI, Mg and Cy are the secondary colors in the display.

If the burst is not at the correct saturation point (n 2%), then find an adjustment for "Burst Amplitude" on the proc amp, camera control unit or whatever is feeding the signal to the vectorscope. Somewhere, back to the sync generator or camera, is burst amplitude. Check all of the devices in the line — any of them could alter the signal.

If the burst is at the correct saturation, but the color bars are not, then the "Chroma" level is incorrect. This could be a bit more tricky, because "Chroma" adjust-

ments often affect both burst and color bar amplitude. This depends on the device. Be careful, watch both the burst reference and the color bar amplitudes when adjusting chroma amplitude.

Now, how about phase. Phase is relative, and the first thing to look at is, again, the reference burst. Assume that the reference burst is at the 9:00 o'clock position. The more common case is where the burst phase is in the correct location, but the color bars are not even close to the boxes. It seems like the whole display (except burst) should be rotated. The problem is one of two things. The first is chroma phase, and this happens in cases where a complete processing amplifier is in use. Most frame synchronizers, TBCs and processing amplifiers have separate chroma phase or hue adjustments. The second type is where equipment like a production switcher is replacing sync and burst with a "Blanking Processor". In these cases, you are looking at the burst from the switcher's black burst processor, and the color bar chroma from some where else, like a camera. The switcher is removing and discarding the (camera) color bars' reference burst and adding its own burst. If the phase is not matched between the switcher reference and the external (camera) color bars, then the

external (camera) color bars must be brought into correct phase by adjusting the camera burst phase or genlock phase until the color bars on the output of the switcher are at the correct phase relative to the reference burst.

Then there is smear and fuzzy dots. Many potential problems, but I'll try to address the basics. Almost all video recorders (disk or tape) make color bars look worse than they were in the beginning. The more generations of copies, the worse they get. Before you get too worried, look at your best VTR or desktop system, under the best circumstances, with the best of all situations you can provide and record some color bars directly from a signal generator (or a camera switched to bars). Play back the color bars and watch it on a vectorscope and a picture monitor. Get an idea of how much angular smear (phase difference) and how much saturation smear (gain difference) is normal for your machine under the best of circumstances. In an ideal world, the dots look like the original. In the real world, you know how the pictures look, and the vectorscope just helps you see the errors. It's up to you to decide when it's broken.

Mark J. Everett, Videotek, Inc.

CLOSED CAPTIONING

For **\$1,995**

own our CPC-600 CaptionMaker software. It's the user friendly favorite of novices & pros alike.

For **\$3,995**

own our CPC-700 CaptionMaker Plus with SMPTE time code. It's the video professional's choice.

TELE-PROMPTING

For **\$2,495**

own the same CPC-1000 SmartPrompter software CBS, NBC and FOX use every day.

For **\$3,995**

get simultaneous prompting and closed captioning, post production captioning, and stand-alone prompting with the CPC-2000 SmartPrompter Plus.

CAPTIONING SERVICE

For **\$395** we will open or closed caption your 30 minute VHS video.

For 3/4" SP, Betacam SP, and 1", add \$125. For D2 add \$200. If script is not provided add \$4 per minute for text entry.

Free Demo Video

Educational Discounts

CPC
(800) 9-PROMPT

Computer Prompting & Captioning Co.

1010 Rockville Pike, Rockville, MD 20852-1419
301-738-8487 • 301-738-8488 FAX • 301-738-8489 TDD

Now on
GSA
Schedule

rethinking required courses

Moving toward a media curriculum that gives students what they need to succeed

Media writing, history, ethics and internships — these are the courses that a clear majority of faculty involved in teaching mass communication and journalism agree today's students need in order to be successful in any area of electronic media. That's the major finding of a nationwide media curriculum study done by NACB. More than 100 faculty responded to a survey asking what courses they believe ought to be required of any communication student, regardless of his or her specific media concentration.

Faculty selected the following courses in order of priority from among a list of twenty suggested: (1) Media Writing (described as "an examination of the manner in which messages are constructed for a variety of media"); (2) Communication History ("the development of communication media from earliest times to modern electronic message systems"); (3) Media Ethics ("explores ethical issues confronting communications practitioners in a wide range of areas; and (4) Media Internships ("practical experience in a media setting, either at a radio or TV station").

Over 70 % of faculty polled said they favored requiring these four courses. By a similar margin (67%), they expressed doubt over the necessity of requiring courses in communication theory, international communication, media research and organizational communication, but 82% approved of requiring majors to take courses in economics, philosophy, computer science, political science and psychology.

Our results seem to support what many schools, both large and small, are currently making a priority: revamping their departments and curricula to reflect a closer alignment between the teaching of practical production skills and the instill-

ing of a broad base of knowledge from many fields. At the University of Southern California (USC), the new \$120 million Annenberg Center for Communication is a prime example. USC's program stresses an integrated curriculum of practice and theory. It draws on other academic programs, including the school's Information Sciences Institute, which pioneered the computer software that led to the Internet. As Dean Elizabeth Monk Daley says of USC's communication curriculum: "There is no question that the media's future is going to be built from a cross-fertilization among science and art, technology and dreams."

