TABLE OF CONTENTS

OPENING CEREMONY Sunday, March 20, 1994	DIGITAL TRANSMISSION ALTERNATIVES AND APPLICATIONS FOR AUDIO David Anderson, IDB Communications
KEYNOTE ADDRESS BROADCASTING: PAST, PRESENT AND?	Group, Inc 62
Jules Cohen, Jules Cohen and Associates, P.C	DIGITAL AUDIO WORKSTATIONS AND STORAGE Sunday, March 20, 1994 71
THE "GRAND ALLIANCE"	•
HDTV SYSTEM Sunday, March 20, 1994	CONFESSIONS OF A DIGITAL AUDIO WORKSTATION USER Ty Ford, T/S/F
DATA BROADCASTING: RADIO	SAVING THE GOODS: A SURVEY OF DIGITAL
Sunday, March 20, 1994 9	STORAGE ALTERNATIVES Laura Tyson, Broadcast Supply
HIGH SPEED SUBCARRIER DATA SYSTEM (HSDS)	Worldwide
Gary Gaskill and Ken Gray, SEIKO Telecommunication Systems, Inc	A SYSTEMS APPROACH TO NON-TRANSCODED AUDIO DELIVERY: A STEP TOWARD
•	DIGITAL COMPATIBILITY
THE DEVELOPMENT AND STRATEGY OF AN FM MULTIPLEX BROADCASTING SYSTEM FOR MOBILE RECEPTION	Richard Becvar, California Digital Audio Systems, Inc
Tetsuro Miyazaki and Tadaaki Tanaka, NHK Planning Division of the Engineering	HDTV STATION ISSUES, PART I:
Administration Department and Osamu Yamada and Tadashi Isobe, NHK Science	TOWER PREPARATION, SITE SELECTION AND FACILITY PLANNING
and Technical Research Laboratories 30	Sunday, March 20, 1994 95
ISDN AND T1 TRANSMISSION	STRUCTURAL CONSIDERATIONS FOR A
Sunday, March 20, 1994	SUCCESSFUL TRANSITION TO HDTV BROADCASTING
NEW BROADCAST DECISIONS: DIGITAL	Raymond C. White, P.E., Kline Towers 97
NETWORK COSTS VERSUS REQUIRED	THE EFFECT OF CHANNEL ASSIGNMENT
BIT RATE FOR DESIRED AUDIO	ON TRANSMITTER AND RECEIVER
BANDWIDTH AND AUDIO QUALITY James M. Switzer, RE AMERICA, Inc	REQUIREMENTS FOR EQUIVALENT
James M. Switzer, HE AMERICA, IIIC 39	HDTV/NTSC COVERAGE Oded Bendov, Dielectric
SELECTING A BRI ISDN TERMINAL ADAPTER	Communications Antennas
Lynn Distler, Comrex Corporation 48	
THE GROWING IMPORTANCE OF	AN HDTV RF SYSTEM FEASIBILITY FLOWCHART
DIGITAL TRANSMISSION FOR	James Stenberg, T. Vaughan
BROADCAST APPLICATIONS	Associates
John Kelly, Intraplex, Inc 57	

ADVANCED TECHNIQUES Robert D. Weller, P.E., Hammett and Edison, Inc. Consulting Engineers	PRE-CORRECTION TECHNIQUES USED IN THE DIGITAL TRANSMITTER Vicente Polo, Dalmacio Tola and Jesus Diaz-Reganon, PESA Electronica, S.A
GRAPHICS AND NON-LINEAR EDITING Sunday, March 20, 1994	DIGITAL MODULATION FOR TELEVISION BROADCASTING Monday, March 21, 1994
DIGITAL AUDIO PROCESSING AND SYSTEMS Monday, March 21, 1994	TECHNICAL AND QUALITY ISSUES FOR EUROPEAN DIGITAL TELEVISION David Wood, European Broadcasting Union199
MAINTAINING A 100% DIGITAL PATH FROM THE STUDIO TO THE "ON AIR" RF SIGNAL Geoffrey N. Mendenhall, P.E., Harris/Allied Broadcast Division	EVALUATION OF MULTI-CARRIER TRANSMISSION SYSTEMS FOR ADVANCED TELEVISION IN NORTH AMERICA Yiyan Wu, Benoit Ledoux and Bernard Caron, Communications Research Centre 205 MULTI-CHANNEL TV DELIVERY SYSTEMS Monday, March 21, 1994
MANAGING IN BROADCAST ENGINEERING Monday, March 21, 1994	DIRECTV™—A DIGITAL MULTI-CHANNEL DISTRIBUTION SYSTEM John Hartwell, Sony Electronics Company Inc
AN INTRODUCTION TO ENVIRONMENTAL REGULATIONS AFFECTING BROADCAST FACILITIES Daniel Boone and Wendy J. Reed, Camp, Dresser, & McKee Inc	MULTI-CHANNEL BROADCASTING AUTOMATION George L. Fullerton, Louth Automation221 MULTICHANNEL TRANSPORT OF VIDEO SIGNALS IN THE TELECOMMUNICATIONS EXCHANGE
HDTV STATION ISSUES, PART II: UHF TRANSMISSION Monday, March 21, 1994	Daniel Wirth, Bell Communications Research
FULL BAND LINEARITY CORRECTION AND OTHER REQUIREMENTS FOR ATV TRANSMITTER SYSTEMS N.S. Ostroff and Mark A. Aitken, COMARK	TOWERS AND OTHER TRANSMISSION SUPPORT EQUIPMENT Monday, March 21, 1994
Communications Inc. 175	UNDERSTANDING AND PREVENTING

