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**HAND DELIVERED**

Magalie R. Salas, Esquire

Secretary

Federal Communications Commission

1919 M Street, NW

Room 222

Washington, D.C. 20554

**Re: 1998 Biennial Regulatory Review — Amendment of Part 18 of the Commission's  
Rules to Update Regulations for RF Lighting Devices  
ET Docket No. 98-42**

Dear Ms. Salas:

Pursuant to Section 1.1206(a)(2) of the Commission's Rules, and on behalf of Symbol Technologies, Inc., 3Com Corporation, and Harris Corporation, I am filing the original and one copy of this letter to report an oral ex parte communication in the above-referenced proceeding.

Yesterday the following persons met at the Commission's offices: Julius P. Knapp, Karen Rackley, Anthony Serafini, and John A. Reed, all of the Office of Engineering and Technology; Jim Zyren of Harris Corporation; Peter Murray of Ericsson Inc.; and the undersigned. Although this firm does not represent Ericsson Inc., I am pleased to list Mr. Murray in this letter as an accommodation.

We explained that the proponents of 2.4 GHz RF lighting have declined to share emissions data. As a consequence, our analysis of interference from RF lighting to Part 15 has had to depend on the worst-case limits set by the RF safety rules, which predict very severe interference to Part 15 operations. Mr. Zyren presented a specific suggestion for shielding at least some configurations of RF lighting equipment. His proposal would block 98% of the interfering RF radiation while passing 95% of the visible light, at a cost of pennies per unit.

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We noted that it would benefit all of the parties to determine whether a technical solution exists that can accommodate the needs of both industries, without the need for the Commission to balance their respective interests. We noted, however, that such a resolution is impossible so long as the proponents refuse to share emissions data. In that event the above-listed companies, and perhaps other Part 15 interests as well, must continue to insist that the public interest requires setting limits in the band for RF lighting devices that constrain interference to Part 15 devices.

Additional information presented at the meeting appears in the attached handout materials.

Kindly date-stamp and return the extra copy of this letter.

If there are any questions about this filing, please call me at the number above.

Respectfully submitted,



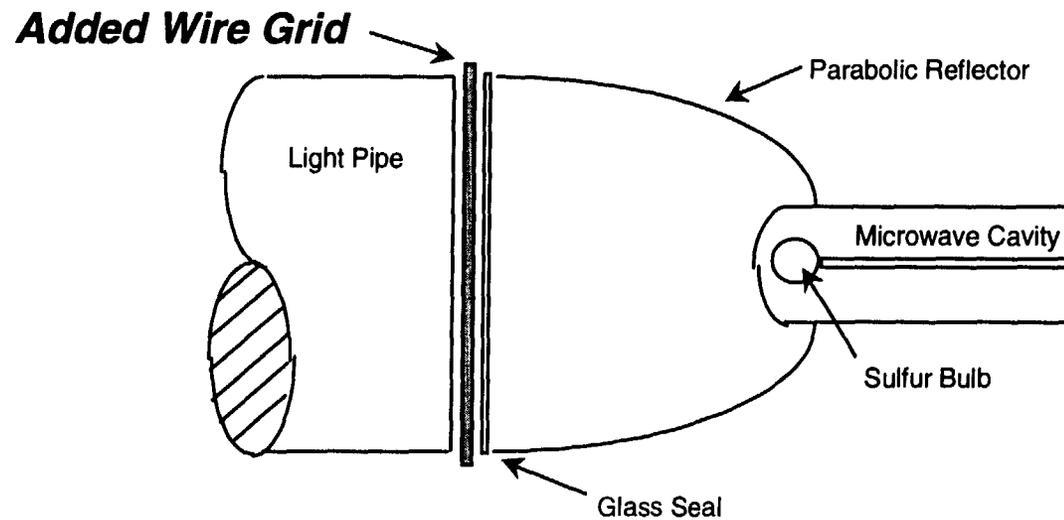
Mitchell Lazarus  
Counsel for  
Symbol Technologies, Inc.  
3Com Corporation  
Harris Corporation