Similarly, a former Boston trade school known as Northeast Broadcasting School has expanded its curriculum to become Northeast College of Communications. With that change has come a broad-based approach to instruction. Now a two-year accredited college, the new Northeast stresses a mix of theory and hands-on instruction throughout its curriculum. Echoing our survey findings, Northeast has what its president, Howard E. Horton refers to as "a very strong internship program that provides our students with direct exposure to media outlets."

Internships, writing and ethics are all cornerstones of Hofstra University's new School of Communication. According to Hofstra's Nancy Kaplan, "there is a strong emphasis on liberal arts education." Kaplan, who teaches in the school's department of audio/video/film, says that means "exposing students to a lot of information in a lot of areas with that

strong liberal arts base." Courses are being revamped to incorporate more and new courses are being added, including at least one in "Ethics", another priority area identified in our curriculum study.

Connecticut's Quinnipiac College is another school undergoing curriculum change, moving toward a program of 350 majors, a far cry from the 75 students it had just three years ago. Its new state-of-the-art Ed McMahon Media Center has brought with it an entire overhaul of course requirements. A three credit internship is now "virtually required," says communication department chairperson Raymond Foery. Where video production was one course, it has been expanded into two, with the emphasis on both a hands-on and theoretical approach. Foery's description of Quinnipiac's curriculum may best summarize what many schools are trying to accomplish. "Maybe we're producing practitioners", he says, "but at least they're enlightened practitioners."

Dr. Tony Silvia, Associate Professor of Journalism, U. of Rhode Island

If you have any comments about the curriculum that your institution offers, changes your department or school is undergoing, specific program courses/ requirements or teaching methodology, please contact NACB. All faculty and staff are encouraged to network and exchange ideas on these topics and related issues with the NACB Faculty/ Staff Advisory Board.

Engineering continued from page 19

In order to be assured of a smooth license renewal process, adequate ANSI compliance will need to be fully addressed. If you need assistance in the preparation of a showing in this regard or recommendations regarding RF measurement instruments or control devices, contact your consulting engineer or qualified contract engineering service as most stations do not have the funding necessary to own and maintain the specialized measuring equipment. Conversely, the purchase and regular use of personal monitoring equipment is comparably cost effective and would be a wise addition to the station's budget.

Laura Mizrahi is the Vice President of Communications Technologies, Inc., a broadcast engineering firm in New Jersey.

As NACB's engineering advisor, Ms. Mizrahi will respond to selected questions in *College Broadcaster* or the *NACB Station Handbook* submitted to her in writing to: NACB Engineering Column, 71 George St., Providence, RI 02912-1824. If you think you may need to contract the services of an engineering consultant, Ms. Mizrahi can be reached at 609-985-0077.

Digital Sound cont'd from page 18

Also while in Texas look for a file titled pub/mac/sound. The URL address is <http://wwwhost.ots.utexas.edu/mac/pub-mac/sound.html>. There you'll find a host of software tools for recording and playing back audio using the Mac.

Software and hardware tools are plenty in the commercial world. Most of the ones mentioned here assume that you already own an appropriate Mac or PC computer.

OSC's Deck II 2.2 and Opcode Systems' DigiTrax 1.2 turns an AV or Power Mac into a multi-track recording deck, complete with on-screen mixers and volume-level controls. Deck II can be the better program for high-end work: besides supporting more tracks than DigiTrax, it has more of the features pros need, including support for high-end digital audio boards. But DigiTrax is cleaner and more straightforward than Deck II. Systems are priced in the range of \$400 to \$1000. Like any computer based audio recording system that requires the viewer to watch different meters, palettes and design tools, two monitors may be a good approach. One of the Mac's most underutilized features is its ability to display two screens at once. Displaying two screens, which is already built into the Mac, gives the viewer the ability to work on one screen while all the palettes, design tools and other information is displayed on the other. It works flawlessly.

One of the few long time developers of audio recording and editing software and hardware is Digidesign. Check out their home page (URL address listed above). Digidesign just introduced the Pro Tools III, the latest in a series of high-end audio workstations. A combination of hardware and software, the Pro Tools III system enables NuBus-equipped Macs to record, play, and digitally process up to 16 tracks of CD-quality audio. A bit pricey at \$7990, but for a student radio or television station it is a far cry from a \$14,000 reel to reel audio tape editing deck.

Waves has released Pro Tools III-compatible updates of its highly regarded sound processing plug-in modules. These include the \$600 Q10 Parametric Equalizer, which boosts or attenuates certain frequencies to enhance a recording, and the \$800 L1 Ultramaximizer, which processes recordings to provide the highest sound quality at

a variety of sampling resolutions. Waves also shipped its new \$700 C1 Compressor/Gate, a plug-in that adjusts the dynamics of a recording to add punch and improve sound quality. The company introduced WaveShell, a \$100 program that lets you use Waves plug-ins independent of Digidesign's recording software. WaveShell, and all three Waves plug-ins, work with all Digidesign digital-signal processing (DSP) hardware, from the Audiomedia II card to the new Pro Tools III system.

If you own a copy of Adobe Premiere 3.0 or 4.0 you already own an audio mixing workstation. Premiere does work a little more slowly than some of the dedicated audio recording/editing programs, but, as software programs go, it is one of the best for audio mixing and adding effects. One of the features of Premiere is the ability to plug-in third party software. Audio plug-ins from OSC provides built-in equalization and other digital effects.

