

CED

Advantage | THE P... ZINE OF B... TECHNOLOGY | www.cedmagazine.com | MARCH 2008

Who will be
cable's 2008
shining stars?

**You decide.
Nominate today!**

The 2008 Emerging Technologies Award winners will be recognized in a multitude of industry venues, including a cover feature in the March 2008 issue of CED magazine and presented with a special award during SCTE Conference on Emerging Technologies® annual awards luncheon.

Nominations deadline: November 2, 2007

It's easy to nominate: Visit www.scte.org to complete the nomination form for a deserving industry professional.

IP Innovator Award

Sponsored by  **Juniper**
NETWORKS

A member of SCTE who, as an engineer or manager, has displayed innovative achievement and creativity in the advancement and development of IP networking.

Polaris Award

Sponsored by  **CommScope**

An engineering manager at the system, MSO or vendor level who has displayed exceptional achievement and commitment to the development and/or deployment of HFC Networks. Nominees must be members of SCTE to be considered.

Star of Integrity

Sponsored by  **C-COR**

A member of the SCTE who, as an engineer or manager, has contributed to the efficiency and effectiveness of next-generation networks in delivering On Demand services.

The 2008 Emerging Technologies awards are presented by:

World Radio History

 Society of Cable
Telecommunications
Engineers

CED

Broadband **Business**

deep video library with instant access must-watch lists; accessed through second and third screens; opt-out windows that would allow viewers to change their mind about a movie within the first five to 10 minutes without paying for it; a high-quality viewing experience; and instant access to the desired title with simplicity and not all the "forced previews" of DVDs would provide a formidable service that would not only compete with best-in-class online rental companies but beat them with ultimate convenience.

Such a service could relegate the likes of Netflix and Blockbuster to mere niche players who provide deep libraries of hard-to-find titles. While this too could also be a lucrative business for some time, VOD operators need storage technology to get much better and significantly cheaper for them to cost-effectively build and maintain a 100,000-plus title library. ■

CICIORA'S CORNER

Have a comment? Contact Walt by e-mail at: wciciora@ieee.org

Continued from page 46

measure my blood pressure. It was 200-plus over 100-plus. That was the last game I watched – not worth dying over.) So when *USA Today* comes, the first thing I toss is the sports section (got to take care of my blood pressure). When the *Wall Street Journal* comes, I toss section C. And I haven't looked at those pages of fine print of stocks in years. I have my Internet connection for that. Should my newspapers be "a la carte," too?

The consumer electronics industry is pushing for regulations that would limit cable innovation by forcing cable services to be constrained to only what can work with the products they make – I should say, the lowest common denominator of the products they make, since there are very few standards. The misleading terminology of "Digital Cable Ready" has caused plenty of confusion with subscribers who thought they wouldn't need a set-top box for VOD or other interactive services. These same folks would like to halt switched digital video because it requires a set-top box or an adapter with DCR. Are our subscribers to be prevented from enjoying additional services because of these limitations? Again, I'll let you decide if these are "clowns" or "jokers," but in either case, they are unfair and dangerous.

It seems all we can do is grin and bear it and hope our Washington folks can do some good in the face of all the evil forces. Here's another line: "It's so hard to keep this smile from my face, losing control, yeah, I'm all over the place."

If watching TV kills
brain cells, chances are
we have them in stock.

Inventory. Just one of the ways **we work where you work.**

1.800.238.7514 | www.ptsupply.com | Your Supply Chain Partner



Power & Tel
BROADBAND



3M™ Dynatel™ M-ID Series Cable/Pipe And Fault Locators

You can now locate markers on two different frequencies, and path trace at the same time. Helps avoid the expense and danger of digging in the wrong place.



3M™ Scotchlok™ Butt Connectors

Specially-designed wire insulation displacement contact grasps all conductors with a firm, resilient pressure, all in one motion, with no stripping of insulation required.

3M

Middleware demystified

A New Live Webcast from CED

Sign Up Free Today!



MIDDLEWARE

LIVE WEBCAST:

Tuesday, October 2, 2007

11:00 a.m. ET; 8:00 a.m. PT

Register at www.CEDmagazine.com

Moderator:



Gary Arlen
President
Arlen Communications Inc.

