

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of)
)
Digital Television Distributed)
Transmission System Technologies)

MB Docket No. 05-312 Federal Communications Commission
Office of Secretary

DOCKET 05-312-0007-0000

To: The Commission

COMMENTS OF LOUIS MARTINEZ FAMILY GROUP, LLC

1. Louis Martinez Family Group, LLC ("LMFG") hereby submits these comments in response to the Commission's Notice of Proposed Rule Making in the above-captioned proceeding, FCC 05-192, released December 7, 2005 ("NPRM"). LMFG is the licensee of one Class A and two Low Power Television ("LPTV") stations in Texas and California and the permittee of a LPTV station in Texas¹ as well as three LPTV station in southern California. All these stations operate under the LMFG company name, MetroCast. More significantly, LMFG is the controlling shareholder of Radio Telecom & Technology, LLC ("RTT"), a firm holding several important patents relating to the instant NPRM and who in the mid 1990's was one of the leading companies developing and installing it's T-NET system for Interactive Video & Data Service ("IVDS") for licensees in major USA cities. LFMG is very enthusiastic about the distributed transmission system ("DTS") concept and believes that DTS holds significant promise for improved signal coverage as well extended services by all television stations, but especially by Class A and LPTV stations that are confined to low power levels under the Commission's Rules.

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¹ These stations are KQUX-CA, KMHZ-LP, KBLM-LP, and K15GX.

2. Martinez's managing member, Louis Martinez, is an engineer with several decades of experience in developing the radio art. He holds patents for a space-division multiplexed ("SDM") antenna, "synergistic-modulation" technology that offers substantial increase in overall information throughput and the possibility of even more innovation and service enhancement from DTS than the Commission may have contemplated in the NPRM. In one form, SDM uses sectorized antennas, which permit a common frequency to be used over a omni directional area around a given transmitter but also allow different content to be distributed to individual sectors or arcs from the common location, could allow a television station to include different, highly targeted material, as well a common program in its transmissions while occupying just one 6 MHz television channel, with or without subdividing the bandwidth into multiple digital streams. In other words, a common news or information program could include sub-categories of material of interest to just one part of a station's service area, or even a completely different program, such as a movie, for each sector. The model would be similar to that of a central city newspaper that includes individualized suburban inserts or a suburban newspaper group that publishes a separate edition for each community but creates them all from a central office location.²

3. The hallmark of Class A and LPTV stations is localized service. DTS with SDM and synergistic modulation offers significant possibilities for enhancing this characteristic as summarized in the attached technical statement by Mr. Martinez. However, for the full potential of DTS to be realized, the Commission must avoid imposing rigid conformity in the technical standards imposed on DTV stations using DTS. Technical regulations should be limited to avoiding any new interference to other stations -- a limitation with which LMFG can comply

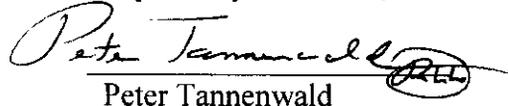
² One press report indicated that the *Washington Post* newspaper, for example, has some 225 individualized variations of the inserts that are delivered to homes throughout the Washington, DC, metropolitan area and suburbs.

with sectorized antennas distributing varying content. Any other limits will only stifle creativity and innovation, with no offsetting benefit. LFMG wants to be a leader, not a follower, and it asks the Commission to give it the flexibility to do so.

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February 6, 2006

Respectfully submitted,

A handwritten signature in cursive script that reads "Peter Tannenwald". The signature is written in black ink and includes a stylized flourish at the end.

Peter Tannenwald

Counsel for Louis Martinez
Family Group, LLC

ATTACHMENT "A"
STATEMENT OF LOUIS MARTINEZ
DTS IMPACT ON TV TECHNOLOGY OF THE FUTURE

The Commission must be applauded for the vision proposed in the DTS NPRM because it opens the door to evolve techniques only imagined by inventors in the past but which never saw light of day because of regulatory constraints; also, implications of those constraints added additional risks to budgeting funds for R&D.

Technology has substantially changed the consumer's interests and the way they watch TV programming. Consumers are rapidly demanding, and will soon expect to see what they want, when they want it, and wherever they want it. Fortunately, advances in video compression, high capacity storage devices, Internet, and wireless delivery are not only becoming reliable but very economical and, with the Commission's proposed DTS rules, will enable Broadcasters to satisfy the aforesaid "whatever, whenever, wherever" consumer demands.

More specifically, MetroCast and RTT are developing a product called Iⁿ-Cast which, in a portable "DVD-like Player" device integrates a DTV receiver and wireless (wi-fi) technologies and incorporates a LCD screen and 100 GB hard-drive to continually store incoming TV news and also store over 100 movies and other programming to thereby instantly display personalized virtual cable services for fixed, portable or mobile locations. Iⁿ-Cast requires a high capacity wireless broadcast capacity in the range of 100-200 Mbps and this is provided by space division multiplexing (SDM) technology described below.

Engineers are familiar with frequency, time and space division multiplexing as evolved in the past half century, all aimed to separate signals in these three dimensions to "keep them apart". More recently code division multiplexing (arising from spread spectrum technology developed over the past forty years) has effectively removed the need to "keep them apart", so signals can overlap in aforesaid three dimensions. Moreover, Martinez and others have shown that conventional signals, such as analog TV of today, can be made to carry many more "piggy-back" signals without mutual interference. In the mid 90's, Martinez experimented with superimposing digital data transmissions at low power levels upon TV signals of existing TV transmissions from a distant station so that those digital signals behaved like sidebands on the distant TV signal and were detectable by special receivers throughout the local area surrounding his low power¹ digital transmitter. That local digital receiving area was in fact a "cell" and many such cells, carrying different data, could have been constructed and operated with no interference to the TV broadcasts. This clearly is an early form of DTS as now envisioned by the Commission. The generic idea is "synergistic modulation" (e.g. see Martinez patent 5,177,604). This technology, which was in fact classified by the DoD in the 50's and 60's when Martinez started work on the concept² is generically a spread spectrum technology. It offers great promise to expand the efficiency of wireless transmissions and shared spectrum use. More details are contained in numerous Martinez patents easily accessible via the USPTO.

¹ Power levels authorized under FCC Part 15 rules.

² Martinez started at Motorola Research Lab and thereafter headed a small "Electromagnetic Concepts and Plans Group" at the largest US non-profit think tank (Aerospace Corp).

One form in which Iⁿ-Cast plans to broadcast involves transmissions from a central location using an antenna array providing 8 to 10 angular sectors wherein each sector radiates the same “main” TV program, but different multiplexed digital data streams, thereby multiplying the overall data throughput by a factor equal to the number of sectors.

Another option employs individual cells wherein a central transmitter broadcasts an “umbrella” main program signal over the full service area and separate small cells in that area synergistically modulate their individual data streams for their cell. This latter method looks especially useful for what MetroCast calls T-LANs, such as separate housing development areas, or wireless cities, such as Riverside, CA, which is implementing this concept with the collaboration of MetroCast.

Suffice it to say again that we support the Commission in essentially all the proposed rules to the extent the rules do not hinder or displace the potential of low power TV stations or their class A counterparts.

Respectfully prepared and submitted by:

Louis Martinez
Engineer, FCC licensee