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Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website. We've had over 26,740 different visitors since we started the website on July 1st, 2000. .

Thanks to our regulars and welcome to the new folks.
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Editor's Comments

This supplement to our regular edition is very timely. It is reprinted with the permission of Advanced Television Publishing – HDTV Magazine. The information is very germane to where we're at in the transition. HDTV Magazine's audience isn't necessarily the technical or marketing folks we normally reach. It is important that our readers know this side of the business too.

Feel free to send your comments to both Tech-Notes and to HDTV Magazine. Their website is: www.ilovehdtv.com The following is copyrighted material.) Copyright 2003 - All commercial rights reserved.)

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Tech-Notes #114 – our regular edition, will be published sometime this weekend.

Features



Subject: Observations on HDTV

By Dale Cripps, Publisher, HDTV Magazine hdtvmagazine@ilovehdtv.com

Today's (February 20, 2003) Hollywood Reporter said that News Corp.'s president and chief operating officer, Peter Charmin, was "brimming with excitement" from the stupendous ratings the final episode of "Joe Millionaire" received and also because 30 million people watched at least some portion of Fox Sports' Daytona 500 coverage Sunday afternoon. Add to their crowing achievements "The Simpsons," who delivered the highest audience in five years with their 300th episode, and you see why celebration corks are flying.

But Fox has not one hour of HDTV programming in its weekly lineup. This is a network that places no value on HDTV as an asset for its broadcast future. Those rating numbers have nothing to do with HDTV. Why bring this up then? A reminder that some people don't need us yet. For HDTV to succeed we have to be in those numbers of TV households which make network executives appreciate us and by winning us over makes them brim with excitement. That is our work--getting to there. Our ranks will have to greatly swell before we get first rate attention. But prior to anything we need to know about how we can cause that. It is not our duty alone, but it is part of our duty if we see this transition as having a national benefit. We know that the market is trotting along fairly well now without us doing much of anything, It is nearly on automatic pilot and no matter how badly its programmed, it's still flying, though imperfectly. It will run aground at some point. By being prepared we can break it lose again. If not, we will say, "Oh,gee, it's all failing, Damn it anyway."

Next item...

This email is from Middle America--the heartland--where HDTV must take hold. Look at the trouble this man has gone to and still not getting the HDTV formatted programs which are being produced but he doesn't have. Like food in the starving sectors of Africa all shortages are a distribution "problem" for the most part. I know this is an all-too-familiar story. Likely you could have written it. How are the hearts of Mr. and Mrs. middle America going to be won to HDTV under these conditions?

Dear HDTV Magazine,

I have recently started receiving HDTV over my local cable system (Insight Communications). I only get HBO, Showtime, PBS, and WHAS (my local ABC affiliate). I am writing you for a little advice on some local lobbying I have been trying to do. First, let me tell you how I got to where I am with this quest.

I live in Shelbyville, Kentucky, which is just east of Louisville. Like most people in this area, I am a diehard fan of college basketball. Most of the high profile games that the University of Kentucky plays wind up on CBS's college basketball programming. I am desperately wanting to get a HDTV feed of CBS. I was about to concede that all I could do was wait until my local CBS affiliate (WLKY) got their act together when I heard that one of Kentucky's game would be broadcast in HDTV as a feed from CBS in the Lexington market (WKYT). I just about lost it over this one! They were telling me that Lexington has a CBS affiliate passing on HDTV from CBS and Louisville does not? Louisville is a much larger city than Lexington.

I could not believe it. I immediately went to WLKY's web site and sent a nice letter asking why they were slow in getting their station setup to pass along CBS's HDTV content while a much smaller market station (WKYT) was already up and going. I also asked if there was any information that they could give me that laid out a schedule for when they would be up and running. The FCC web site says they were already scheduled to be up and going.

No response. I decided to ask their owner, Hearst-Argyle Television, Inc. I went to their web site and sent a nice letter asking when WLKY would be up and running and if they thought it was appropriate that my inquiry went unanswered.

No response. Is this normal behavior in this arena? I thought I would try another approach. I sent an e-mail to the ABC affiliate (WHAS) that is broadcasting in HDTV and asked them why they were not "blowing their own horn" as loudly as possible - telling everyone they were the only local network affiliated station broadcasting in HDTV in the Louisville area. I even suggested that maybe as a way to gain market share they should consider running a news story investigating why the other stations are ignoring FCC deadlines, not spending the money they are supposed to be, and continuing to give the local consumer the shaft on the next generation of television.

No response. Sorry it took so long to get here, but I have 2 questions that I need to ask.

1) Has there been any discussion on the ability of consumers to take a broadened interpretation of the "must-carry" law that the cable companies must abide by to include HD? In other words, is there any chance of a position being taken that says my local cable company must pass along HDTV material from my local

channels as they get up and running with it? I know they must pass along their regular programming.

More importantly is the next question.

2) Has anyone thought of using the lack of a network affiliate broadcasting in HDTV in their area as a lobbying point to get a cable system to provide another affiliate of the same network's feed? I understand that if you live in a remote area today and can not receive a CBS station over the air, that a satellite company can then legally provide you with CBS programming from another affiliate. The logic being "I can not receive CBS HDTV over the air today so I should be able to get my cable company to provide me a CBS HDTV feed from another area's station".