Panelists:

Matt Cuson,

Vice President of Marketing,
Minerva Networks

Keith Wymbs,

Product Manager,
Motorola

David Eubanks,

Network Planner, Strategic Network Planning,
D & E Communications

The term **"middleware"** can mean different things to different people...and perhaps to different industries. Although, at its essence, middleware ensures a linkage between the application and the device's resident operating system and aims for applications that can be "written once" and deployed widely, some versions bundle in an interactive program guide, while others don't. Some are optimized for specific platforms, and others are designed to operate in a wide range of environments.

This **FREE Webcast** will cut through the clutter to apply a firm definition on middleware and provide an unbiased view of the various types of middleware, as well as their capabilities and potential shortcomings.

During this 60-minute, live event, you'll learn...

- About the role of middleware in entertainment delivery systems and the linkages that middleware forms to tie anchor services together.
- How a major broadband service provider weighed its middleware options and came to an important, final decision.
- The benefits of an extra layer of software that makes it easier for operators to adapt middleware to different hardware platforms, including digital set-tops.

Sponsored by:



MOTOROLA

Planned & Produced by:

CED

MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other marks are the property of their respective owners. © CED Magazine 2007. All rights reserved.

World Radio History

international **SPOTLIGHT**



SOUTH KOREA



By early 2007, about 29 percent of South Korea's population – 90 percent of households – subscribed to broadband services, making it the most penetrated broadband market in the world. In the late '90s, the government mandated that operators provide a 2 Mbps connection for every citizen. The government's push for ubiquitous coverage, mixed with Korea's competitive market, dense population (apartment buildings make up nearly 60 percent of housing) and computer-literate society, outlines the foundation of the country's burgeoning broadband market.

The popularity of available content, such as online gaming, has also spurred broadband growth, as well as reduced costs due to increased competition. And as of 2006, South Korea had the largest percentage of Internet users downloading videos from the Web.

South Korea's Broadband convergence Network (BcN) is expected to be completed by 2010, converging TV broadcasts, voice telecommunications and the Internet into a single network with transmission speeds of 50-100 Mbps.

Cable TV operators in the country have rivals in satellite providers, but also in Hanaro and KT, two telcos that have deployed pre-IPTV services. IPTV regulations have been delayed in the country because of a long-lasting spat between the Ministry of Information and Communication (MIC) and the Korean Broadcasting Commission (KBC) over who should regulate the new technology. Now the National Assembly is trying to introduce a regulatory framework through legislation.

What follows are some brief statistics and a peek at South Korea's major players.

South Korea broadband stats

- Population: 49.1 million
- 41.1 million mobile subs**
- 34.1 million Internet users*
- 23.1 million fixed telephone lines in service*
- 14.2 million broadband subs***
 - 5.2 million DSL subs
 - 5.1 million cable modem subs
 - 3.6 million A-LAN subs
 - 400,000 other subs

C&M

- Headquarters: Seoul
- Second-largest cable operator
- Offers cable TV, VOD and high-speed Internet services.
- 2 million cable TV subs*
 - 1.9 million analog subs
 - 84,000 digital subs
- 422,000 Internet subs*
- In August, Goldman Sachs sold its 30.5 percent share in C&M to Macquarie Bank for \$664.9 million.

Hanaro Telecom

- Headquarters: Seoul
- Second-largest telco
- Offers high-speed Internet, IPTV and telephony services.
- 540,000 hanaTV (VOD IPTV) subs***
- 3.6 million broadband subs**
 - 2 million cable modem subs
 - 956,000 A-LAN subs
 - 568,000 DSL subs
 - 77,000 FTTH subs

KT

- Headquarters: Seongnam City
- Largest telco
- Offers fixed-line, data, Internet, mobile and satellite telecom services.
- 21.3 million fixed-line subs**
- 6.5 million broadband subs***
 - 4.5 million DSL subs
 - 1.8 million A-LAN subs
 - 187,000 FTTH subs
 - 1,200 satellite Internet subs
- 30,000 MegapassTV (VOD IPTV) subs**

SK Telecom

- Headquarters: Seoul
- Largest mobile operator
- Offers mobile, wireless Internet and video telephony services.
- 20.7 million subs**
- Recently inked deal with McDonald's, enabling users to place meal orders via mobile phones.

