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December 18, 2002

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Notice of *Ex Parte* Submission of Cantor Telecom ET Docket No. 02-135

Dear Ms. Dortch:

Cantor Fitzgerald Telecom Services, LLC ("Cantor Telecom") submits this *ex parte* filing reporting a meeting on December 18, 2002, with the following staff of the Office of Plans and Policy: Robert Pepper, Mark Bykowsky, John Williams, Kenneth Carter and Evan Kwerfel. Andrew Lipman and Axel Spies of Swidler Berlin Shereff Friedman, LLP on behalf of Cantor Telecom and Brent Wilkins, Managing Director of Cantor Telecom, attended this meeting. At the meeting, the attendees discussed Cantor Telecom's reply comments submitted on July 23, 2002 in this docket, and gave a presentation to the above-mentioned staff. Cantor has attached this presentation for submission into the record pursuant to the requirements of Section 1.1206(b)(1) of the Commission's *Ex Parte* Rules.

If you have any questions regarding this submission, please contact the undersigned.

Respectfully submitted,

Andrew D. Lipman
Counsel for Cantor Fitzgerald Telecom Services, LLC

Enclosure

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SECONDARY SPECTRUM TRADING

Presentation at the

FCC Office of Plans and Policy

December 18, 2002

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I) Introduction of Cantor Telecom

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Cantor Fitzgerald . . .

- *Has been the world leader in the giant US treasuries market for over 55 years.*
- *Is the leading broker-dealer in US government bond and securities.*
- *Employs more than 1,000 people in offices throughout the US, Canada, Europe and Asia.*

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eSpeed: Cantor's electronic trading platform . . .

- *Enables market participants to transact business online instantaneously.*
- *Is used by more than 650 financial institutions worldwide.*
- *Can be rapidly customized to suit needs of any marketplace involving multiple buyers and sellers.*

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eSpeed Platform:

- *Auction and reverse-auction capabilities*
- *One-to-many capabilities*
- *Inquiry-based request for quote functionality*
- *Real-time distribution and transaction capabilities*
- *Access to a secure high-speed private network, or web-based distribution*

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- *Was established in 2001 by the acquisition of Chapel Hill Broadband by Cantor Fitzgerald.*
- *Chapel Hill was the leading broker of network infrastructure in the U.S.*
- *Brokers telecommunications infrastructure and services (dark fiber, collocation, conduit, lit fiber, rights-of-way).*
- *Is the market leader in these areas in the U.S.*

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Cantor's vision:

An effective secondary market in wireless spectrum in the United States and other countries.

- *Intermediaries such as Cantor can make these markets work so that a buyer finds a seller.*
- *A trading tool and standardized trading conditions will bring transparency to the market place.*

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- *Spectrum Policy Task Force Report identifies 3 major areas of concern:*

(1) "Explosive demand" for radio frequencies to be expected
(2) Spectrum policy "must evolve towards more flexible and market-oriented regulatory models" in particular in rural areas
(3) Existing FCC "command and control" spectrum allocation model limits full and open access to spectrum in most circumstances.

Spectrum Trading is an important tool to provide relief in all three areas.

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II) *Advantages of Spectrum Trading*

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1) In the wireline business, trading is a reality:

- *Trading of telephone minutes.*
- *Trading of fiber capacity.*
- *Trading of capacity on shared lines.*
- *Trading of equipment.*
- *Trading of satellite transponder capacity.*

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2) In the wireless sector, the situation is different:

- *Presently, only approx. 7% of the most valuable spectrum is available for market allocation at all (OPP White Paper (i)).*
- *Currently, almost no spectrum trading due to restrictive license conditions (e.g. transfer/lease of spectrum requires prior approval of FCC).*

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3) Spectrum trading is a win-win situation

