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**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Allocation and Designation of Spectrum)
for Fixed-Satellite Services in the 37.5-38.5 GHz,)
40.5-41.5 GHz, and 48.2-50.2 GHz Frequency)
Bands; Allocation of Spectrum to Upgrade Fixed)
and Mobile Allocations in the 40.5-42.5 GHz)
Frequency Band, Allocation of Spectrum in the)
46.9-47.0 GHz Frequency Band for Wireless)
Services; and Allocation of Spectrum in the)
37.0-38.0 GHz and 40.0-40.5 GHz for)
For Government Operations)

IB Docket No. 97-95

RM-8811

To: The Commission

**INITIAL COMMENTS OF ICE-G, INC. DBA
INTERNATIONAL COMMUNICATIONS ELECTRONICS GROUP**

ICE-G, Inc. dba International Communications Electronics Group (ICE-G) hereby submits its initial comments as permitted by the Commission's March 24, 1997 Notice of Proposed Rulemaking (NPRM) (FCC 97-85)(62 Fed. Reg. 16129, April 4, 1997). In support whereof, the following is respectfully submitted:

1) ICE-G is an entrepreneurial company which was formed for the purpose of developing and deploying advanced telecommunications systems and services operating at 28 and 40 GHz. ICE-G currently possesses licenses to conduct radio experimentation in both frequency bands.

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List A B C D E

2) The NPRM, seeks comment on the Commission's proposal "to designate 4 gigahertz of spectrum predominantly for Fixed-Satellite Services ("FSS")."¹ For the reasons provided below, ICE-G considers that the Commission should revisit its tentative decision to allocate the 40.5-41.5 GHz band to predominant FSS use.

3) ICE-G has developed a 100% digital operating system in the 40 GHz band.² The 40 GHz spectrum and equipment developed for that spectrum is excellent for ground based applications which seek to compete with services provided by local exchange companies and multi-channel broadband video service providers in view of the rapid signal attenuation (thereby enhancing frequency reuse)³ and digitization of signals (thereby enhancing channel capacity).⁴ Moreover, the 40 GHz spectrum is ideal for rapid, wireless interconnection with the Internet.⁵

4) ICE-G is concerned that the Commission's decision to allocate the 40.5-41.5 GHz for predominant FSS use while permitting only an underlay of terrestrial wireless services will stifle growth of the nascent digital communications network which will compete with the entrenched communications networks. The Commission has already determined that this spectrum is ideal for

¹ 37.5-38.5 GHz, 40.5-41.5 GHz, and 48.2-50.2 GHz.

² ICE-G is in the process of securing capital to commence equipment manufacture of its proprietary, patented multi-service platform.

³ Notice of Proposed Rule Making, 9 FCC Rcd 7078, 7081 (1994) (para. 8).

⁴ The Commission previously found that the 40 GHz spectrum with its wide bandwidth "can support the operation of wireless communications links with capacity approaching that of coaxial cable and fiber-optic systems." Notice of Proposed Rule Making, 9 FCC Rcd. at 7081-82 (1994) (para. 8).

⁵ The FCC has found that data rates in the 40 GHz band will be in the 50-5000 Megabits/second range are possible and ICE-G concurs in that determination. Notice of Proposed Rule Making, 9 FCC Rcd. at 7082 n. 12 (1994).

the type of services proposed by ICE-G and allocation for satellite services. The Commission's decision to leave only 1 GHz of clear spectrum for wireless uses will likely delay significant competition with existing telephone and cable television interests and well as delay the coming of the wireless, high speed Internet.⁶

5) Additionally, if 2 GHz of the 40 GHz spectrum, i.e., 40.5-42.5 GHz, were made available to the fixed/mobile wireless industry on a predominant basis, the Commission could create two 1 GHz licenses in each market across the nation thereby ensuring necessary bandwidth for effective competition and increasing the return from any future auction. This would also serve to foster diversity in ownership of the spectrum. It is most likely that only a very few companies could participate in an auction for satellite spectrum given the enormous costs associated with manufacturing and launching satellites.⁷ This lack of bidding competition combined with the fact that, depending upon how the orbital slots are allotted, only two or three parties will be licensed on any particular FSS frequency, means that the Commission's auction return would be more limited compared to a market by market auction for wireless services.

6) If the Commission must proceed as announced in the NPRM, ICE-G concurs with the Commission's decision to afford wireless mobile and fixed services a "primary" status, albeit on an

⁶ ICE-G understands that the Commission has an obligation to find about \$2 billion to begin wiring schools and libraries to the Internet. It seems that a more economic approach would be to foster the wireless Internet industry. It would be cheaper to install wireless connections than to install wired connections. Moreover, the wireless connections will provide faster Internet access (real time, full motion video) likely rendering any wired connections obsolete.

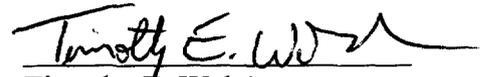
⁷ Only a few companies participated in the Commission's recent Digital Audio Broadcast satellite auction.

underlay basis. However, ICE-G respectfully requests clarification of the relationship between an underlay, but primary, wireless service provider and a predominant FSS provider.

WHEREFORE, in view of the information presented herein, it is respectfully submitted that the Commission should not allocate the 40.5-41.5 GHz band to predominant FSS use and that the Commission should allocate the 40.5-42.5 GHz band for predominant use by the wireless mobile and fixed services.

Respectfully submitted:
**ICE-G, INC. DBA INTERNATIONAL
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