SkyLife

- Headquarters: Seoul
- Offers digital satellite TV, as well as portable and mobile video services.
- 2 million subs**
- Launched DVB-MHP-based iTV service (SkyTouch) in 2003; currently has more than 1 million SkyTouch subs.

Tbroad

- Headquarters: Seoul
- Largest cable operator
- Offers cable TV, VOD and high-speed Internet services.
- 3 million subs*

* As of December 2006

** As of March 2007

*** As of April 2007

Source: BuddComm



Advanced Targeted Advertising

Teaching the old dog new on-demand tricks!

A New Live Webcast from CED

Sign Up Free Today!

LIVE WEBCAST:

Thursday, October 18, 2007

11:00 a.m. ET; 8:00 a.m. PT

Register at www.CEDmagazine.com

It's not just about avails anymore. On the Web, advertisers can get much better visibility into who is seeing their ads and who is actually clicking on their ads. In the process they're getting rapid feedback on which of their ads work best, and under what circumstances. Advertisers want that kind of effectiveness from their TV ads, and finally, service providers have the tools and techniques to make that happen.

Addressable advertising, interactive advertising, RFI (request for information), telescoping, and on demand advertising are all means for service providers to increase ad revenue from both local and national advertisers. New capabilities in ad splicers, video on demand servers and switched digital video can be combined with new dynamic ad decision engines to enable a powerful infrastructure for maximizing revenue while providing a better product for advertisers.

During this hour attendees will hear about...

- Infrastructure requirements and options
- How to build on success
- Realistic expectations for return on investment

Moderator:



Brian Santo
Editor
CED Magazine

Panelists to be announced

Sponsored by:



Planned & Produced by:

CED

World Radio History

NEW products

FTTx cabinet

HICKORY, N.C. — Corning Cable Systems has announced the latest addition to its cabinet offering, the OptiTect Local Convergence Cabinet, LS Series, which the company says is suited for applications involving higher density, flexibility and scalability. The new cabinet will be available in scalable sizes up to 864 fibers.

The LS Series Cabinet features a new method of splitter module loading and parking. Its jumper routing and slack storage allow FTTx providers to install cabinets quickly and easily on day one, as well as maintain fiber

organization and protection throughout the life of the network, according to Corning.

The cabinet includes “pass-through” patch panels for commercial services or customers who require dedicated fibers that bypass optical splitters. The cabinet allows for multiple feeder and distribution cables for added flexibility in network deployment. It also features a replaceable shell. If a deployed cabinet sustains exterior damage, the shell can be replaced without having to interrupt services and install a new cabinet.

The LS Series Cabinet features splitter modules

which are approximately 40 percent smaller than traditional modules, says the company, and are robust enough to meet the requirements of harsh installation environments.

Three-phase UPS

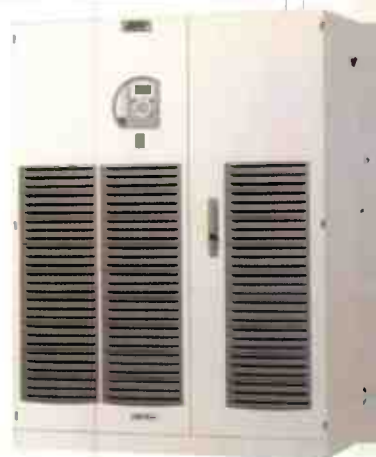
DAYTON, Ohio — Staco Energy Products Co. has unveiled its new TreStar P line of online, double-conversion, three-phase Uninterruptible Power Supplies (UPS) for critical loads. Up to eight TreStar P modules can be installed in parallel for redundancy or additional capacity. The new products feature a digital con-

trol system to eliminate all overloads, frequency variations, transients, flicker and blackouts in real time. The digital control processes signals 10-times faster than previous analog methods, according to Staco. The TreStar P is suited to protect sensitive loads like data centers, computer systems, and telecommunications systems.

