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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of	)	
	)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies	)	RM-9332
	)	
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: The Commission

REPLY COMMENTS OF COMSPACE CORP.

ComSpace Corporation ("ComSpace")[1], pursuant to Section 1.405 of the Federal Communications Commission's ("FCC" or "Commission") rules,[2] hereby replies to the comments submitted in response to the Petition for Rulemaking filed the American Mobile Telecommunications Association, Inc. ("AMTA") in the above-captioned proceeding.[3] ComSpace supports AMTA's Petition and urges the FCC to adopt expeditiously a date-certain timetable for Part 90 licensees to implement spectrally efficient equipment. In support thereof the following is shown:

I. ComSpace Generally Supports AMTA's Proposal.

In its Petition AMTA argues that there is no rationale for either commercial or non-commercial operators to deploy more spectrally efficient equipment when the additional capacity

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[1] ComSpace Corporation, formerly Unique Technologies International Inc., is a technology development company with the goal of producing products that enable two-way radio licensees to more efficiently use their limited spectrum resources by increasing the capacity of and adding features to their wireless communications systems. Since 1994 the company has been developing Dynamic Channel Multicarrier Architecture ("DC/MA"), a new technology that could increase capacity economically for all operators, including medium- and small-sized firms. ComSpace has taken the technology from a working prototype to a real product and has signed a memorandum of understanding with a manufacturer.

[2] 47 C.F.R. § 1.405.

[3] Public Notice, Report No. 2288, (rel. July 31, 1998); AMTA, Petition for Rule Making, (filed June 19, 1998).

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that would be made available by doing so will be accessible to unknown, future licensees who have not made a comparable investment.[4] To provide an incentive for the deployment of more efficient technologies such as, but not limited to DC/MA, AMTA urges the Commission to adopt a date-certain time frame after which licensees that implement more advanced technologies will retain primary status on their originally authorized bandwidth, while the licenses of incumbents electing not to upgrade revert to secondary status. AMTA's proposal included all non-Public Safety Part 90 licensees in the bands between 222 MHZ and 896 MHZ, except for those licensees in the 800 MHZ Channel Blocks A-V, already subject to competitive bidding procedures. With the modifications discussed herein, ComSpace urges the Commission to adopt procedures consistent with AMTA's proposal.

As noted by several commenters,[5] the transition to spectrally efficient equipment in the "refarming bands" – the 150-174, 421-430, 450-470, and 470-512 MHZ bands -- is currently being managed through type-acceptance requirements placed on manufacturers of radio equipment. No similar requirements are in place in the 800 MHZ band. To date, there are also no provisions in place which provide licensees with incentives to upgrade their equipment. The result is unbalanced uncertainty, a delayed transition and ever increasing congestion on the subject bands.

On one side of the equation are the licensees. They have little confidence that if they are "good citizens" and invest in more efficient equipment, that they will reap any reward. Instead, they have a reasonable concern that any additional capacity made available by transitioning to narrower

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[4] AMTA Petition at 3-5.

[5] Comments of USMSS, Inc. at 2; The Council of Independent Communications Suppliers ("CICS") at 2 and UTC Comments at 11.

bandwidth or other more spectrally efficient technologies will be reserved for future licensees. Those willing to invest in advanced technologies not only have no assurance that they will enjoy the additional capacity created thereby, but bear the associated risk of increased interference. As a result, it appears that licensees will continue to use their spectrally less efficient, existing equipment.

On the other side of the equation are the equipment manufacturers. Without a market for their product, there is little incentive to make alternative equipment available. As an equipment developer, ComSpace brings to the Commission's attention that there is a strong correlation between the Commission's decision not to impose a date-certain for the transition and the speed at which new technologies are being produced and being brought to market. A date certain is necessary for the manufacturing community to plan its future portfolio and for investors to participate. While some telecommunications equipment is developed, implemented and manufactured by large publically traded companies, the Commission is aware that smaller, private companies often must seek funding from a variety of investment sources. If these hotbeds of technological innovation cannot correlate their concepts with investment dollars, their equipment does not make it to the marketplace.