- ***All:*** *Roll-out of wireless services, in particular of 3G, is a complex interaction between different players that spectrum trading will facilitate. Spectrum Trading Task Force also found that advancements in technology permit spectrum to be used more "intensively" so that there may be a higher demand for trading in the future.*
- ***For the Government:*** *Less spectrum that is allocated remains unused. It will foster the development of innovative technologies and small businesses interested in providing a new service well-suited to a particular frequency band.*

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- ***For the market players***: *More efficient and flexible use of their spectrum and the ability to react more flexibly to customer needs/trends.*
- ***For the customers***: *Lower costs since mobile operators will be allowed to sell/lease spectrum they don't need.*

The economic incentive to maximize efficient spectrum use will drive market participants to develop new spectrum-efficient services and technology and attract new investments.

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4) The market is in favor of greater flexibility in using and disposing of spectrum

a) Technical perspective: *devices (base stations, receivers, etc.) will be:*

⇒ *Smaller*
⇒ *More sophisticated*
⇒ *Capable of tuning into different spectrum automatically*
⇒ *Capable of allowing wireless providers to tune into different spectrum manually*
⇒ *Capable of being relocated more easily (even worldwide)*

b) Service perspective*:*

The market players need a maximum degree of flexibility for offering new products and services that only spectrum trading provides.

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III) Tools to Create a Secondary Market

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1) Create a regulatory system to allow providers to trade

- *Intermediaries, such as Cantor, with up-to-date databases make it easy to match up buyers and sellers on the basis of standardized terms and conditions.*

Cantor's trading tools can support different approaches, e.g.,
- *A centralized data base at the FCC or*
- *A private data base with the relevant information.*

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- *The Spectrum Trading Task Force promotes trading when advocating for license "easements" for non-interfering, frequency agile transmitters.*
- *The Spectrum Trading Task Force also recommended that the FCC take action in the existing FCC secondary spectrum market proceeding. Cantor wholeheartedly agrees.*

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2) The Market Tool must be flexible to accommodate short-term spectrum needs.

- *Short term leases might frequently be for rights plus facilities or for capacity rather than for spectrum rights alone.*
- *Tunable equipment may make it possible for one lessee to engage in a series of short term leases from different lessors.*
- *The new rules on spectrum trading should not prevent spectrum users from adapting their spectrum to services that meet the demands of the market on a short-term AND long-term basis.*

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3) The Market Tool must be transparent and reliable to be accepted by the market players.

- *An online trading forum requires standardized terms and conditions.*
- *Information on the spectrum should be consolidated so that it is more readily available to potential buyers and sellers.*

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4) Spectrum traders and intermediaries should be treated differently.

- *A trader takes an "ownership" position in spectrum. An intermediary does not; it merely mediates between lessor and lessee.*
- *Pure intermediaries should be shielded from independent liability for transmitting users' or licensees' noncompliance.*

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5) Spectrum trading should only be subject to minimum "streamlined" reporting requirements.

- *Spectrum holders that are actually transmitting on the spectrum should be required to file standardized, minimal reports with the regulators, which reports could serve as a basis for resolution of interference problems.*

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6) Spectrum trading would be facilitated by the use of standardized terms and conditions.

- *Reduce transaction costs and time.*
- *Sample standard terms and conditions can be provided separately.*

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7) Spectrum trading would be facilitated by an advanced platform once certain volume is reached.

- *eSpeed's trading platform is scalable to manage large traffic volumes.*
- *Information on eSpeed's platform can be provided separately.*

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IV) Arguments Sometimes Raised Against Spectrum Trading Don't Hold Water

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1) "ILECs will buy up the spectrum and dictate the price."

- *Scenario unlikely since all ILECs lack funds "to rake up spectrum."*
- *Issue could be tackled by existing competition protection tools.*
- *Fears of excessive concentration would be further allayed if regulators open more spectrum for use by service providers/spectrum trading.*

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2)"Spectrum trading leads to a fragmentation of the spectrum."

