numerous terrestrial microwave operators ranging from the county of Los Angeles, which uses the band for intracounty communications, to *The Washington Post*, which uses it to transmit the digitized pages of the newspaper to a remote printing plant. The microwave operators dislike the prospect of being bumped to the less reliable and more costly 18 ghz band to make room for the DBS service and they have made their feelings known in comments to the FCC and in testimony before Congress.

The proponents of DBS have held that the fears of broadcasters are unfounded. It has been the contention of STC in particular that its proposed service will have little or no impact on broadcasters. Not only will DBS not "wipe out" broadcasters but representatives of USSB and VSS say that by providing them with high quality programming they will help marginal broadcasters survive.

At least some of the DBS applicants appear willing to pacify the terrestrial microwave users by contributing to a fund that would be used to reimburse them for costs they incur in moving from the 12 ghz to 18 ghz band.

The stickiest DBS question facing the FCC may have to do with the CBS proposal for HDTV. Some of the other DBS applicants, particularly USSB, have attacked the CBS proposal as being impractical. They are concerned because HDTV takes wider channels than conventional television, and the wider the channels, the fewer may be accommodated by the DBS spectrum. Initially, CBS asked for channels with a minimum bandwidth of 27 mhz, while most other applicants proposed 16 mhz or 18 mhz. Last week, however, CBS indicated it would be willing to endorse channels as narrow as 22.5 mhz. The extra wide channels needed for HDTV could be had by combining two channels, it said.

In its filing, CBS asked the FCC to grant its application and defer action on all the others since CBS's is the only one that fulfills the FCC's expressed goal of encouraging experimentation in the DBS spectrum. "Every other pending DBS application merely proposes conventional quality NTSC service, utilizing well-established earth and space segment components," CBS said. "There is nothing truly experimental about them."

CBS defended its proposal from some of the most oft-heard criticism. CBS insisted that the latent demand for HDTV is real. "Given the historic receptivity of U.S. consumers to higher quality goods and services, HDTV will doubtless be very popular with the public and will ultimately permit the U.S. to achieve a position of leadership in television communications. People who have taken a look at HDTV on prototypical equipment," CBS said, "expressed a new and exciting feeling of presence and realism when viewing such a presentation." In hopes that regulators will express the same feeling, CBS will demonstrate HDTV programing shot in California over the past few months (see story, page 82) in Washington later this month. (That programing also will be used to conduct "psycho-physical tests and consumer research concerning HDTV acceptance," CBS said.)

CBS also asserted that no major technological barriers exist in constructing HDTV production equipment or receivers. Furthermore, it said, a Kalba Bowen report it commissioned concludes that the cost of an HDTV receiver would be only 20% to 30% greater than a conventional set of comparable size (see story, page 88).

CBS rejected the suggestion of some that HDTV should wait for the development of the next spectrum to open up in the 22 ghz band. The high-powered transmitters needed to successfully broadcast at 22 ghz frequencies will not be developed for at least 20 years, it said. CBS dismissed USSB's argument that the Japanese plan 22 ghz DBS service by explaining that the Japanese archipelago is much smaller than the U.S. mainland and, consequently, a Japanese DBS at 22 ghz would require far less power than U.S. DBS.

CBS said the report of A.D. Ring & Associates commissioned by USSB that concluded that terrestrial transmission in the 12 ghz band was impractical was "incorrect and misleading." The Ring report, CBS said, is based solely on the experiences of the Japanese and Germans but ignores "the success and the significance" of the French approach. With high-power high-antenna facilities, the French have reported "good clear-weather reception out to 60 km to 100 km" using omnidirectional antennas. More will be known about terrestrial 12 ghz broadcasting, CBS said, after it performs similar 12 ghz propagation tests in San Francisco this spring.

CBS's comments filled in some of the gaps in its original filing and made some rather significant modifications to it. Aside from proposing a smaller channel bandwidth, CBS has decided that HDTV transmission by DBS should be digital, to take advantage of digital bandwidth compression techniques. Using such compression, the digitized HDTV signal could be transmitted at a data rate of 76.5 megabits per second over a channel with a bandwidth of 45-48 mhz, which could be created by combining narrower ones.

Regardless of the technical standards that are ultimately chosen for HDTV in the U.S., CBS said some attention should be paid to compatibility with existing receivers. The key to compatibility, CBS said, is "transcoders"—set-top devices that would receive the HDTV signal and convert it to an NTSC signal so that it could be displayed on a conventional set.

CBS has based all of its filings on the NHK HDTV system, not because CBS is forever enamored with the system, but because it "represents an implementable and practical configuration." The basic parameters of the system call for 1,125 horizontal scanning lines, a two-to-one frame rate, a five-to-three aspect ratio, 19 mhz of luminance bandwidth and 7 mhz of chrominance.

In its filing, CBS urged the FCC to call NTSC-3 (an industry committee acting under the aegis of the FCC) to explore channel bandwidth and technical parameters for HDTV—after it has granted the CBS application.

Turner buys NCAA cable rights for $17.6 million

It's historic turn of events, says Wussler, as first-ever contract goes to Atlanta superstation; USA Network, ESPN were bidders

The first national cable television rights to National Collegiate Athletic Association football games were awarded last Wednesday (Jan. 27) to Turner Broadcasting System for nighttime coverage on superstation WTBS(TV) Atlanta for a price of approximately $17.6 million for the 1982 and 1983 seasons.

TBS won the cable bid in competition with USA Network and ESPN, a spokesman said.

Plans call for a total of 19 games each season, with 14 scheduled on Saturday nights, one on Thanksgiving night and four others during the week on evenings still to be determined. The games to be selected will be drawn from those of NCAA's Division One, comprising 91 of the top football colleges. ABC and CBS have the television rights to the games for daytime coverage. There will be different teams on cable and over-the-air.

Robert Wussler, president of WTBS and executive vice president of TBS, said the agreement represents a significant turn in cable history. He added: "If I may mix a sports metaphor, cable is beginning to step up to the plate."

Wussler noted that WTBS serves systems with almost 20 million subscribers and said he expected the total to reach 22 million or 23 million by September when the football cable TV schedule begins.

By Thursday, Wussler said, advertisers had started to call asking for details of sponsorship. He said he expected to announce a major sponsor this week.

For the NCAA, the signing of a national cable agreement represents a strengthening of control over college football television policy. In December, the association averted a head-on collision with dissident members also belonging to the NCAA when College Football Association schools rejected a tentative pact reached with NBC to telecast games on Saturday night ("In Brief," Dec. 21, 1981). That pact called for payment by NBC of $180 million over four years, starting in the fall.

NCAA now has the $17.6-million contract with TBS plus a $263.5-million agreement with ABC and CBS spread over four years, starting in September.