The components include a user-friendly front control panel with an LCD panel.

Self-healing cable

P L E A S A N T PRAIRIE, Wis. — Honey-



Staco Energy Products' UPS

well has introduced HDMI digital cable with CURxLight technology that automatically corrects corrupted HDCP and EDID data that would otherwise degrade high-definition picture and multichannel audio performance. HDCP and EDID data becomes corrupted as a result of inconsistencies in hardware manufacturers' implementation of HDMI, or excess transmission distances, according to the company. CURxLight Technology automatically cleans the bad data to its intended dynamic range for the best picture quality. Left uncorrected, this corrupt data causes dropout of the picture or audio signal, incorrect resolution, intermittent “snow” in the picture, or a pink- or blue-hued screen. Four LEDs integrated into the cable's HDMI connector serve as self-diagnostic monitoring indicators.

Fiber optics



PLP's Coyote splice tray

Splice tray

CLEVELAND, Ohio — Preformed Line Products (PLP) has introduced the Coyote splice tray with Lite-Grip technology, which makes fiber installation and adjustment easier to manage, minimizing the potential for damage and reducing labor time and cost, according to PLP. The tray's design features Lite-Grip retention sleeves, which secure bare fiber entering the tray; splice blocks, which secure and protect fiber splices from movement and vibration; and ribbon managers, which help organize fiber bundles within fiber storage compartments.

The design of the components eliminates the need for tie wraps. They accommodate single buffer tube, multiple buffer tube and pigtail grip configurations. Soft component materials help ensure that fiber is not over compressed during installation or adjustment. The Lite-Grip splice blocks are designed to increase splice density within the splice tray, and they are available for single fusion and ribbon applications. Splice blocks for ribbon applications are also sized to accept PLC splitter devices. The splice tray is engineered to meet the challenging space requirements of newer fiber networks by permitting larger bend radii in a small package.



Building the Network of the Future Today

A New Live Webcast from CED

Sign Up Free Today!

LIVE WEBCAST:

Thursday, November 1, 2007

11:00 a.m. ET; 8:00 a.m. PT

Register at www.CEDmagazine.com

Moderator:



Mike Robuck
Senior Editor
CED Magazine

Panelists:

Eve Griliches,
Program Manager, IDC

Winston Way,
CTO and Founder, OpVista, Inc.

John Guran,
Senior Director, Network Engineering;
Northeast Ohio Division
Time Warner Cable

Cable operators are faced with a **changing landscape** in today's network environment. They need to keep up with the current slate of services, have plans in place for advanced services and be ready for the next "killer" application.

This Webcast sponsored by OpVista and hosted by CED will outline the current environment of today's networks and the requirements for networks of the future.

This live, 60-minute event, will educate you on...

- What's going on in the network today?
- What new services are driving the need for greater bandwidth and quick service delivery?
- What are the continuing pressures to reduce CAPEX and OPEX?
- Unpredictability of the next "killer" application
- Requirements for the network of the future; service types, bandwidth required, flexibility (CAPEX & OPEX containment), Options for the network of the future and tradeoffs

Registration will include a FREE white paper on the same subject

Sponsored by:

OPVISTA™

Planned & Produced by:

CED®

World Radio History

Business Showcase



Authorized JDSU
Repair/Calibration Facility
for the Western United States

New and Remanufactured
Broadband Equipment

Test Equipment
Fiber Optic Equipment
Digital Settops
Digital Headend
Power Supplies
Amplifiers
Repairs



Authorized
Stocking
Distributor for
**Scientific
Atlanta**
A CDS COMPANY
On Hand. On Demand.™

Toll Free 800.397.8897

Int'l (760) 631.2324 Fax (760) 631.1184

www.jonesbroadband.com

CEMAGAZINE.COM



Your First Answer

- 5M Dual Powered Gibraltar
- 3.7M Az-El
- 4.2M Fixed Gibraltar Az-El
- 4.5M Horizon to Horizon
- 3.8M Polar



Your Final Answer

1-608-326-8406 1-800-627-9443
www.DHSATELLITE.com

Online Broadband Equipment Auction

Purchase broadband equipment
at a fraction of the price 24/7.