Digital Expressions has introduced a new version of its \$1895 SoftSplice digital-audio editor, a dictionary-size box containing DSP hardware that enables 4-track digital recording and playback. While other firms' DSP hardware installs in a NuBus slot, the SoftSplice connects to a Mac's SCSI port — it even works with PowerBooks. One catch: the base unit contains only digital input and output; if you need to record an analog signal (such as that coming from a microphone) you must connect the SoftSplice to a digital audio tape recorder or to Digital Expressions' \$995 digital-to-analog converter. The new version's software provides enhanced editing tools and better support for SMPTE time code.

Lastly, the technology task force

The U. S. Congress, both the House and the Senate, have created a technology task force to wrestle with what to do about copyright laws with material used over the Internet. "Cyberspace" and the proliferation of materials available for download scare copyright protectionists across the world. Every photo you download, every sound file, sound effect, graphic and other material you download and clutter your hard drive with comes with its own copyright protection. Only when the item contains the words *use freely* or *public domain* or other indication that no copyright is attached, is the work available for your use free of any copyright attach-

ments. Copyright is nothing to sneer at. People make their living with works that have their stamp of creation. Most importantly just because an item is listed on the Internet does not give you the right to take it and use it on one of your radio or TV programs. You must get clearance for its use from its creator.

To give you some idea of the severity of the problem with copyrighted works, the Working Group of the Information Infrastructure Task Force, in their September 1995 report, recommends the following:

"Consumers of copyrighted works pay for the acts of infringers; copyright owners have suggested that the price of legitimate copies of copyrighted works may be higher due to infringement losses suffered by copyright owners. The public will also have access to more copyrighted works via the National Information Infrastructure (the Net and others (sic)) if they are not vulnerable to the defeat of protection systems.

Therefore, the Working Group recommends that the Copyright Act be amended to include a new Chapter 12, which would include a provision to prohibit the importation, manufacture or distribution of any device, product or component incorporated into a device or product, or the provision of any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without authority of the copyright owner or the law, any process, treatment, mechanism or system which prevents or inhibits the violation of any of the exclusive rights under Section 106. The provision will not eliminate the risk that protection systems will be defeated, but it will reduce it."

To download a copy of the Working Group's report and recommendations look in the following WWW home page: <http://www.uspto.gov/web/ipnii>

Copyright issues are paramount in using any resource. Use the available resources via the net with caution and only if you are allowed, go buy a Mac and start using some very sophisticated sound editing hardware and software. If you use all resources wisely someday your soundtracks will be as well constructed as that of *The Usual Suspects*.

Paul A. Roselli

CreationZ Interactive Designs, Inc.

CMJ continued from page 20

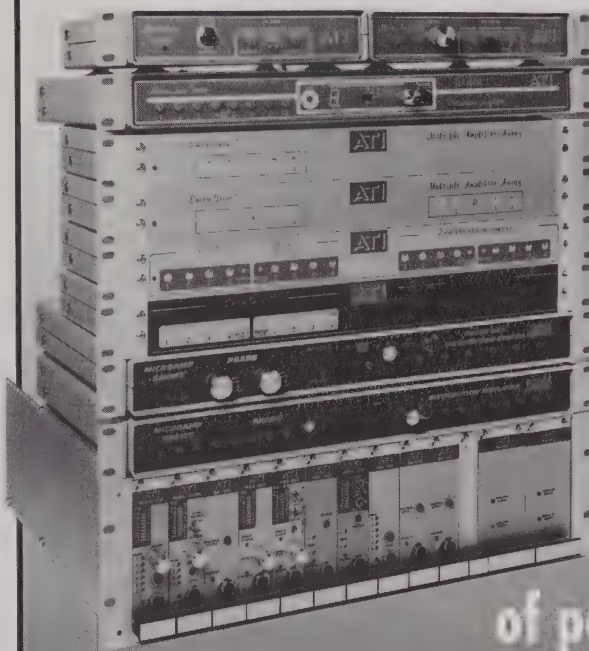
guides helped stations where he worked. Their wide distribution in music stores and alternative healing businesses, among other appropriate locations, allowed the stations to charge advertising rates that made a profit, as well as forge a good perception of the stations in their cities of license. He also recommended keeping up ongoing, direct communications with at least two key contacts in the college administration. Most of them don't know anything about your station, Vernile said. He consulted a college president in Richmond, VA, who wanted to turn over the college station license to a community public radio group and take NPR programming. By showing what value the station had as it was, they were able to stop the transfer. But "don't wait for bad times to approach the university," added Freedman. "Cultivate relations during the good times" so you can count on them when crises occur.

Glenn Gutmacher is Chairman of the Board and past Executive Director of NACB. He is currently Communication Manager of Collegiate Advantage, Inc., a Boston-based advertising/promotions agency that represents corporate marketers on college campuses nationwide.

ATI Audio DA's. The

HEIGHT

of performance.



**AUDIO
TECHNOLOGIES
INCORPORATED**

CALL OR WRITE NOW FOR FREE DETAILED BROCHURE.