Has anyone tried this approach? Insight Communications is the cable provider for both the Louisville and Lexington areas so I know it would be easy for them to send everyone that is now getting HDTV the CBS feed from WKYT in Lexington. Any advice you could offer would be greatly appreciated.

Thanks,

Brian Yount

Shelbyville, KY 40065

Why did I print this particular letter? Let me encourage you to read the following interview with Nat Ostroff. You will find insights into the local broadcasting businesses which will help you understand what Mr. Yount has to do to get his programming, and what we can do to help the broadcasters serve us all. It's not the whole story, but it's one piece of a very large puzzle. We have to put that together before we can be truly effective lobbyist for our own cause. When we are effective, we are the answer to the prayers of both set makers and signal providers.

I have been doing a lot of thinking about how I can help our readers be more effective in getting their voices heard. It always comes back to the same thing: EDUCATION. The reason a voice is not listened to is that it has error in what it says. We have to eliminate error in what it is we are talking about. We have to know in this age Peter Drucker calls the "Knowledge Age" a great deal more about how these television businesses operate and become familiar with the leading positions taken by the various spokespersons. We need to take only knowledgeable positions which are not glaring examples of half-educated guessing. Anything less and we are just dust in the wind to this transition. That is why the TIPS List is important and the HDTV forum. People are really learning in those forums, especially when supported with some authority.

In the spirit of delivering some of this education I am going to provide you with a glimpse into the mind of a controversial broadcaster. Nat Orts manages the technical side of 62 TV stations for Sinclair Broadcast Group. In due course I will interview all of the

key players in every sector of the signal providing business until we know what we are talking about when we do come face to face with our sources of supply. We will have to swell up our ranks too before the likes of Mr. Charmin (from Fox) will be "brimming with excitement." over us. Remember, unlike color HDTV is NOT compatible. That makes for a huge and more difficult difference. This transition, while it resembles the color movement, is more like radio--different beasts altogether. We must not forget that there is only one window of opportunity in our lifetime in which to secure HDTV as a widely accepted service. We are still less than 2.5% penetration and the window is wide open. We are only partially through this window and it could shut on us in a heartbeat to no loss of the likes of Mr. Charmin. The loss would be all ours.

HDTV INTERVIEW

Nat Ostroff

SINCLAIR BROADCAST GROUP

"The over-the-air aspect of broadcasting is fading into history"

It would be wonderful if we only had glowing reports to write--an abundance of announcements heralding new programs, dozens of programmers jumping in...and Saddam Hussien sitting cherubically under a Bohdi tree studying ponderables from Omar Khayyam instead of those "Bedtime Stories" by Stalin. But life is not so perfect so you will excuse me if some less than glowing reports should stain these pages. Does it mean I went negative? Hardly. My 20 years with a unwavering (if not sometimes trembling) hand on the tiller should always tell you differently. I just want us to know what the issues are--positive and negative--and then to shed light on things we may have to do to rectify those extremes which give birth to our discontent.

In short, I interviewed Nat Ostroff of Sinclair Broadcast Group. I have been a tad reluctant to publish this interview. Why? Ostroff is the same man who first raised to national prominence the issue about the ATSC 8-VSB DTV standard being a little wacky. That question caused a lot of pain to some people, me included. Not just a few were displeased when I published the first interview Mr. Ostroff had given on the subject back in 1999. That was when the controversy was just starting to boil. I took some heat for providing Sinclair a forum to "exploit" such an unpopular view as he was proffering--that the 8-VSB part of the ATSC standard didn't work very well. It was then unthinkable to do anything but support the standard.

It was also obvious that others were already on the scent of this story. I would at least bring my background to the questions and, hopefully, in my bumbling way crack the weakness in the arguments being put forward. I traveled to the Baltimore facility of Sinclair to witness their "test" of the first generation 8-VSB consumer decoder. The "test" indicated that 8-VSB would not work in some places where NTSC reception did. That wasn't how it was supposed to be. Many within the industry leapt to their feet to say that Sinclair had not performed "tests" in any scientific sense but rather did a carefully crafted demonstration designed to make a point Sinclair wanted made. What point would that be? Critics said, "Sinclair wants to delay the transition for five years while they scrape up the money for their stations later. Sinclair was dismissed by CEA and others as a rascal in a playground who didn't have their own lunch money and so were grouching. Such talk rankled David Smith, Sinclair's principal stockholder and president. "Not true!" he declared emphatically.

Zenith was first to charge Sinclair with technical skullduggery. "All of what Sinclair did should be discounted, if not discredited and dismissed." It was all rubbish. They had a point too. There was little science involved in these demonstrations but, still, all observers--and there were many--saw that ghosts confused the decoder and it would not work for you as a consumer even when in the strongest signal zones. Other group broadcasters said to me that trouble was certainly brewing. Others, to be sure, expressed an undying faith that 8-VSB was not only fine, but would get better and better and that Ostroff had put his finger only on a first generation glitch. It meant nothing in the long run.