It's FREE to register and for a limited time there is no buyer premium.

New, Surplus, Used and
Overstocked items added daily

Buy & Sell with Confidence
GUARANTEED

MyMyia.com

Ingress Testing
Starting at
\$695

Drop & Home
Qualification
for Today's
Advanced
Services

Sadelco® **DisplayMax®**

(800) 569-6299 sales@sadelco.com www.sadelco.com

WWW.CABLETECHNOLOGIES.COM

Cable Equipment Supplier for Over 20 Years

- | | | |
|------------------------|--------------|----------------|
| ✓ Product Repair | ✓ Modems | ✓ Cables/Cords |
| ✓ Headend | ✓ Digital | ✓ Batteries |
| ✓ Power Supplies | ✓ Converters | ✓ Remotes |
| ✓ Character Generators | ✓ Line Gear | |

Cable Technologies International, Inc.

PA 800-378-8753 * 215-672-0440 Fax
NY 518-664-7500 * 518-664-4296 Fax
sales@cabletechnologies.com

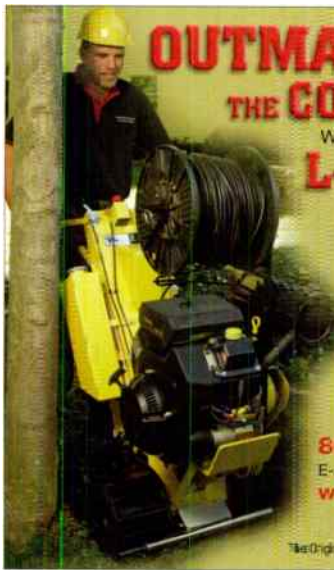
OUTMANEUVERING THE COMPETITION

WITH THE POWERFUL YET COMPACT
L-2 LINE LAYER

- Ideal for buried service drops, pulling pipe or conduit
- Super maneuverability for fast, easy installations
- Rubber tracks & reciprocating blade minimize lawn damage
- 23 HP Kohler for powerful performance in any conditions
- Boring attachment available

800-816-9621
E-mail: info@lineward.com
www.lineward.com

LINEWARD CORPORATION
The Original Since 1972




Stay ahead of the market by reading our e-mail newsletters

Subscribe for FREE at cedmagazine.com



Stop Signal Theft!

Signal theft in today's marketplace is, well, criminal. Not only is it against the law but cable service providers are experiencing lost revenue and the services provided to paying customers is degraded. That's not fair to anyone.

The solution? Establish a system to identify services that holds installers, contractors and auditors accountable for issued tags. Test, mark or re-mark drops for clear identification of services.

For solutions call, visit our website or email us at mail@budcocable.com.

Budco
WE'VE GOT **IDEAS!**
800-331-2246 | www.budcocable.com



AGC ADAMS GLOBAL COMMUNICATIONS

NCTC Platinum Vendor
We buy and sell new and used cable equipment!
We offer quality products at competitive prices with impeccable service.
(800) 451-1762 • (913) 402-4499 • fax (913) 402-4494
www.adamsglobal.com
email: cshirling@adamsglobal.com

To Advertise Contact:

Winter Thielen
973-920-7711
winter.thielen@advantagemedia.com

\$399 New 1 GHz NODE

1 GHz Amplifier Modules
with PowerMiser™ Technology
50% Less Current for Under \$299

Steven K. Richey CEO
Andrew F. Staniak CTO

See our Web Site for More details
(877) 825-6409

4Cable TV
www.4Cable.tv

PTL TEST EQUIPMENT, INC.

BUY • SELL • LEASE • TRADE
NEW & RECONDITIONED TEST EQUIPMENT

FACTORY LIST PRICE \$18,040

PTL PRICE \$9,975

HP 8591C w/ Option 107

Ph: 561.747.3647
Fax: 561.575.4635

www.PTLTEST.com
Email: PTLTE@bellsouth.net



■ Capture and Analyze RF and MPEG-2 TS From Your Digital Cable Network Via a Laptop

- Tests cable RF signal integrity via RF analyzer
- Tests transport stream integrity via TS analyzer
- Forwards captured TS over IP – UDP, Unicast, or Multicast
- Compatible with QAM and DVB-C
- Computer interface



DIVICATCH™ RF-C

For information call 858-613-1818. Or visit www.dveo.com.