378 Maple Ave.

Horseshoe, PA 19044, USA

FAX: (215) 443-0394

(215) 443-0330

Take Control of Your Channels

with Programmable Event Controllers from LEIGHTRONIX

AUTOMATED VCR AND SWITCHER CONTROL

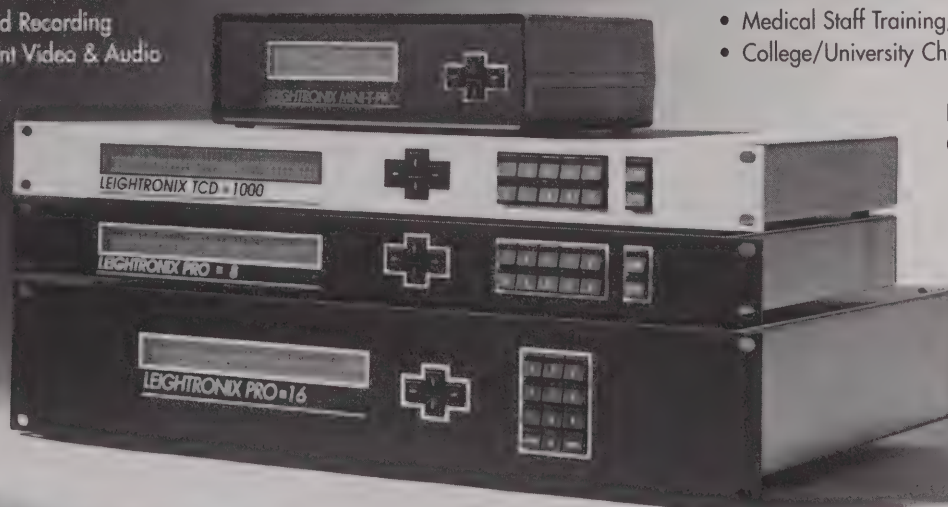
- Automated Broadcast
- Unattended Recording
- Timed Event Video & Audio Switching

CLOSED CIRCUIT TELEVISION

- Corporate Communication Networks
- Industrial/Manufacturing Plant Communications
- Medical Staff Training/Patient Education
- College/University Channels

LOCAL ORIGINATION CABLE CHANNELS

- Community Access
- Local Government
- Educational Access
- Leased Access



LEIGHTRONIX, INC.

• 2330 Jarco Drive Holt, MI 48842 • (517) 694-8000 Fax (517) 694-1600

EMPLOYMENT

Full-time bureau chief positions available in Guntersville AL, Scottsboro, AL and Fayetteville, TN. Applicants must live in town where bureau is located. Must be bright, energetic, self-motivated who enjoy covering news. Previous reporting, TV photography and supervisory experience necessary. Positions include on-camera and behind the camera work. Send confidential resumé, salary history, references and cover letter and 1/2" or 3/4" tape of best stories to: Personnel Dept., Bulletin #252, WAAY-TV, 1000 Monte Sano Blvd., Huntsville, AL 35801. EOE.

University of Oregon: Tenure-track Assistant Professor in Electronic Media. The School of Journalism and Communication seeks a new colleague in the Electronic Media sequence beginning fall 1996. The successful candidate will combine demonstrated competence in video and audio production with a commitment to teaching and service. The candidate should bring a doctoral degree and strong research

promise, and/or the capacity to provide leadership in industry through creative work, consulting and professional development activities. The ideal candidate will also contribute to instruction in visual communication, as well as one or more of the following areas: documentary, policy, theory or evolving media technologies, such as multimedia. Consideration of applications will begin November 15 and continue until the position is filled. To apply, send vita and any appropriate supporting materials, along with the names, addresses and phone numbers of three academic or professional references to: Search Committee, School of Journalism and Communication, U. of Oregon, Eugene, OR 97403-1275. An affirmative action/equal opportunity employer committed to cultural diversity and compliance with ADA.

INTERNSHIPS

ABC Radio Networks International is seeking enthusiastic interns to do to assist in all areas of operations, including program produc-

Tape Resources, Inc.**(800) 827-3462**

- Blank Video Tape
- Blank Audio Tape
- Blank Data Media

**SPECIAL
LOW
PRICING
FOR FCC
STATIONS!**

SONY**PROFESSIONAL MEDIA**

"Great prices...excellent service and friendly people! Makes my day!"
... Bill B., WNFT-TV, FL

"Small operation? Small budget? Tape Resources is the best choice to get the most for your money."
... Les A., WVT-TV, NC

"Have been using TR for years. They do it all...quickly! Quality tapes, good prices and fast service."
... Sue R., WWAY-TV, NC

"Tape Resources offers us the best of price and service...they understand service, that's why they are successful. They're friendly, supportive of the broadcast business and a great resource!"
... Carl G., WDBJ-TV, VA

The Fast & Friendly Professional Media Source

We're based in Virginia Beach, VA and ship same-day by UPS for next day delivery in most of the Mid-Atlantic. 2 days to the rest of the Eastern Seaboard. FedEx available. Orders taken till 7pm EST.