- *Let the market decide what amount of spectrum an operator needs (some level of spectrum fragmentation may be wanted for short term, localized or specialized uses).*
- *Cantor agrees with the OPP White Paper (p.3):" An ideal market allocation should impose no restrictions on spectrum uses and users beyond those necessary to limit interference."*

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3) "Spectrum trading dilutes or violates existing license conditions and undermines predictability/business cases of the wireless competitors."

- *Predictability is already absent from the extremely dynamic wireless market.*
- *Regulatory problems can be avoided by industry agreements, or by allowing spectrum leases for providers in any geographic or service area for any period of time during the term of their licenses.*

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- *Flexibility should be given to existing licensees in determining how to subdivide their licensed spectrum and on what basis to lease or otherwise make it available to downstream entities.*
- *Ability to assign spectrum will lead licensees to use only the bandwidth that is needed to guard the value of their investment; excess capacity will become available to the market.*

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- *The licensee should contractually require the lessee to assure compliance with the spectrum rules and retain the right to reclaim the leased spectrum in the event of noncompliance -- instead of prior approval of FCC regarding the lessee's spectrum use (only reporting requirements).*
- *However, the FCC should be entitled to impose measures against the party actually transmitting on the spectrum (lessee) if it does not comply with the law/the license conditions.*
- *Encouraging industry to develop standard terms and conditions (e.g. uniform provisions for liquidated damages and delivery failure) will resolve many of the compliance issues.*

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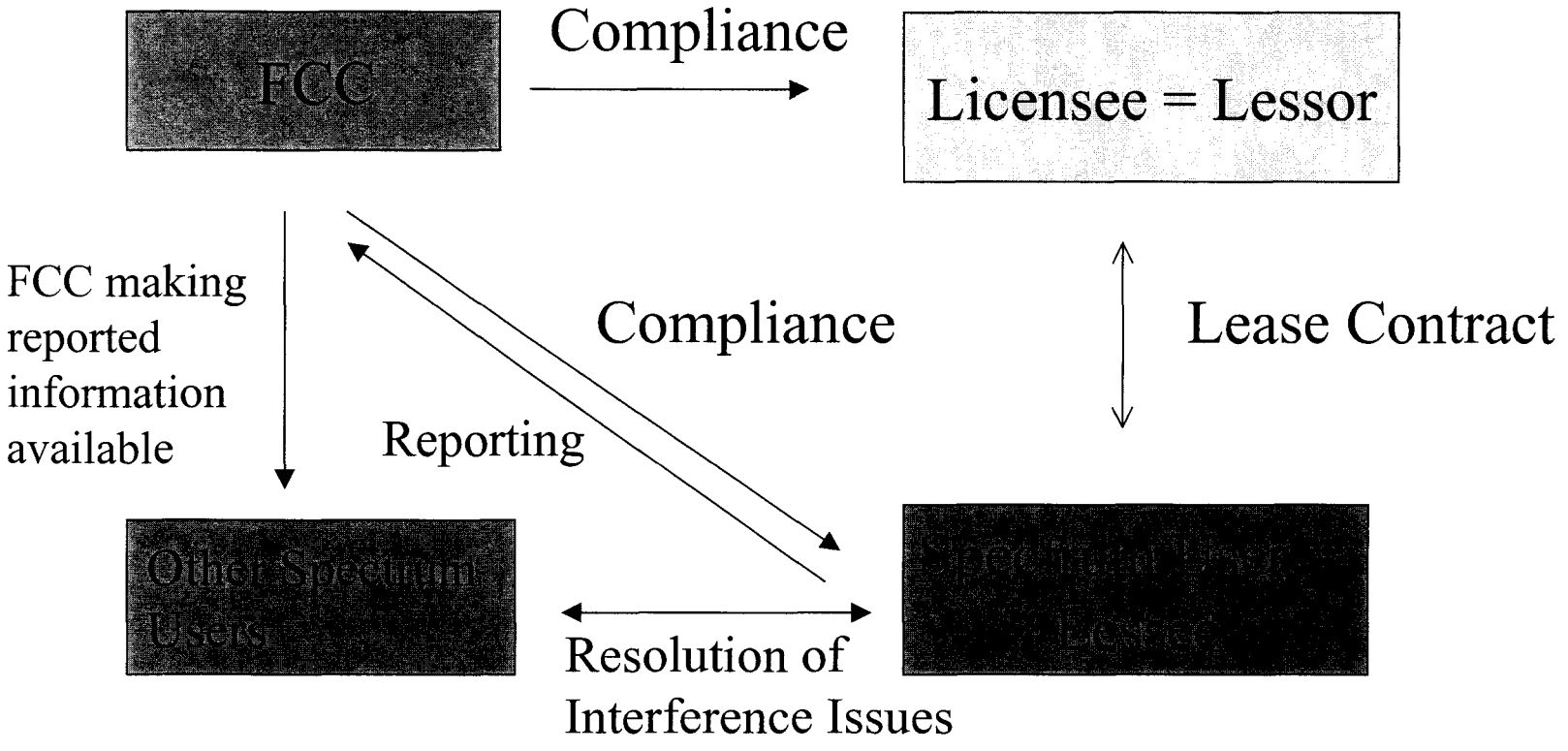