SCTE Sustaining Member

Peter Froehlich & Co.
executive search

P.O. Box 339 Weatherford, TX 76086
(800) 742-4947 FAX (817) 594-1337
EMAIL: pfsearch@flash.net

All levels of Technical Positions - Corporate to Hourly. Operators and Manufacturers Call or Write. Fees Paid.

Did you miss the Job Fair?

Don't worry it will be archived until December 12th!

Be sure to check out our educational seminar

"Why Everyone Wants to Hire You – Making the Most of Being in High Demand"

Participating Companies:

Cellular Specialties Inc.
Cisco
Cox Communications
Deployment Technologies
Hargray Communications
Innovative Wireless Technologies
Mediacom
Mixed Signals
Multilink
Verizon Wireless
Nagravision
PCT International
Verisign
WooshCom
C-COR
Synacor
Comcast
Thomson
T-Mobile

Register here for FREE to find your dream job.

<http://www.cedmagazine.com/jobfair>



Sponsor:



CED
Wireless

Adindex

ADindex

ADC www.adc.com/mso	9
Advanced Media Technologies www.amt.com	13
Alcatel-Lucent www.alcatel-lucent.com	11
Arris www.arrisi.com	7
Aurora Networks www.aurora.com	60
CHD e-newsletter www.CEDmagazine.com	40
CedarPoint Communications www.cedarpoint.com	34
Comcast Media Center www.comcastmediacenter.com	37
Converse www.converse.com/billing	29
Concurrent Computer Corporation www.ccur.com	43
Corning Cable Systems www.corning.com/nosubs/ced	23
DAWNco www.DAWNco.com	25
Harmonic Inc. www.harmonicinc.com	24
Imagine Communications Inc. www.imagine-com.com	27
JDSU www.jdsu.com/test	5
Jones/NCTI www.jonesncti.com	26
MaxCell www.maxcell.us/stories	39
MoCA www.mocalliance.org	38
Motorola Broadband www.motorola.com	17
Motorola Webcast, 10/2 www.CEDmagazine.com	49
Motorola Webcast, 10/18 www.CEDmagazine.com	51
Monroe Electronics Inc. www.monroe-electronics.com	44
Multilink Inc. www.multilinkone.com	41
NCS Industries www.ncsind.com	59
Opvista Webcast www.CEDmagazine.com	53
Power & Telephone Supply Co. www.ptsupply.com	48
SCTE www.scte.org	47
Sencore www.sencore.com	15
Trilithic Inc. www.trilithic.com	2
TVC Communications LLC www.tvcin.com	35
Tulsat Corporation www.tulsat.com	33
Vecima Networks www.vecimanetworks.com	28
Vyvo www.vyvo.com	19
Vyvo Webcast www.CEDmagazine.com	45