Everything Imaginable for Professional Audio

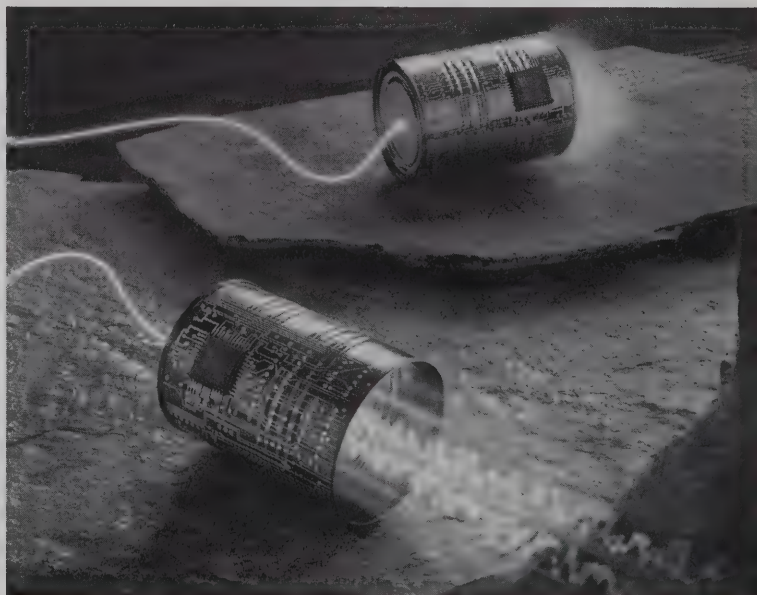
BSW offers a huge selection of equipment for virtually any professional audio or RF application from radio broadcast transmitters, to digital production equipment, to CD storage racks and everything in between. You can count on BSW to lead the way in providing the latest in technology while maintaining personal, professional service. When you need audio or RF equipment, turn to the supplier with 22 years of experience serving audio professionals around the world, Broadcast Supply Worldwide.

Equipment Solutions To Keep You Number One

BSW
BROADCAST SUPPLY WORLDWIDE

7012 27th Street West Tacoma, WA 98466 USA

Phone: 800 • 426 • 8434 Fax: 800 • 231 • 7055



tion, script editing and package distribution. Course credit necessary. Production and computer skills a plus. Bi-lingual skills not necessary, but a definite plus. Resumé to: Becky Wight, Operations Mgr., ABC Radio International, 13725 Montfort Dr., Dallas, TX 75420.

California Channel seeks a broadcast intern to assist with various aspects of daily master control operation. Communications/television major preferred; student must be able to obtain course credit. Send resumé to John Hancock, The California Channel, 1121 L St., suite 502, Sacramento, CA 95814. Phone: 916-444-9792 fax: 916-444-9812 e-mail: Calchannel@aol.com.

The Interep Radio Store offers seasonal internships to students interested in radio marketing and sales. Contact Sharon Mancini, 100 Park Ave., NY, NY 10017. 212-916-0756.

Museum of Broadcast Communications (Chicago): Gain knowledge of broadcasting's past, present and future while earning


valuable experience in the field of communications and museum administration. Semester or summer internships available to juniors and seniors in Public Relations, Programming & Production, Accounting, Archives, Finance, Office Administration, and Development. Positions unpaid. Applications accepted on an ongoing basis: 312-629-6001.

Rainbow Human Resources has openings in at a number of their cable networks, including American Movie Classics (for Marketing, Public Relations, Programming, Production, On-air promotions); Bravo (for Marketing, Sales, Public Relations, Programming, Production, Corporate Communications); News 12 (for Promotions, Assignment Desk, Production Assistant, Guest Coordinator, Reporter Assistant, Sports Production, Sports News Marketing); SportsChannel (for Public Relations, On-Air Promotions, Programming/Traffic, Sports Production). Contact Karen Parker 516-364-2222 x871

Recording Engineer Radio Announcer ON THE JOB TRAINING

IN MAJOR LOCAL RECORDING
STUDIOS/RADIO STATIONS
Part time, nights, weekends. No
experience required. Free brochure
and recording tells how.
1-800-295-4433

*NACB's engineering advisors
can be yours too!*



COMMUNICATIONS TECHNOLOGIES INC.
BROADCAST ENGINEERING CONSULTANTS
Clarence M. Beverage
Laura M. Mizrahi
P.O. Box #1130, Marlton, NJ 08053
(609) 985-0077 • FAX: (609) 985-8124

Ask your college buddies.

Your collegiate colleagues would be happy to speak with you about their BEXT experience in broadcasting. They love their BEXT transmitters, translators and STL's because our equipment performs, we back it up and our prices are surprisingly low.

BEXT

• 1045 Tenth Avenue • San Diego, CA • 619-239-8462 • FAX: 619-239-8474 • 92106

Call for a catalog, prices and user list: BEXT, Inc.

NEED THE BEST STUDENT RADIO & TV STATION LIST?

*Your reliable, direct
contact to student
electronic media is
the most complete list
available with over
2,000 stations!*

*On labels, paper or disk
at low cost, customizable.*

401-863-2225

HOW TO CHECK THE NACB LISTSERV

If you still haven't checked out **STUDENT MEDIA FORUM**, NACB's Computer Listserv Network, you should! Communication between stations is at an all-time high. It's easy to get instantaneous access to student broadcasting information and get solutions to problems from your peers. Or put in your playlists, describe new shows you've produced that are available for exchange or re-broadcast at other stations, successful promotions other stations could try, a big news story happening in your area that other stations could call you to get recorded audio about, or simply to share ideas.