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- *Lessee should, in particular, be contractually obliged:*

(1) To cooperate with the FCC.
(2) To accept FCC's oversight and enforcement pursuant to the license conditions.
(3) To comply with minimal reporting requirements to the FCC re the spectrum use.

The reports of the spectrum users should be made available to other spectrum users which will resolve most of the interference problems among actual users.

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4) "Spectrum trading will lead to uncontrollable interference problems."

a) Technology Advances

- *Dynamic change as a result of advancing technology so that current interference concerns are reduced or eliminated (example: noise level from signals of mobile units or spill over of emission into adjoining band has already decreased) - see OPP White Paper at 45.*
- *Additional measures, such as limiting the in-band power of transmitters, guard bands, improving the filter capacity of receivers will help to reduce harmful interference (see OPP White Paper at 46).*

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b) The current definition of "interference" is outdated and should be reviewed-

- *The Spectrum Task Force recommended a review of the definition of "interference:" The FCC should move away from measuring interference based on transmitter operations, and moving toward "real-time adaptation based on the actual RF environment . . .[of] transmitters and receivers."*
- *This would entail determining the "interference temperature," that is, measuring the RF power at the receiving antenna per unit of bandwidth (the "noise" level encountered by the receiver).*

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- *To the extent necessary, interference can be avoided by imposing power limits at geographic and frequency boundaries on the spectrum users. The Spectrum Trading Task Force also found that clear definitions of users' interference rights, will lead the way to greater efficiency in spectrum use.*
- *Cantor agrees with the Spectrum Trading Task Force that harmful interference could be lowered by promoting the use of automated transmitter power, advanced antenna technologies and preparing "best practice" handbooks.*

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c) Lessee would succeed to the obligations of the lessor re harmful interference

- *Lessee will in any event succeed to same obligations as licensees as to emission power limits, geographic area, etc.*
- *Lessee will also succeed to Licensee's rights to protection from interference by others.*
- *In highly congested areas, there will be few potential lessors of spectrum; therefore, a secondary market will not increase congestion.*

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d) Fast-Track Dispute Resolution Mechanism will reduce possible potential for conflicts.