All of this controversy burst on the scene just at the ATSC was trying to peddle the US standard to other parts of the world. The Europeans had also developed, and standardized another digital system called COFDM. They were seeking global domination with that standard. They had hundreds of companies and many nations supporting it while we had a house in a big divided trying to market 8-VSB to Brazil, Japan, and China. It was a sad case. COFDM fans claimed superiority over 8-VSB. I won't go into the depth of arguments here other than to say that 8-VSB had usually shown itself better in reaching further distances using a given power but it had questionable capacity to deal with dynamic ghosting that buildings and mountains can cause. COFDM seemed to eat those ghosts for lunch. Demonstrations in both Europe and the U.S. had more than a few engineers convinced that COFDM was superior, at least for mobile applications. But that was not good for HDTV. The payload would be too small when using COFDM 6 Mhz spectrum for mobile applications. Those advocating HDTV leapt to the defense of 8-VSB and denounced mobile ideas as being as odd as Michael Jackson's latest press clippings...and nose.

Ostroff petitioned the FCC to accept both 8-VSB and COFDM in the same box, a solution I had suggested on our first meeting in Las Vegas in 1999. Experts sprang up and jabbed fingers in the air saying that doing that would be catastrophic because it would add five years to the transition. It was just unthinkable. Those waiting impatiently for analog spectrum would not sit still for it either. You could depend on them to raise hell.

Retailers and manufacturers realized that the introduction of any modified standard would take testing and lots of FCC work to certify it. What would they do in the meantime with billions dollars sunk into HDTV tooling and inventory? The industry rallied behind the NAB and financed a new comparative test (both COFDM and 8-VSB) using the services of another Washington technical association, MST, and from those results declared that Sinclair's concerns were, for the most part, baseless. Good science had prevailed and the world got what it wanted--an answer that said 8-VSB was good for the US. But those test were blurred by controversy too. The stomach to continue with the argument trailed off and patience had run out. It was decided by enough that to hell with any more controversy and "let's just get on with it. It's good enough in most cases, and maybe superior in some." The FCC had solicited commentary and concluded from the responses, much lobbying, and their own tinkering that no change should be made to the original decision. The 8-VSB would be the US standard for over-the-air transmission.

The Advanced Television System Committee (ATSC) shortly thereafter initiated studies to make 8-VSB better. While not exactly a response to the ATSC work a distinctive design for ghost-handling appeared at the last National Association of Broadcaster's convention in April. The new approach (only in software) worked remarkably well in a highly complicated transmission environment. Ostroff was present and said to me at that time that if the system (dubbed "Casper" because it is friendly to ghosts) were to work in the real world as effectively as it did in the Convention Center demonstration under horrendous transmission conditions then H/DTV was off to the races.

A new broadcast technology center was recently formed with \$\$\$ from the National Association of Broadcasters and others. The aim of this lab is similar to that of Cable Labs -- keep the technical destiny in the hands of broadcasters and not their vendors. One of the first orders of business, I am told, is to work on 8-VSB. All of these efforts to improve 8-VSB have reluctantly granted some respectability to Ostroff's first findings, though Ostroff himself remains tarred and feathered by those wishing he had just remained silent in the first place.

That is not Ostroff's nature. When Gary Shapiro made a comment in these pages that Sinclair had single-handedly done more to delay the broadcast transition than had anyone Ostroff was angered and contacted me for an opportunity to set the record straight.

It would be ingenuous of me to not publish anything that contains a potential impact upon any part of the DTV transition. Do we give space to anyone who is just grouchy, underhanded, or mean-spirited against God, motherhood, and HDTV? No, of course not. Do we provide the stone wheel for another's ax grinding? Not at all, This is a more serious endeavor than that. But anything that has the potential to shape any part of the outcome of HDTV has to be given its due.

With 62 TV stations under his technical charge Nat Ostroff is hardly an outsider nor merely a miscreant shooting from the hip from total ignorance. Does he have an agenda? Who still alive doesn't? This is a man who has been involved with broadcasting for many,

many years. He is a senior member of the engineering community and not easily led astray by irrelevant considerations nor is he without skills and knowledge needed for dealing in the slippery world of techno-politics, which, in the end, rules all. But why publish his views now? Are they new and different than before? The answer is yes. He now approaches things from a more mature perspective and from one who is reconciled as much as he can be to the U.S. standard and deeply invested in it. Now his chief need is to make the best of his company's \$100 million dollars worth of digital transmission equipment. He is as much a stakeholder in the DTV transition as can be any, and so I present to you Mr, Nat Ostroff., Vice President of Technology for Sinclair Broadcast Group.

HDTV Magazine: At this year's CES the president of Sony said that television is back on center stage.

Ostroff: I am an over-the-air broadcaster. I am not a cable programmer, although my signal is on the cable systems. The great tragedy of what has happened is that free over-the-air television is not only been marginalized, but it has been taken off the table as far any real consideration by the equipment manufactures is concerned. They just don't care.

HDTV Magazine: Is that a posturing?