ANCHOR SHAFT CORROSION Craig M. Snyder, Sioux Falls Tower Specialists, Inc./Anchor Guard	BROADBAND IMPLEMENTATION OF PHYSICALLY SHORT, HIGHLY TOP-LOADED ANTI-SKYWAVE ANTENNAS Timothy Cutforth, P.E., Vir James Broadcast Engineering Consultants
CONTROLLING CORROSION ON BROADCAST TOWERS: A SUBJECT YOU CAN'T AFFORD TO BE RUSTY ON J. Cabot Goudy, Structural Systems Technology, Inc	A TUNEUP GUIDE FOR AM BROADCAST ANTENNA SYSTEMS Thomas Gary Osenkowsky, Radio Engineering Consultant
PERFORMANCE OF A TRANSMISSION LINE HAVING A RIGID OUTER CONDUCTOR AND A CORRUGATED INNER CONDUCTOR Ronald L. Tellas, Andrew Corporation	MODERN PRACTICAL TECHNIQUES FOR INSTALLATION AND REPAIR OF AM ANTENNA GROUND SYSTEMS Larry Paulausky, Greater Media WPEN/WMGK Radio
RFR UPDATE Monday, March 21, 1994	PREPARING FOR RADIO MULTICASTING AND THE R-LAN ENVIRONMENT Skip Pizzi, Broadcast Engineering Magazine
DESIGNING A SERIAL DIGITAL	
TV FACILITY	THE NEW EBS SYSTEM
Tuesday, March 22, 1994255	Tuesday, March 22, 1994317
DIGITAL VIDEO SIGNAL ANALYSIS FOR REAL-WORLD PROBLEMS Konrad Finck, Advanced Audio	USER FRIENDLY EBS Richard A. Rudman, KFWB/KTWV319
Visual Systems	ALL CHANNEL ALERT: CANADIAN EMERGENCY BROADCAST SYSTEM
THE MERGING OF COMPUTER AND	C. Patricia Lok, MeteoMedia/
VIDEO: USING ETHERNET AND SCSI FOR DIGITAL VIDEO INPUT AND OUTPUT	The Weather Network328
Stephen Kilisky, Abekas Video Systems264	TV AUTOMATION Tuesday, March 22, 1994
SERIAL DIGITAL, THE NETWORKING SOLUTION?	
Steve Haines, Quantel Ltd	DIGITAL TV TEST AND MEASUREMENT WORKSHOP
BUILDING AND OPERATING A	Tuesday, March 22, 1994335
MULTI-FORMAT ALL-DIGITAL TELEVISION PLANT	
C. Robert Paulson, AVP Communication 273	THE PURINESS OF CONTRACT
or reserve adiosit, Avr. Communication 270	THE BUSINESS OF CONTRACT ENGINEERING
AM/FM IMPROVEMENT	Tuesday, March 22, 1994337
Tuesday, March 22, 1994283	
TECHNIQUES TO EVERYD THE ASSURES	FCC-INDUSTRY TECHNICAL PANEL
TECHNIQUES TO EXTEND THE SERVICE LIFE OF HIGH POWER VACUUM TUBES Walter Johnson, Voice of America	Wednesday, March 23, 1994339
Walter Johnson, Voice of America285	

VIDEO COMPRESSION TUTORIAL Wednesday, March 23, 1994341	DIGITAL VIDEOTAPE WORKSHOP Thursday, March 24, 1994417
HDTV SYSTEM TESTING Wednesday, March 23, 1994343	RADIO TRANSMITTER MAINTENANCE WORKSHOP Thursday, March 24, 1994
HDTV FREQUENCY ALLOCATION ISSUES Wednesday, March 23, 1994	CAMERA WORKSHOP Thursday, March 24, 1994421
SPECTRUM STUDIES FOR ADVANCED TELEVISION SERVICES IN THE U.S. William R. Meintel, Datel Corp	525-LINE PROGRESSIVE SCANNING TV CAMERA WITH 16:9 ASPECT Akihiro Hori and Tadao Kurosaki, Nippon Television Network Corporation; Noriaki Wada and Shogi Nishikawa, Matsushita Electric Industrial Co. Ltd.; and Keijiro Itakura, Matsushita Electronics Corporation
DAB—I Wednesday, March 23, 1994369	SPECIAL REPORT
THE EIA DIGITAL AUDIO SUBCOMMITTEE VHF CHANNEL CHARACTERIZATION TEST Robert Culver, P.E., Lohnes and Culver Consulting Engineers	GRAND ALLIANCE HDTV SYSTEM SPECIFICATION Draft Document
DAB—II Wednesday, March 23, 1994387	COMPANY INDEX
THE AT&T DAR SYSTEM UPDATE Nikil Jayant, AT&T Bell Laboratories389	
AT&T/AMATI DAR SYSTEM: AN UPDATE John A. C. Bingham, Amati Communications	
SATELLITE AND AUXILIARY SERVICES Wednesday, March 23, 1994	
DATA BROADCASTING: TV Wednesday, March 23, 1994407	
THE SMART COMMERCIAL Mitchell Simon, General Instrument, John Houston, Mediatech	

BROADCAST ENGINEERING CONFERENCE OPENING CEREMONY

Sunday, March 20, 1994

Moderator:

Charles Dages, CBS Television Network, New York, NY

THE 1994 BROADCAST ENGINEERING CONFERENCE OPENING CEREMONY

KEYNOTE ADDRESS, BROADCASTING: PAST, PRESENT AND ?

Jules Cohen and Associates. P.C. Washington, DC