- *A licensee who is allowed to trade spectrum has an incentive to study the particular market and potential interference issues to avoid disputes and to guard the value of the investment.*
- *The establishment of a user database would enable the quick identification of interfering users.*
- *The FCC should provide a fast-track dispute resolution forum of experts to resolve interference issues. The Spectrum Trading Task Force also recommends establishing efficient and reliable enforcement mechanisms to ensure regulatory compliance by all spectrum users.*

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V) Conclusion

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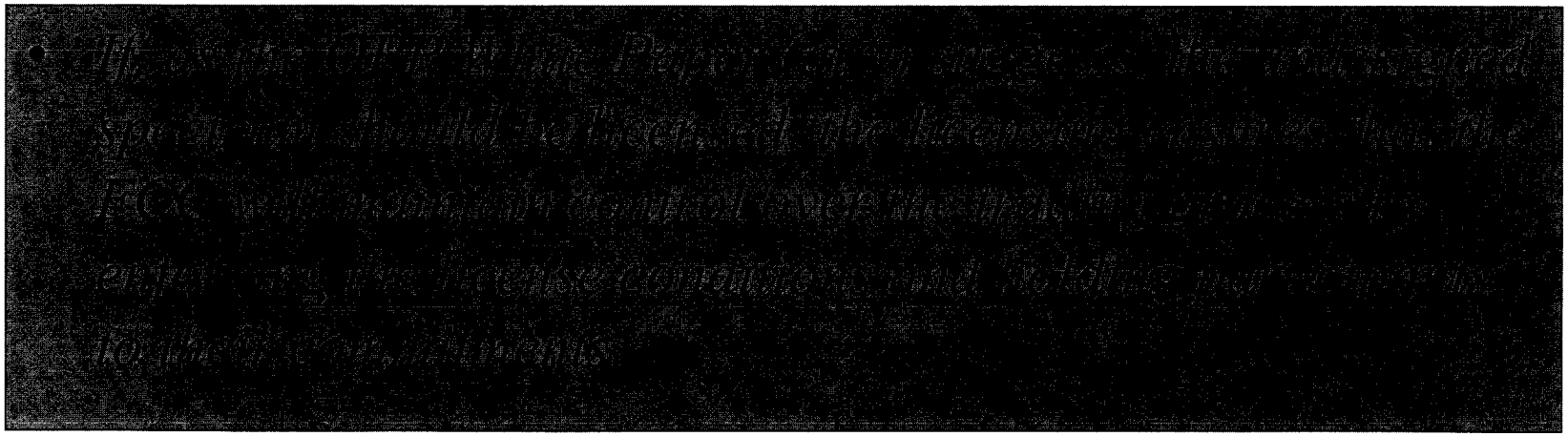
Cantor's concept is in line with the suggestions in the OPP White Paper, for instance:

- *If spectrum is (re-) auctioned, permission to trade spectrum could be part of the license conditions.*



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- *Licensees should at least have fee simple ownership of spectrum to efficiently assign spectrum. The FCC should provide for exhaustive, flexible, exclusive, transferable spectrum-usage rights and strong license-renewal expectancies (OPP White Paper at 5).*

- [redacted]

- *In view of technological progress, allowing some objective level of interference without the permission of the affected parties should be acceptable (OPP White Paper at 44).*

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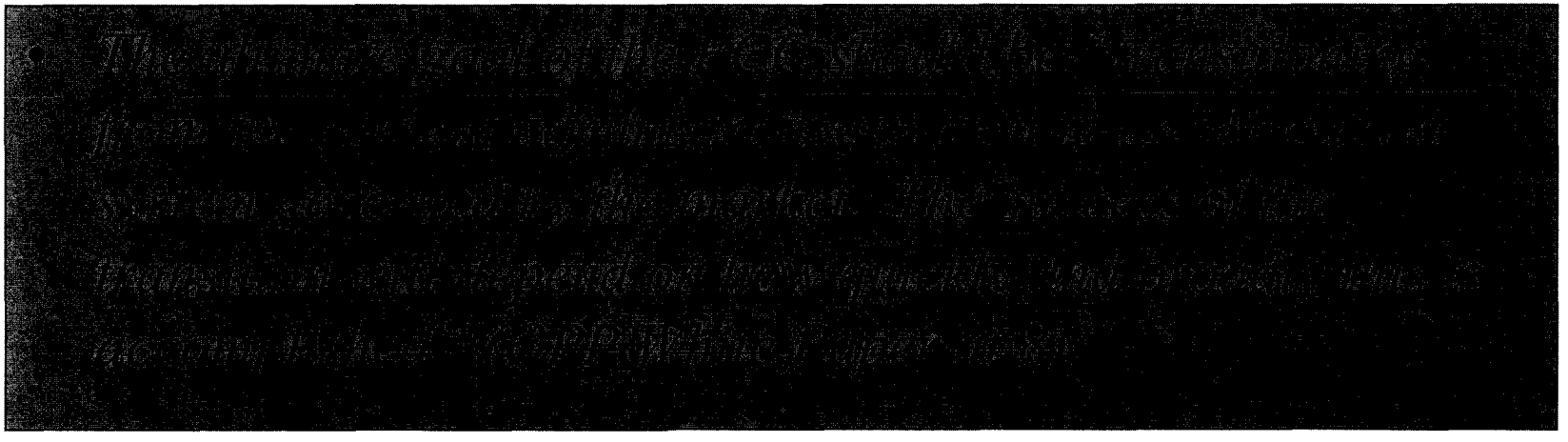
- *Flexibility in spectrum use allows licensees to move spectrum to higher values (OPP White Paper at 42).*