Ostroff: No, it is real. They discovered at the same time Sinclair discovered that 8-VSB doesn't work for over-the-air Broadcasting. Now FOX has admitted it. There is \$2 million dollars coming from CEA and from the NAB that is being spent for improvements (in 8-VSB). They all are admitting that they have to improve the performance of 8-VSB for over-the-air broadcasting. The consumer guys knew it! They were not going to put out product in the marketplace that was going to bounce back because people could not get pictures. So, they sat on their hands and they punched out 25 million analog sets while they waited. Finally, the cable guys are beginning to crank out some HDTV programming (Showtime, HBO, Discovery) and they are picking up a couple broadcast signals to put out on the cable, and all of a sudden "television is back." It is only back because the cable guys are putting HDTV out and the consumer guys knew all along that they could not sell consumer products to an over-the-air audience...because it didn't work. That jab that came from Gary Shapiro...It was such a cheap shot. It is covering up the real strategy of CEA, which is that "we are not going to build digital products and promote them until we can deliver until we can deliver pictures to the living room, and we can't deliver those pictures with 8-VSB, and now we don't care."

HDTV Magazine: I don't think that Zenith shares that view with you.

NO. Come on Dale. You are looking at hundreds of millions of dollars in patent rights!

HDTV Magazine: Yes, but they have invested a great deal of money to insure that it works and it would seem to me that you would make a better allies than you would an enemy.

Ostroff: That is not going to happen. They hate our guts because we called them out for what they were three years ago when they made statements that were not true. Now, the statements they made three years ago may have some grain of truth in them today. But they made them three years ago, and they were wrong. They were doing it to fight the idea that there be a dual standard--COFDM and 8-VSB. If COFDM got into this country 8-VSB would fade out in six months. They would be gone in 8 months. I think Lucky Goldstar (Korean owner of Zenith) estimated that the patent rights over the next ten years to Lucky Goldstar was \$800 million (source--Korean publication). So, anything that Zenith says is tainted by that enormous windfall of royalties.

HDTV Magazine: Yes, but those wind falls don't occur until the system works and people are buying it.

Let's get down to basics. What is the general health of broadcasting, at least from the people whom you know?

Ostroff: It is not healthy.

HDTV Magazine: Is it on life support?

Ostroff: No, it is not, but it has some serious health problems. None of them are life-threatening. They certainly are profit and value-of-property threatening.

HDTV Magazine: In a healthy climate broadcasters are able to developed new and original programming. Is that one of the things now grown unhealthy?

Ostroff: Broadcasters have discovered a couple of things. One is that localism is their mantra. News is an enormously profitable segment of their broadcast day, and they are concentrating on that. The reason why I say that broadcasting is not healthy is because we have, to a great extent, lost our franchise--the ubiquity of delivery that is independent of other sources, i.e, free-over-the air. We have become increasingly dependant upon cable carriage to bring out signal to our audience. The cable has the absolute authority and ability to position the broadcaster in their offerings in any fashion they so choose. As a result some broadcast stations are being lost on the cable offering. The over-the-air aspect of broadcasting is fading into history. I think that is a very sad event and one which broadcasters themselves don't seem to realize.

HDTV Magazine: Isn't this cyclic? On some days this scenario seems dominant and on better days it looks great?

Ostroff: No, it never looks great. It goes up and down like the stock market but if you draw a trend line through it, it doesn't have a positive slope. We are losing viewers. We are losing advertising revenue. Yes, some days its up, some days its down. But the trend line is negative. I attribute that to the fact that broadcasters have not concentrated and taken advantage of their over-the-air franchise and in a sense have become captured by the ease of delivery by cable.

HDTV Magazine: Are you suggesting this is a technical problem more than programming problem?

Ostroff: We are talking here about the analog side.

HDTV Magazine: Yes, I understand. But if cable is doing better what is broadcasting not doing better at?

Ostroff: When you boil it down to the essence of it the only revenue stream broadcasters get is advertising. The cable industry has not only created a subscriber revenue stream but they are now selling advertising against the broadcast stations.

HDTV Magazine: They have never been very effective at that.

Ostroff: They are getting better at it all the time. Broadcasters have acquiesced to allow the cable systems to carry their signals free of charge. Therefore, the broadcaster has no compensation for its signals whatsoever even though many people believe that if the local broadcast signal was not on the cable system, the cable system could not have the subscriber base it has today.

HDTV Magazine: That is a widely held view. Why don't they go "on strike?"

Ostroff: Broadcasting is made up of hundreds and hundreds of diverse interests. Many of the broadcast stations are owned by groups who have cable interests. Look at ABC. ABC screwed the broadcast industry when the last attempt was made to get compensation for our signal. ABC broke ranks and made a deal with the major cable carriers that in exchange for the ABC network signals the cable companies would carry the ABC cable channels--ESPN, ESPN2, etc. So, the big players have much larger interests than insuring that their over-the-air signals are compensated by cable.

Now, the reason for this discussion is leading to DTV.

HDTV Magazine: If DTV worked perfectly would it help you or hurt you?