ML:deb

Enclosures

cc: Meeting Participants  
Ray Martino, Symbol Technologies, Inc.  
Scott Forsyth, Esq., 3Com Corporation  
Jeff Abramowitz, 3Com Corporation  
Carlos Rios, 3Com Corporation  
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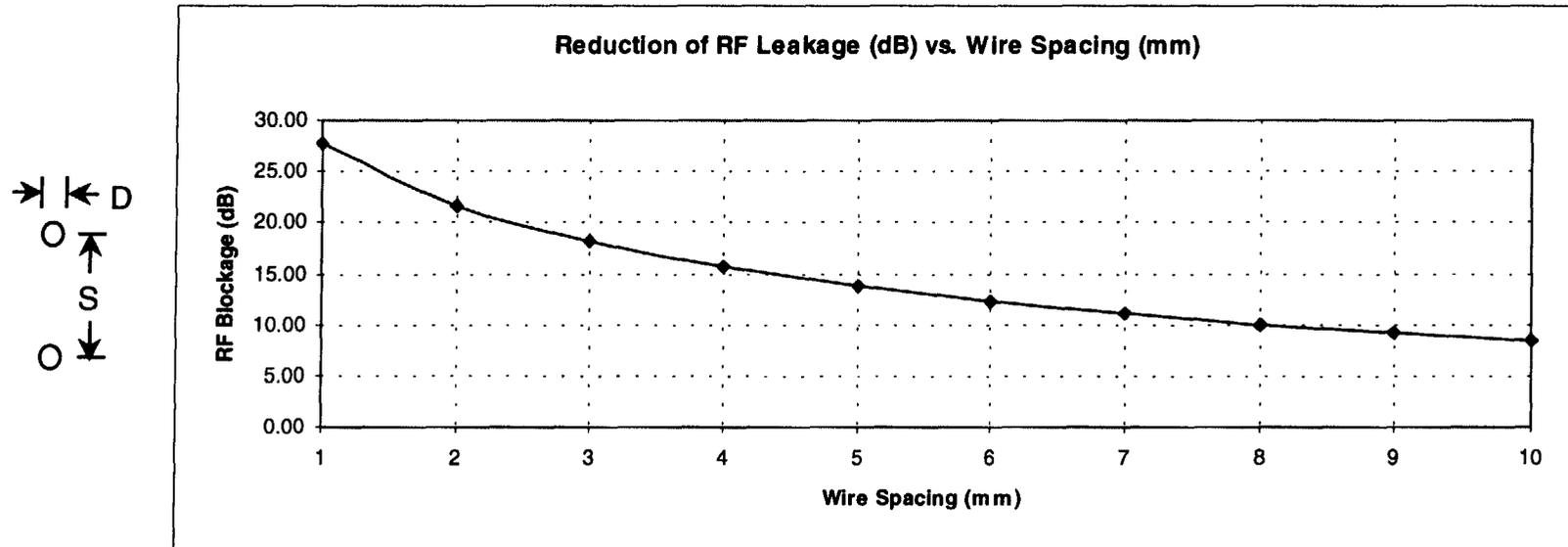
# Attachment: Possible RF Leakage Reduction Measures