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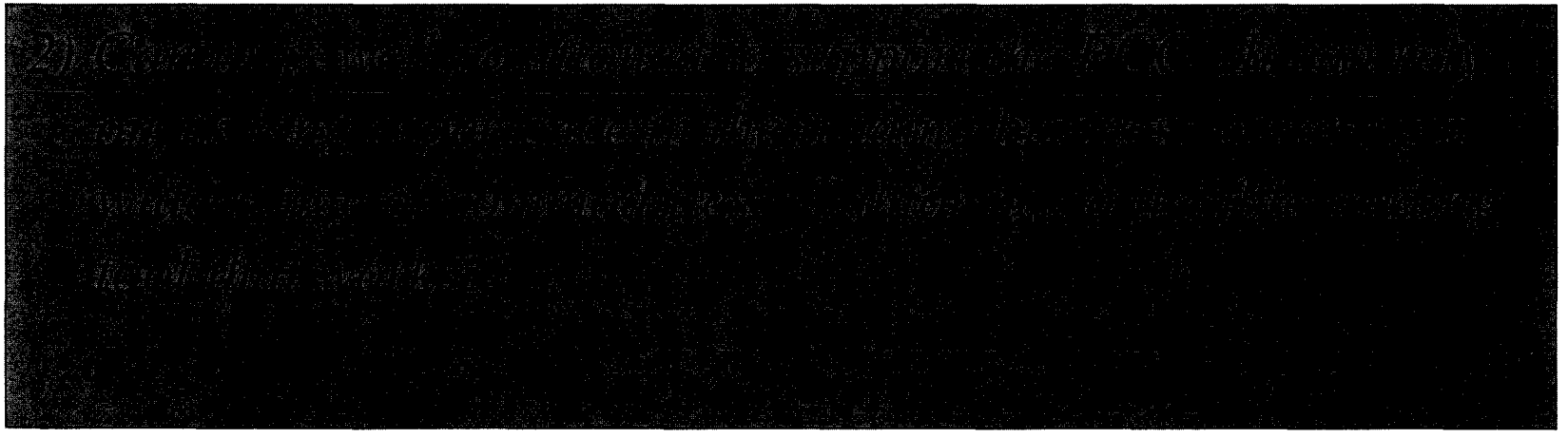
Cantor Suggests as Next Steps:

1) Cantor agrees with the OPP that the NPRM on the Secondary Spectrum Market should be concluded ASAP.



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3) Cantor stands ready to support the FCC by:

- *Trading simulations;*
- *Initiating a fixed term pilot program;*
- *Creating an online market tool for spectrum trading; and*
- *Developing standardized terms and conditions to implement spectrum trading successfully.*

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FOR MORE INFORMATION PLEASE CONTACT ...

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