Ostroff: If DTV worked as it was originally promised, i.e., that it is as easy to receive as today's analog signal, there are a plethora of applications that broadcasters could be using to generate revenue to support their investments.

HDTV Magazine: How far away are you from seeing that optimal condition?

Ostroff: It's not going to happen because the technology that we are stuck with leads us all to the cable system. There is no reliable nor reasonable reception of DTV off-the-air for many, many viewers. Of course there are always the viewers who can get it, but for an over-the-air service that might offer a mobile or portable element, the technology cannot

support it. So, we are driven to the cable industry. That is where we have to go. The cable industry is going to deliver our signals.

Now, the point to me is very simple. We gave away our analog signals because we had a very handsome revenue stream from advertising and the cable company was bringing us viewers and the argument was that the quid pro quo for analog was that "we (cable) are bringing you eyes and you are making it on advertising." That same quid pro quo does not exist for digital. In this case the broadcasters have invested hundreds and hundreds of millions of dollars to build an over-the-air delivery service that no one is watching and no advertisers are paying for that delivery service. The cable company is using the HDTV signals from our transmitters to entice their subscribers to buy into their digital tier. The broadcasters, must, if they are going to survive, be compensated for their HDTV signal that is carried on cable.

HDTV Magazine: That makes a great deal of sense. I do think that our public is pleased enough with HDTV to pay a bit for that premium quality.

Ostroff: It is pay tier now, Dale.

HDTV Magazine: I mean, and passed on to you.

Ostroff: It is a very simple situation. I have Comcast here in the Baltimore/Washington area and I get a notice in the mail that says that I don't subscribe to the digital tier. I am one of those guys who has basic cable and high-speed Internet service and so gets a bill for a hundred bucks. My wife comes in to me exclaiming, "I just paid Comcast a hundred dollars.!" She is aghast. Now, they want me to subscribe to the digital tier for another \$19 or \$20 per month. What is the incentive?

I get a notice in the mail saying we are now carrying WBAL and WMAR HDTV programming on our digital tier and we are giving it to you free. All you have to do is to subscribe to the digital tier--another twenty bucks a month. It is fundamentally unfair. If broadcasting is going to have a business in the future that is sustainable over the long term they need to participate in the cable company's revenues. I know this is like declaring war, but this is the fundamental fact of life.

HDTV Magazine: Well, wars are declared and wars are won. How do you win this one?

Ostroff: There is no reason why it has to be zero sum game. The cable company wants to drive people to their digital tier. The broadcast stations are the most powerful promotional tool on this planet. Here is a strategy: Every time you run an HDTV program that is also broadcast on analog you announce on your analog station via some ID (remember the peacock?) on channel 33 HDTV. If you cannot receive it, call your local cable company, and here is the number. Now the cable company gets these phone calls and they call us up and they say, "we want your signal." We say, "Here is the deal. We will promote your digital tier by making that announcement and in the future we will say it is available on channel 33 over-the-air or on Comcast digital tier. You pay us a fee for

everyone who subscribes to your digital tier. You can call it a promotional fee rather than a per sub fee, and we are all happy. It is a win win for every body, but damn it, I have to get something for this because I have a huge investment in this HDTV transmission system and processing system and I am not getting anything back on it, and it has to come from the cable industry."

HDTV Magazine: I had an advertiser call me the other day who said they are out buying time on DTV stations. Won't there be some trail blazers out there to change this perception you have?

Ostroff: The problem is, Dale, there just are no eyeballs. What kind of gross rating points am I going to present to an advertiser? Are there the few early implementors who want to say they are on HDTV, see us on the digital channel? Sure, but is that going to pay the electricity to keep the lights on. When I am talking about gross rating points I am talking about 1000 eyes vs. 50,000 for my analog service.

HDTV Magazine: How have you been able to measure the audience that you do have in DTV in the various markets that you are in?

Ostroff: There is no published figures that are reliable at this point. It is a small number, but we just don't know.

HDTV Magazine: How many stations do you have now, and how many are equipped for digital?

NO. We have 62 stations and virtually all are equipped for digital. There are a couple with which we still have issues. But Sinclair has put \$100 million into it. The argument that Mr. Shapiro puts forward is not only specious, but is almost libelous. It is a lie. He is a very good liar, and that is on the record. As far as I am concerned he has not done his homework. We spent over \$100 million to put our TV stations on the air with digital. If anyone did the math...I have guys objecting to the comment you made that Acrodyne was almost out of business. Acrodyne did nearly \$25 million in sales last year, so that was sort of painful for those guys to read. Mr. Shapiro did not do his homework and his logic was not there. If Sinclair has invested \$100 million WHY would we not want it to work? WHY would we want to delay it? The money is sunk cost. It is out there. It is spent. There is no return on it! Why would we sit there and try to obstruct the roll out of digital television? My God, man, we want it to be successful. But what we see is that everything that is happening is driving it just the other way and into a catastrophe.