**Figure A1 Wire Screen Placed between Reflector and Light Pipe**

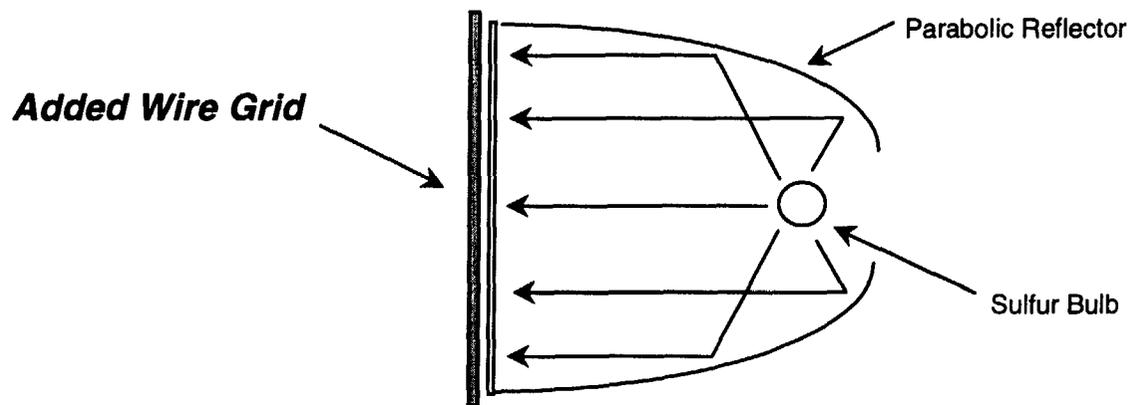
Placing a wire grid between parabolic reflector and light pipe could reduce RF leakage by over 98% while passing over 95% of the visible light, at a cost of pennies.

# Attachment: Possible RF Leakage Reduction Measures



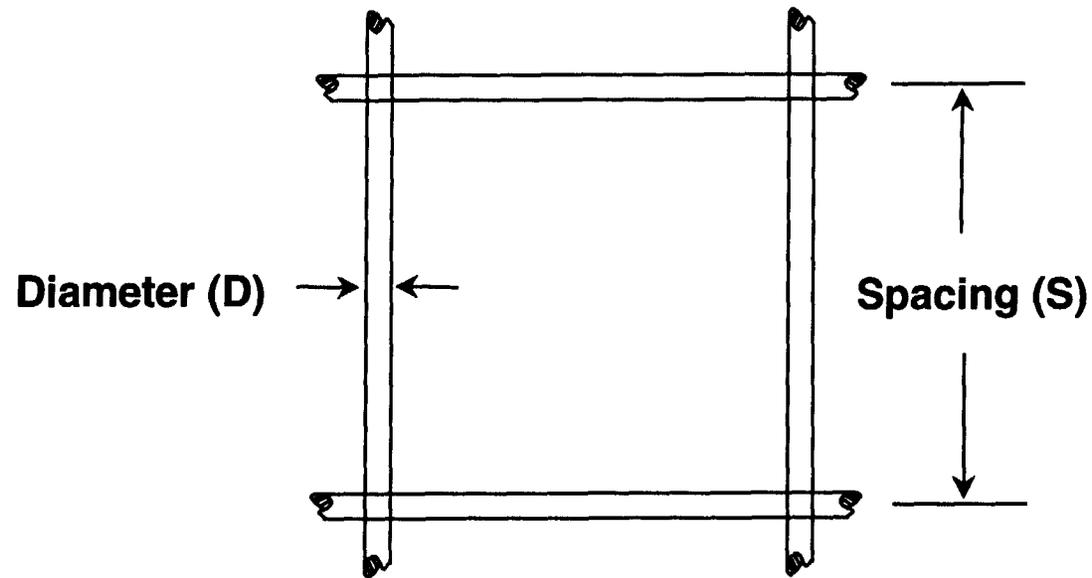
- Plot shows Reduction of RF Leakage vs. spacing of fine wires in a metal mesh placed between glass seal and light pipe as shown in Figure A1.
- Spacing of 3 mm blocks >98% of RF and passes >95% of normally incident light
- Ratio of wire spacing (S) to wire diameter (D) is fixed in this example:  $S/D = 40$
- Reference: Johnson & Jasik, "Antenna Engineering Handbook", 2nd Ed., McGraw Hill, 1984, pp. 46-3 to 46-8

# *Attachment: Possible RF Leakage Reduction Measures*



- Sulfur bulb located near focus of parabolic reflector ensures normal incidence of light upon wire grid
- Light must be at near normal incidence to ensure efficient coupling into light pipe
- Brewster's angle typically between 25 to 30 degrees depending on index of refractivity of light pipe

# *Attachment: Possible RF Leakage Reduction Measures*



- Optical transparency ( $t$ ):  $t = (S - D)^2 / S^2$
- For  $D = S / 40$ :  $t = 95.06\%$