Subscribing to the computer network is free to any NACB station or individual member. Just get a computer account on your school's system in order to take part in the NACB electronic discussions via the BITNET system. To subscribe, address your e-mail to:

LISTSERV@GWUVM.GWU.EDU

Your e-mail should include the following one-line command:
**Subscribe NACB yourfirstname
yourlastname.** Once the listserver acknowledges your subscription and adds you to the list, send all your e-mail to post on the NACB listserver to: **NACB@GWUVM.GWU.EDU**

**If you have any problems, call
NACB at 401-863-2225.**

NACB INTERNSHIPS

NACB's Mass Media Internship Program allows interns to take advantage of a transitional experience between college classes and professional media. NACB offers a hands-on approach to interning by assigning tasks requiring independent work and by placing the intern in a creative team environment working on member services which include a trade publication, a satellite programming distribution network, student electronic media conferences and an awards program for student producers.

Categories

Member Services Assistants to facilitate continuity of member services, Programming Assistants to support the national distribution of student productions, Publications Assistants to work on production of in-house publications, Development/Corporate Relations Assistants to generate & maintain corporate support, and Executive Assistants to facilitate activities of the Organization.

Requirements

Some experience in college radio and/or TV station operations is strongly preferred. Computer literacy (Macintosh environment), in particular database management, will be considered a definite asset.

- Applications should include a resume, cover letter and appropriate written materials.
- NACB Internships require a minimum of 10 hours per week.

Deadlines

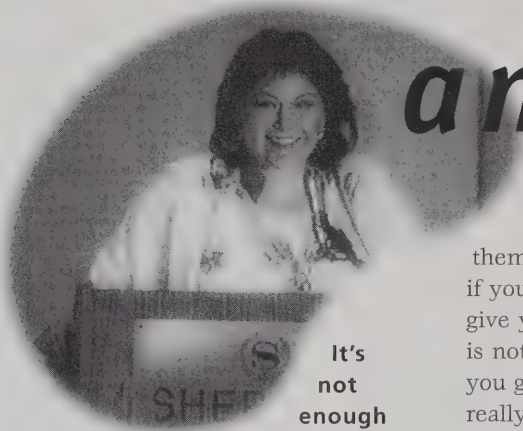
Applications are accepted on an ongoing basis at: NACB Internships, 71 George St., Providence, RI 02912-1824.

Questions

Kristine Hendrickson at 401/863-2225.

NACB IS AN EQUAL OPPORTUNITY ENVIRONMENT.

THE PURSUIT OF EXCELLENCE *and its captors*



It's
not
enough
only to
pursue excellence.

One has to capture it, control it and make it one's own. One also needs to define excellence and bring to it a definition for others. Excellence is not success, nor vice-versa, but one can certainly follow the other.

In March of this past year, NACB was honored to have Roseanne keynote our Western Regional Conference. Roseanne's success is a testament to the achievements garnered through an aggressive pursuit of excellence. Speaking and answering questions for over an hour, Roseanne covered topics about the media industry today, about the glut of talk shows, celebrity shows, etc., as well as her own struggle to produce the show that she intended, to exert control in the TV industry, and to impact media with her opinions and views on America, society and women.

Roseanne told the students and professionals in attendance: "After about 3 years, I began to do the show that I wanted to do... (The wait) was worth it because I never came into show business because of money or anything like that. I came from a political background, and I came to say something. As an artist, fighting made me stronger. And as a person with a point of view and a moral belief, fighting for that made me stronger, too."

Roseanne shared those points of view, parts of which are excerpted here.

"Real power — and it is not about power over people either, to control them or force them — real power is the power of transformation and that comes from within you. And if you know that, then you will speak out and the minute you speak your opinion you give yourself power... All that crap they give you about being rewarded for conformity is not true, it isn't true at all. You're not rewarded for conformity. The only thing that you get for conformity is the *status quo*. As soon as you step out of line, and start being really loud and un-ladylike, you, as an artist or as someone in the media, there are great rewards in it and even if the rewards are not monetary, what about your soul? ...When you're doing the kind of work that you really believe in, the money just comes — it really does. If you start out thinking that the things you're going to do are going to lead you to money, they never do. I believe you have to make a spiritual and a moral choice first, and never make a decision based on money, because then you end up in that world. Then you have to conform the next time, for the next big money. That's what I found.

"It's really hard [for young creative talent to work without compromising, without giving up control when forces abound that would suppress them] and it gets harder and harder, because everything is going more and more corporate — that's about going around like a robot and espousing some party crap that nobody believes in anyway. People tell you to find a balance between your own voice and that, but I really don't think that you can. I can't find it — the balance between saying what I really want to say with my art (that word is so horrendously pretentious), with what I do. I chose somewhere to stay on that side and stay away from the other side. I think it is Satan in a way — it strips you of everything, if you go there. All you end up of having is just thinking about money all the time. That is what is on television, just shows that do care about money. We are a society that's really hungry for a spiritual *something*, which we don't see and what we're not given in the arts and that's what the Arts are for. It's sad that we live in this real scary time. If you keep sticking to what you believe, you'll either die or you'll get better. But at least you can look at yourself. I hope you're all strong. I hope the ones who do have things to say, say them. People want to hear them... Every single show I've done that's gotten the highest ratings, the most letters, the most approval, are shows they said couldn't be done.

"[Giving opportunities to young talent] is part of what I think and feel. I did everything I did with a 9th grade education and not knowing anybody. The work I like to do, and the things that make me feel good are things I feel are empowering to other people. That's the selfish agenda part of it: it makes me feel good to do that. But the practical part that's really good is when you get these young people who haven't done television before, you get a fresher point of view and a voice that hasn't been beaten down and doesn't sound like everybody else's on TV. I would pass over 10 professional writers for one fresh young comic with an edge. I really would and have and do. It's easier to teach a comic the form of television rather than teach a TV writer how to be funny and say anything."