A great advantage to the cable industry, and to the set manufacturers who realize they can make a hell of a lot more money making set top boxes and building high speed cable interconnects and TIVOs and all things which connect to a cable system...that is where the money is. Gary Shapiro says very specifically in your interview with him that their interest is not for the guy who can't afford a big screen TV. Their interest is not the guy who cannot afford a cable system. Their interest and their target is the guy who buys a big screen TV, pays for the cable system. And that is wonderful unless you are living in

the inner city and trying to live on \$20,000 a year in income. To me Mr. Shapiro's remarks almost border on being racist. It is anti-minority and anti-race. You can put that into the record too.

HDTV Magazine: I will. I see this tape smoking a little. This is a pretty tough statement. Is there any way in which you see light at the end of this tunnel?

Ostroff: One of the lights is that the broadcast industry will suffer a great deal of pain. If it has its wits about it it will begin a move towards the cable company to get some revenue from them the HDTV signal.

The other question is: are there any improvements in 8-VSB to improve over-the-air reception? I think there are some improvements. They are still not bringing 8-VSB anywhere near to what COFDM will do, but they are bringing it up to a better level of performance. Then the battle will be -- will the consumer electronics industry actually buy those (improved) chips? If they decide that the chip costs an extra \$2 per set, and (if) their view is that they don't care about over-the-air anyway, you will not get a ubiquitous roll out of TV sets that work for over-the-air.

HDTV Magazine: That last time you and I saw each other was at the NAB when looking over the CASPER system and you had a presentation from Rich Cetta (noted engineer who was on the development team for 8-VSB when he was with Zenith). I ran across Bob Rast at the CES (formerly with General Instruments, the developers of digital broadcasting, and now president of LINX, the company that developed CASPER) and asked him how things are going and he said that it is becoming a chip. He said he had a license or two already signed. Have you done more investigation on their system. You said then that if this it will work in the real world like it is in this environment (at the convention center), then DTV is off to the races?

Ostroff: But we have not seen it working in the real world. Even the demonstration they did in Chicago (some noted demonstrations to a variety of industry experts) were controlled experiments. I know you were at our demonstration of 8-VSB in Baltimore in 1999. You just went anywhere you wanted to go and you could compare how it works with an analog signal. But the fact is, it is progress. What FOX and Philips are doing with Space Diversity Antennas and dual channel processing and auto correlation--that is very helpful as well.

What is particularly annoying to me, Dale, is that three and one half years ago Sinclair said there is a problem with this 8-VSB service and it needs to be fixed and we were vilified by Gary Shapiro and by the National Association of Broadcasters and the MST. "There was nothing wrong with 8-VSB. It was just that we (Sinclair) were looking at early generation receivers and the problem was going to be fixed by Mat Miller of NextWave (dubbed by cynics as the miracle chip)." Whatever happened to all of that? The fact is now everyone is admitting that we have to make it better. The Broadcast Lab (recently formed from an NAB action) is being created and the first project is to make it better. FOX admits that there is a problem and "now they have fixed it." Sounds like

echos of Mat Miller, but nobody, Dale, is saying that Sinclair was the FIRST to identify this problem and that they deserve NOT to be vilified and attacked because they told the truth! That is what was so annoying about the interview you had with Gary Shapiro. The son of a gun continued the old warped view of the world when, in fact, everything that Sinclair said three years ago has come to pass. I am getting tired of being the scape goat for CEA's cover up of the fact that they never wanted to build over-the-air receivers. They wanted to build receivers for satellite, and now they have a HDTV service on satellite and cable, and NOW they are going to push HDTV. They didn't push it before because they knew damn well that if they put a product out in the marketplace it would come bouncing back into the door the next week...because it would not work for the consumer.

HDTV Magazine: At the Consumer Electronics Show this year there was only HDTV shown. All standard TV was pushed off into the corner.

Ostroff: That is because you have a cable service. For the first time cable companies are carrying some HDTV programming, and that comes full circle to their trying to use the broadcasters signal as well.

HDTV Magazine: You are an affiliate to all of the networks. What do they tell you? What is their council to you with respect to the DTV business? They must talk to you.

Ostroff: No they don't. Everyone keeps their council very close. There is not a free liberal exchange of views on this subject, that I can tell you.

HDTV Magazine: Is that because everyone is fearful?

Ostroff: I think the view is that no one knows what to do and they are afraid to admit it. If they do have an idea, they are afraid to put it forward because maybe the other guy will jump on it. So, there is very little talk about what we should do. At a seminar last month in Washington one stood up and pounded the table about how the broadcasters gave away the analog rights and we can't give away (to cable) the digital rights, and we have to be paid for it, etc., Everyone just yawned and left the room. There was no discussion of it. I think the reason is that people are afraid to challenge the powers-that-be and they don't know where they stand, so it is best to be quiet about it.

Now they (consumer electronic manufacturers) have the integrated agreement with cable (PHILA) and people will be able to switch back and forth between analog and between channel one and channel four, and it is going to kill HDTV as an over-the-air service. It is just too hard to do even if it works. You need to look at the reality of the consumer. Joe consumer is not going to sit with five remotes. My wife just freaks out at all of the remote controls I have here. She refuses to learn how to use them. So, what are you up against?

You asked what are some of the solutions. There is another element.