COMPANYlist

ACA	10, 34
Alpheus Communications	16
Arris	6
AT&T	16
Atlas on-Demand	21
BigBand Networks	6, 34
Black Arrow	44
Bright House Networks	10, 16
BroadLogic	34
C&M	50
CableLabs	8, 36
Cablevision Systems Corp.	6, 10, 14, 32
CAIW	14
C-Cor	21
Changhong	14
Charter Business	16
Charter Communications	8, 21, 31
Cisco	22, 34
Claritas	24
Cogent Communications Inc.	16
Comcast	6, 21, 42
Comcast Business	16
Comcast Spotlight	21
Concurrent	22
Connected Home Research Group	14
Corning Cable Systems	52
Cox Business	16
Cox Communications	6, 10, 24
CT Communications	16
Digeo	42
DirecTV	14, 16, 18, 58
Dish Network	18
DTLA	8
DVN	14
EchoStar	58
Everstream	22
FiberTower	16
GoBackTV	12
Gospell	14
Hanaro Telecom	50
Harmonic	14, 22
Honeywell	52
Huawei	14
ICTV	28
Imagine Communications	32
IMS Research	14
Insight Communications	14
Intelsat North America	58
J.D. Power and Associates	16
Jiuzhou	14
KT	50
Level 3 Communications	16
LG Electronics	8
MoCA	14
Motorola	6, 12, 14, 22, 28, 34, 38
NCTA	8, 10, 31
NDS	12
Netflix	44
News Corp.	12
Optimum Lightpath	16
Pace Micro Technology Americas	36
Panasonic	8
Paramount Pictures	8
Pegasus Development DBS Corp.	58
Philips Consumer Electronics	14
Preformed Line Products	52
Qwest	12, 16
RCN	16
Rentrak OnDemand Essentials	22, 44
RHI Entertainment	10
Samsung	8
Scientific Atlanta	6, 12, 14, 21, 38
SCTE	26
SeaChange International	21, 42
Sedna Services	42
SK Telecom	50
SkyLife	50
Skyworth	14
Sony Pictures Entertainment	8
Sprint	16
Sprint Telecom	16
Staco Energy Products Co.	52
Suddenlink Communications	16
Sunflower Broadband	21
SureWest	16
Tandberg Television	8, 21
Tbroad	50
The Nielsen Company	16
The Walt Disney Company	8
Thomson	10, 14
Time Warner Cable	6, 8, 10, 16
Time Warner Telecom	16
TiVo	6, 8
TVN	21
Verimatrix	12
Verizon Business	16
Vertical Systems Group	16
Vyvo	32
Warner Bros.	8
WOW!	16
XO Communications	16

DBS update

Over the past few years I've provided updates on the new DBS frequency band, and what the FCC was doing (or not doing) to implement new services. It's a saga that could have been written by the Slowskys (www.theslowskys.com/home/).

In 1992, the International Telecommunications Union adopted an additional frequency allocation for broadcast satellite service in North and South America. The 17.3-17.8 GHz band would be the downlink broadcasting frequency, and 24.75-25.25 GHz would be the uplink (or "feeder link") band. In 2000, the FCC adopted this allocation into the U.S. frequency table, except that only the 17.3-17.7 GHz band was allocated for downlink broadcasting; the 17.7-17.8 GHz slice was already heavily used for point-to-point microwave links and the FCC decided that sharing would be difficult.

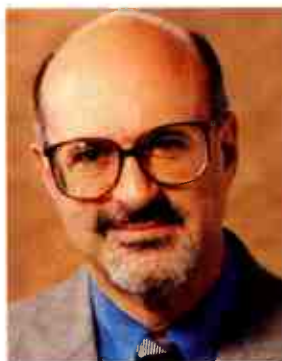
But then the FCC had to confront another sharing problem. The 17 GHz frequencies were long ago allocated as uplink feeder link frequencies for the 12 GHz DBS band, and DirecTV, EchoStar and other satellite operators have uplink earth stations at 15 to 20 locations in the U.S. Those high-power uplink signals would leak into any nearby home earth station receivers and cause interference. This use of "reverse band" operations was unprecedented, and the FCC still has not figured out how to deal with it.

Meanwhile, four companies had filed satellite applications at the FCC to use the new frequency band, even though the FCC had no rules in place to deal with interference issues, licensee eligibility, applications processing, or anything else. These four are EchoStar, DirecTV, Intelsat North America and Pegasus Development DBS Corp.

So in June 2006 the FCC issued a Notice of Proposed Rulemaking, proposing a variety of rules and asking questions in particular about the interference issues. I wrote about that in my August 2006 column (www.cedmagazine.com/article.aspx?id=67672).

The FCC recently adopted a number of policies for the new band, but the interference issues are far from resolved. Among the recent decisions was four degree orbital spacing for the satellites (compared with nine degrees for the existing DBS service). That should support service to dish receivers as small as 45 centimeters. The FCC defined 35 orbital slots that start at 43 degrees West Longitude (over Brazil, and way to the east of any point in North America) and continue to 179 degrees WL (over Fiji and the Marshall Islands, and way to the west of Honolulu). So some of the orbital slots are much more desirable than others.