Listening to Roseanne speak, one is embraced by the time-honored tradition of noblesse oblige: that those with the vision, knowledge and means will share them with those striving to achieve. As Roseanne states that "Media is really about the mass unconscious," it is certain that the waves of her impact will ripple for years to come.

If you're interested in everything Roseanne had to say, copies of the full speech on tape are available for viewing only. Please contact NACB. NACB would like to thank, once again, Frederick Levy for his excellence in organizing the Western Regional.

CNN Newsource in the Classroom provides this invaluable teaching tool.



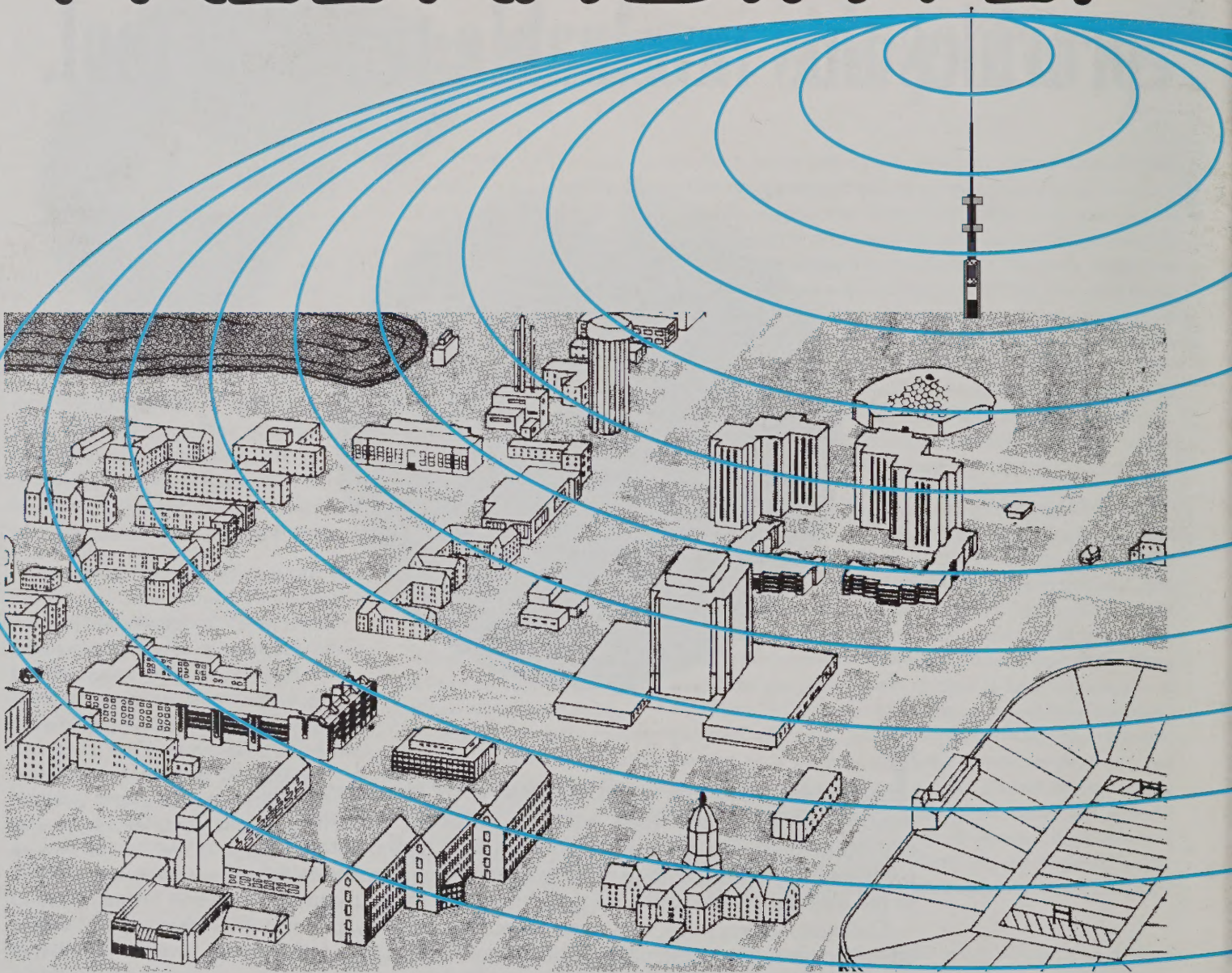
That's right, the whole world. Because CNN Newsource, the nation's premier newsfeed service, is being awarded to television journalism schools in recognition of their outstanding contributions to the teaching of broadcast journalism, and to aid in the training of our nation's future broadcast journalists.

Colleges, universities, and even secondary schools can now have access to the same daily national and international news coverage that over 380 of the nation's leading broadcast stations currently depend upon.

For more information, contact Linda Fleisher, Director of Operations and Administrative Services for CNN Television, at (404) 827-2079. It could mean the world to your students.



FREE RADIATE!



New federal rules now allow the use of an AM vertical antenna on many educational campuses.*

To help you benefit from these new regulations, Radio Systems, Inc. has developed an efficient, easy to install and operate, complete AM transmission package.