The FCC needs to step in. They need to stiffen their spine and say, "you know, we created a table of allotments and we created adjacent channel assignments, and we created adjacent market co-channel situations, and we did it all based on certain assumptions about a DTV tuner. Those assumptions were about its selectivity, about its sensitivity, and about its dynamic range. We must build those assumptions into the mandate for the DTV tuners that will be included in TV sets to support the assumptions we made when we made the table of allotments." That will go a long way towards helping make an over-the-air service viable. If the Commission does not do that, the CEA and its members will not build premium digital tuners into TV sets and the over-the-air performance of these sets will be abysmal. If the Commission says "it has to have this noise figure because that is what we assumed when we did the calculations for coverage. It has to have the selectivity, because that is what we assumed when we assigned adjacent channels in the same market. It has to have this dynamic range. That is what we assumed when we gave the power level out to all of the stations." That will go a long way towards insuring that we have a viable over-the-air service. That is something the Commission can do and should do, and if they don't, they are really disenfranchising millions of Americans who are not going to pay for that digital tier or are not going to pay for cable.

HDTV Magazine: I am sure this interview is going to raise a number of comments. Some are going to say, "Well, we are never going to put in bad tuners. Why would we do that?" Are you going to be open minded to such comments likely to come back to you?

Ostroff: Of course, but the argument that says, "Let the market decide," is specious. If the market is flooded with sets that are targeted for cable connections and the cheapest and dirtiest tuners are put in them because the manufacture doesn't care, then the consumer will be taught that there is no over-the-air service that they can receive. Then you can come back and say, "Well the market is going to demand an over-the-air service. The market will not decide (that), it will not govern, it will not demand that there is a credible tuner that really works and meets the FCC assumed specifications. And the FCC knows that because they did exactly the same thing with the all-receiver act thirty years ago when they did not rely upon market forces (UHF tuners). They required D-10 tuners. They defined the noise figure in a UHF tuner. They did this three separate times as the technology improved. So, the FCC knows that the tuner issue is not a market decision issue. Why would set manufacturers put in poor tuners? Because they don't care about over-the-air. They care about satellite and cable and that is where they are putting their money. They have said so. And the FCC needs to step up and protect the over-the-air viewer.

HDTV Magazine: Two years ago the present Chairman stood up at the NAB and said, maybe broadcasting is irrelevant.

Ostroff: Yes, and Nicholas Negroponte (Media Labs) said we should just turn off television since it was a terrible waste of spectrum. The fact is that the Chairman lives in Washington, DC. I wonder if he would make that statement if he lived in Salina, Kansas, in Wisconsin, or in Colorado where people get their TV by translators he would feel the

same? It is an terrible act of arrogance to make that kind of statement when millions of people watch television with rabbit ears.

HDTV Magazine: In driving in from Las Vegas to Portland, Oregon I listened to one radio station the entire way and didn't drag any cables behind me.

Ostroff: Exactly. One of the things that inspired us so early on to promote COFDM was its ability to support a mobile service. We said that the wireless nature of the franchise is the only thing we have that differentiates us from anyone else. We have a license to wireless. We ought to have a transmission system that allows us to be effectively wireless and create new service for mobile and portable applications. The National Association of Broadcasters said, believe it or not, "why would a broadcaster want a mobile service?" This goes to show they have not a clue as to what the strategy is. The fact of the matter is that there were five to six million automobiles sold this last year that have video players in the back seat.

HDTV Magazine: We did note that at this year's CES many were shown:

Ostroff: The point is that broadcasters cannot participate in that market now. The 8-VSB cannot support the mobile services. So we gave that up when we gave up COFDM. In Finland there is a deal between the telephone company and the digital broadcasters to take a certain portion of their bit stream and use it to deliver high-speed data to cell phones. The US broadcaster does not and can not have that business. I go right back and lay this to the feet of the National Association of Broadcasters and say, "You guys could not possibly understand what you were doing when you said "you have to have 8-VSB." They went through that whole thing two years ago that scared the be Jesus out of broadcast industry that if we went to a dual standard it would delay the roll out five years, and now we are stuck with what we have done. If we had COFDM we would have a business. It would be broadcasting in a different way. Now we don't.

HDTV Magazine: Is it too late?

Ostroff: Well, not if you look at your 20 years. There is going to be a lot of pain and business disruption and unhappy shareholders down stream. When you are getting a \$200 per month cable bill and someone proposes to get a signal over-the-air for free, but you must have a different transmission standard. Maybe ten years from now the whole concept of bringing a COFDM service to the United States will come to pass because so much will have been done overseas with a COFDM service and so many new applications will emerge overseas that people in this country will say, "wait a minute, we feel like we are the second class citizens here." So, there is a chance, but not in the immediate future.

I am sorry to be so negative, Dale, but we are in a situation where it is not a question of detecting if the tide is changing: The tide is flowing strongly against the over-the-air broadcast services.

HDTV Magazine: Do your broadcast colleagues share you views?

Ostroff: Many privately will. Because of their management and other interests they may not as much publicly. I get Christmas cards from the guys saying "Go! Keep fighting the fight!"

Thank you very much Nat.