The FCC had previously received 20 satellite applications from the four companies, but



By Jeffrey Krauss

*President of
Telecommunications and
Technology Policy
jkrauss@krauss.ws*

The FCC recently adopted a number of policies for the new band, but the interference issues are far from resolved

some of them conflicted with one another because they proposed the same orbital slot. So the FCC gave the four applicants time to amend their applications, and decided to allow (eventually) additional applications on a first-come, first-served basis. But for now, there is a filing freeze on new applications until the existing applications are amended. So the existing operators – EchoStar and DirecTV – are assured access to this new band, and they will get the best orbital locations. And maybe Pegasus and Intelsat will simply lease capacity to EchoStar and DirecTV rather than competing with them.

The FCC resolved some of the interference issues, by adopting uplink and downlink power limits and antenna patterns, using traditional approaches. But the question of interference from existing 17 GHz DBS feeder link stations into new 17 GHz DBS home receivers is still up in the air, so to speak. It seems likely that all existing DBS feeder link earth stations will be grandfathered, and operators will be allowed to construct new stations at or near existing sites. Nearby DBS home receivers will simply have to accept any interference.

The tougher question is the deployment of new 17 GHz feeder link stations. As new satellites are designed with more spot beam capability, and as EchoStar and DirecTV try to carry local broadcast signals from additional cities, it seems likely they will want to build more feeder link earth stations. What happens if they want to build a new station say 10 years from now, in an area where there are some 17 GHz DBS home receivers?

So the FCC has released a Further Notice of Proposed Rulemaking on these and other interference issues. Based on past performance, we'll get an answer from the FCC in about a year.

Meanwhile, EchoStar, DirecTV, Intelsat and Pegasus will pick the best orbital slots. The FCC will eventually start to accept additional applications, and later on maybe there will be some new DBS operators to compete with EchoStar and DirecTV.

That will be about the time the Slowskys mutate into tortoises with long sinewy legs, able to run the four-minute mile.

How to Get The System-Critical Network Components You Need, When You Need Them.

A Helpful Reminder from NCS

When other providers don't have the CATV equipment you need now, call NCS.

NCS is a factory-authorized Distributor of Motorola broadband components, with the largest, multi-branded, On Hand, On Demand™ inventory of headend, RF and optoelectric equipment in the industry.

NCS is dedicated to providing the products, technical repair, and fast responsive service you can depend on.

So, the next time other providers say "no," count on NCS to say "yes."



- New and refurbished equipment
- Hardware
- Distribution
- Head End
- Test Equipment
- Converter Boxes
- Cable Modems
- Connectors

Call NCS Industries
800-523-2342

375 Ivyland Road, Warminster, PA 18974
www.ncsind.com • fred@ncsind.com



Motorola BSR 1000



Motorola BLE



**Motorola SG1 & 2
Optical Nodes**



Motorola DSR 4500X



**Motorola Taps
& Line Gear**



**ADDvantage
Technologies Group**

Tulsa NCS Industries ComTech Services Tulsa-Atlanta
Tulsa-Texas Tulsa-Nebraska ComTech Services-Indiana
Jones Broadband Broadband Remarketing International

Aurora's Business Services Solutions

Now you can seize the revenue

Aurora's cutting-edge solutions enable reliable, protocol transparent delivery of business services over existing residential network fibers, dark fibers or WLAN.

Integrated Fiber on Demandsm Platform

- Fast Ethernet embedded over digital return/DWDM/CWDM
- TDM-based for best possible VoIP performance
- Integrated network monitoring
- Scales to 16 customers per wavelength (640 ports per fiber pair)

SMART CWDM Ethernet Access System

- Fast Ethernet and Gigabit Ethernet over CWDM wavelengths
- Dedicated wavelength per business customer
- Fully managed solution
- Field hardened passives

802.11 Wireless Access Platforms

- Rapidly deploy hotspot service, hot zones, P2P or metro-meshed wireless solutions
- Backhaul via environmentally hardened power gateways with integrated RF DOCSIS cable modem or CWDM fiber tranceiver
- Network-powered for maximum reliability and cost effectiveness
- PoE capable outdoor rated 2.4 GHz radio, back office solutions, antenna's and outdoor rated cables



A whole new light, growing brighter!

www.aurora.com | 408.235.7000