The system includes a proprietary AM antenna, antenna tuning unit, transmitter, all hardware, cable and connectors, and complete installation instructions.

Contact Radio Systems for regulations and pricing to see if a vertical antenna system is right for your station.

*FCC regulations require strict compliance with applicable part 15 regulations which prohibit radiation outside the campus grounds and interference with licensed broadcast stations. Radio Systems will provide you with complete applicable rules, restrictions, and compliance requirements.

RADIO SYSTEMS INC.

110 High Hill Road • P.O. Box 458 • Bridgeport, NJ 08014-0458 • (609)467-8000 • FAX (609) 467-3044

FISHER WAYLAND COOPER LEADER & ZARAGOZA L.L.P.

Personnel Telephone and Internet Information

Atassi Gaffney, Heidi	Attorney	202-775-3530 hgaffney@fwclz.com
Bennett, Tanya D.	Legal Assistant	202-862-3765 tbennett@fwclz.com
Berman, Barrie Debra	Attorney	202-775-3548 bberman@fwclz.com
Berman, Stephen J.	Attorney	202-429-4680 sberman@fwclz.com
Bohince, Valerie S.	Legal Assistant	202-775-5667 vbohince@fwclz.com
Capretz, Colette M.	Attorney	202-775-3532 ccapretz@fwclz.com
Clifford, Peter L.	Administrator	202-862-3772 pclifford@fwclz.com
Cooper, Grover C.	Attorney	202-775-3534 gcooper@fwclz.com
Crichton, Diane L.	Legal Assistant	202-775-5668 dcrichton@fwclz.com
Doll, Thomas M.	Legal Assistant	202-775-5669 tdoll@fwclz.com
Fisher, Ben C.	Attorney	202-775-3537 --
Fisher, Robert C.	Attorney	202-775-5664 rfisher@fwclz.com
Flannery, Tamara S.	Trademark Assistant	202-862-3771 tflannery@fwclz.com
Flick, Scott R.	Attorney	202-775-3536 sflick@fwclz.com
Ford, Ann K.	Attorney	202-775-3538 aford@fwclz.com
Galbreath, Robert L.	Attorney	202-775-3544 rgalbreath@fwclz.com
Gottfried, Barry H.	Attorney	202-775-3539 bgottfried@fwclz.com
Gracie III, Brooks B.	Attorney	202-775-5663 bgracie@fwclz.com
Greenwald, Eliot J.	Attorney	202-775-3540 egreenwald@fwclz.com
Griboff, Howard C.	Attorney	202-775-3545 hgriboff@fwclz.com
Harrington, Clifford M.	Attorney	202-775-3541 charrington@fwclz.com
Haskins, Jackie	Systems Admin.	202-862-3775 jhaskins@fwclz.com
Hawkins, Gwyn A.	Accounts Mgr.	202-775-5675 ghawkins@fwclz.com
Jacobs, Bruce D.	Attorney	202-775-3543 bjacobs@fwclz.com
Kaswell, Joel R.	Attorney	202-775-5676 jkaswell@fwclz.com
Kinner, Nancy L.	Legal Assistant	202-775-5670 nkinner@fwclz.com
Laas, Cynthia P.	Legal Assistant	202-429-4694 claas@fwclz.com
Leader, Martin R.	Attorney	202-775-5665 mleader@fwclz.com
Lindstrom, Robert H.	Legal Assistant	202-862-3779 rlindstrom@fwclz.com
Lynch Flick, Lauren	Attorney	202-775-3531 lflick@fwclz.com
Mason, Miles S.	Attorney	202-775-5661 mmason@fwclz.com
Masters, Gregory L.	Attorney	202-775-5677 gmasters@fwclz.com
Montero, Francisco R.	Attorney	202-775-5662 fmontero@fwclz.com
Oxenford, David D.	Attorney	202-775-3546 doxenford@fwclz.com
Pursley, Ricky A.	Law Librarian	202-775-5672 rpursley@fwclz.com
Richards, Glenn S.	Attorney	202-775-5678 grichards@fwclz.com
Rindner, Karen C.	Attorney	202-775-5671 krindner@fwclz.com
Roberts, Jason S.	Attorney	202-775-5673 jroberts@fwclz.com
Schmeltzer, Kathryn R.	Attorney	202-775-3547 kschmeltzer@fwclz.com
Sciarrino, Dawn M.	Attorney	202-775-5666 dsciarrino@fwclz.com
Smyth, Theresa A.	Attorney	202-775-3533 tsmyth@fwclz.com

Stern, Theodore N.	Attorney	202-775-3542 tstern@fwclz.com
Tidman, Mark H.	Attorney	202-775-5674 mtidman@fwclz.com
Walsh, Kevin M.	Attorney	202-862-3761 kwalsh@fwclz.com
Wharton, Amy A.	Info. Specialist	202-862-3767 awharton@fwclz.com
Williams, Michelle A.	Asst. Comptroller	202-862-3763 mwilliams@fwclz.com
Williams, Mickey C.	Legal Assistant	202-862-3776 mickeyw@fwclz.com
Woloshin, Douglas	Attorney	202-775-3535 dwooloshin@fwclz.com
Yung, Carroll John	Attorney	202-775-3549 cyung@fwclz.com
Zaragoza, Richard R.	Attorney	202-775-5660 dzaragoza@fwclz.com

rap092995