Nat Ostroff says that the manufacturers don't care. Now its time to take some medicine for broadcasters. This piece sent to us by Bill Cruce but is a commentary on how broadcasters may view their public. Seems like there is a lot of two way traffic on this digital highway. Well, read on...

At home, I own an RCA HDTV with the attractive name: "F38310". It is a 38 inch diagonal direct-view tube with built in HDTV terrestrial broadcast receiver as well as a "Direct TV" satellite receiver also built in.

Last Sunday, I was watching the Daytona 500, (a hugely popular NASCAR automobile race here in the US for those of you who live overseas), broadcast terrestrially by Fox Network here in Los Angeles on their digital transmitter, channel 65. (For the overseas people on CML, the US FCC has mandated a few years back that US stations broadcast both the analog NTSC signal, on their old channel, and a digital signal on a different, newly assigned channel up in the UHF frequency range)

The image was 16:9 on my screen, but appeared to be 480P, not 720P, or 1080i. When they would cut to in-car footage, or some replays of wrecks, the aspect ratio would jump down to 3:4 with black bars on the side of the image. Some of the replays were at 16:9. All the commercials were at 3:4, which is the norm for all digital broadcasting here in the US so far, be it HDTV or not)

None of that was the issue, the issue was that the audio was out of sync with the video by at least two seconds. When they would cut to a commentator's face, it was almost comical. It had been that way for an hour, when I called telephone information here in Los Angeles and asked for the phone number for the station. When the TV station receptionist answered, I asked for an "engineering supervisor". I was connected to someone, and I told him that on the digital broadcast signal, the audio was out of synch with the video by quite a bit, but was in sync when the spots ran.

At first, I guess he must have thought I was an engineer somewhere in their system. Then it dawned on him that I was an outside caller and he demanded to know "How did you get this number?" I told him the receptionist patched it through. He then incredulously confirmed that I was "a viewer". I admitted that I

indeed was "a viewer" but that did not change the fact that the audio was way out of synch with the video on the digital feed, making the program difficult to watch.

Then he said something very interesting... he said, a direct quote here, because I wrote it down, "We don't monitor the digital that much." They did not know that there was a problem, and even more significant, they did not CARE!

Concerned with this, I talked to my friend here in Los Angeles who is an extremely knowledgeable video engineer / consultant with experience both in monitor design and set up as well as television broadcast systems.

He said that most of the stations local to the Los Angeles market do not monitor what they are broadcasting on the digital side, regardless of the source of the signal. He has seen broadcasts go on for days where ALL of the audio channels are in Spanish. (Great if the station was in Mexico, bad if it is in the US) He has seen broadcasts where the left and right audio channels are 180 degrees out of phase. There are many other issues with timing etc, that were too obtuse for me to understand. He says that he knows the engineering management personally at all of these stations, and sends them e-mails about his observations of problems, and they do nothing about it.

My observation, and this is my opinion, it appears that the station owners and management do not give a rat's-ass about whether or not digital broadcasting, let alone HDTV broadcasting, is successful here in the US. They pump out the signal because it is government mandated, but that's it. The proof is in their negligent behavior.

Bill Bennett
DoP Los Angeles

Dale's comments

Readers, I am going to trust that you take me seriously in this aim to succeed with HDTV. I am focused upon it but I am less of a fanatic than you might think, especially considering all that I have published about it over the last 20 years. I am quite happy to live with my uncalibrated Toshiba and my easy-on-the budget audio system. at least for now. Sure, I would love one of those million dollar babies, but it's not what makes my clock chime. What does ring it is seeing more and more people becoming genuinely and happily enthusiastic about HDTV. If I have the jump on anyone in this vision business it is that I recognized long ago that it takes a monumental, near-superhuman effort to get us over "the hump" with a non-compatible TV system, but we can..

I think everyone wants to know that we are going to have HDTV for the rest of our lives, and with abundant programming, and for the rest of our children's children's lives as well. I am more of a professional revolutionary in this business, and fortuneatly one who got

the message early enough that when the revolution is over, stop revolting PLEASE! I learned that from I read while still in the Army so many years ago now.

People always ask me where we are in this revolution. I try to put it in organic terms and say that right now we are still at the sprouting stage. We have barely seen light through the walls of the cocoon. But we are breaking through. We are making progress. We are taking steps to take us to the next level. We know we have to make our service rise to the standards we preach or get out of the business. I have completely fumbled the I Love HDTV clothing, for example, and owe Hal Protter and a few others I revere my eternal apology for that and I will make it up to you guys one day. But a lot of energy has had to be used in breaking through the wall of the cocoon.

If you feel you are, or if you even might get your money's worth from HDTV Magazine, from the TIPS List and/or from the HDTV Forum, why not subscribe and keep our wheels turning?

Thanks, __Dale

(Editor's closing notes: *HDTV Magazine is a very beneficial service to HDTV viewers. If you are, you might wish to subscribe:*

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Now, Let's go to press!

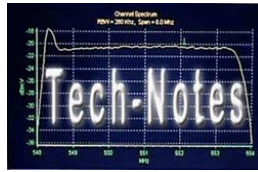


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