AMTA's proposal would break the stalemate. The promise of retaining primary status on the totality of their originally assigned spectrum coupled with the threat of becoming secondary within a reasonable established time frame would drive licensees to replace their out-moded equipment. Moreover, the defined time frame will give manufacturers and investors reason to believe that there will be a market for technologically advanced techniques, and thereby spur the development and marketing of additional spectrally efficient equipment.

For the most part, ComSpace agrees with AMTA's delineation of the spectrum that should be subject to the new procedure. The 800 MHz channel blocks A-V are subject to competitive bidding procedures and should be exempt from these requirements in light of the FCC's oft-repeated

finding that it should be assumed that spectrum awarded by auction will be deployed in a spectrally efficient manner. Further, Part 90 spectrum at 220 MHz should be excluded from this proposal because of the channel bandwidth requirements already applicable to this band. However, unlike AMTA, ComSpace believes that 900 MHz Industrial/Business spectrum should be included in the proposal as even 12.5 kHz channels can be used more efficiently.[6]

Some Commenters in this proceeding oppose the adoption of deadline for efficiency improvements to the 800 MHz Industrial/Land Transportation and Business Pool frequencies.[7] ComSpace supports the inclusion of this spectrum in the proposal and strongly objects to their exclusion. While trunking two or more channels is more spectrally efficient than operating a single channel or a group of channels conventionally, trunking is not as efficient as the improved technologies that are already or soon will be made available.

II. Minor Modifications Should Be Made to AMTA's Proposal.

As described herein, ComSpace supports AMTA's suggestion that a defined time line be established for the election to convert to more spectrally efficient equipment. However, in contrast to Commenters who feel that the deadlines suggested are too demanding,[8] ComSpace submits that the dates suggested are overly protective. Instead, ComSpace urges the Commission to take a more aggressive approach and adopt the following deadlines for licensees to convert to technology that achieves a minium of two times the capacity of their current channelization:

Markets 1-50	1/1/2002
Markets 51-100	1/1/2002

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6 See, n.9.

7 Comments of Atlantic City Electric Company et. al, PCIA, and UTC.

8 See, e.g., Comments of PCIA at 5 and UTC at 12.

Markets 100-200 1/1/2005

Markets 200-305 Market Incentive

ComSpace also urges the Commission to take AMTA's proposal a step further and establish a time frame for the next logical standard -- technology that achieves a minimum of four times (4x) the capacity of current channelization. This 4x standard would be consistent with the refarming initiatives below 470 MHZ and allow for operators using "on channel trunking" systems. The technology already exists to implement this standard.[9]

III. Conclusion

As described herein, a date certain for the transition to spectrally efficient equipment is necessary for the industry to plan and for investors to participate. This is a critical issue, as now there are standards for type acceptance deadlines but not for operators for implementation. This results in a half solution and increased costs with no progress toward efficiency. AMTA's proposal with the modifications suggested herein will allow for the industry to successfully move forward into the future.

Respectfully submitted,

COMSPACE CORPORATION

Marilyn S. Mense

By its Attorneys:
Elizabeth R. Sachs
Marilyn S. Mense

September 15, 1998

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[9] ComSpace's DCMA technology will allow a five times (5x) increase within a 25 kHz channel and adhere to Part 90 Emission masks. DCMA increases capacity by splitting one 25 kHz transmission channel into six channels. Five channels can carry analog or digital voice or data at 9,600 bits per second, and the sixth channel is reserved for data at 2,4000 bps. At 12.5 kHz, it provides for 2 channels, and at 6.25 kHz, 1 channel.

CERTIFICATE OF SERVICE

I, Linda J. Evans have, on this September 15, 1998, caused to be hand delivered a copy of the foregoing Reply Comments to the following:

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