

600 Mountain Ave, P.O. Box 636, Murray Hill, NJ 07974-0636

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL
(Nature of Service)

K E 2 X G F
(Call Sign)

XD MO
(Class of station)

S-0251-EX-91
(File number)

NAME AT & T BELL LABORATORIES

Vicinity of Holmdel and Murray Hill, NJ
(Location of station)

Special Temporary Authority is hereby granted to operate the radio transmitting apparatus described below:

Frequency MHz	Authorized Power (watts)	Emission Designator
19000	1 (ERP)	1G00W7D
22000	1 (ERP)	1G00W7D

This special temporary authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This special temporary authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control by the Government of the United States conferred by Section 706 of the Communications Act of 1934.

This authorization effective July 26, 1991 and
will expire 3:00 A.M. EST. January 26, 1992

FEDERAL
COMMUNICATIONS
COMMISSION

S0251-EX-91



AT&T Bell Laboratories

600 Mountain Avenue
P.O. Box 636
Murray Hill, NJ 07974-0636
908-582-0000
4380

July 8, 1991

Federal Communications Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, Pa. 15251-5320

This is to request a Special Temporary Authority (STA) for our license KE2XGF, File 1361-EX-R-89, for a period of 6 months beginning in July of 1991. Previous testing at microwave frequencies have been successful, but we now need to study the characteristics of high data rate channels at millimeter wave frequencies to determine the effects of multipath and cross-polarization coupling on digital signals.

The attachment to this request gives all the pertinent technical information relative to these additional tests. We also request that the station identification requirements of Section 5.152 of the Commissions Rules again be waived.

We are aware that commercial use of the previously reserved channels is now authorized and we will coordinate our use of the reserved frequencies to avoid interference.

We thank you for your previous assistance and we trust that the information furnished is sufficient for the Commission's purposes. Should any additional information be required, please contact the FCC License Coordinator at the above address.

Yours very truly,

A handwritten signature in dark ink, appearing to read "R. G. Rau".

R. G. Rau
FCC License Coordinator

Copy (with att.) to
M. J. Gans

EQUIPMENT:

Experimental - AT&T Bell Laboratories

FREQUENCIES:

1 Duplex channel in the reserve bands 17.7 to 19.7 GHz and 21.2 to 23.6 GHz
Mobile XMIT 19.000 GHz (Cell Site Receive) $\pm 1.0\text{ppm}$
Cell Site XMT 22.000 GHz (Mobile Receive) $\pm 1.0\text{ppm}$

Power:

Not to exceed
Cell Site Station - 1 watt ERP
Mobile Station - 1 watt ERP

EMISSIONS:

19.000 GHz 1GOW7D
22.000 GHz 1G0w7d

Experimental Spectrum

4 Quadrature phase Modulation
Bit rate fixed for any test but can vary from 40 Mb/s - 1 Gb/s

ANTENNA & LOCATION:

Mobile and Cell Site Consistent with the requirements of
Antennas class A, US FCC Part 21 and 94
47.9db gain parabolic Andrew HPX6-180 or
49.7db gain parabolic Andrew HPX6-220
0.65 degrees vertical and horizontal beamwidths.
Antennas may be mounted on 80 ft. tower at
Murray Hill or 20 ft. tower at Crawford Hill.
These towers are presently used at lower
frequencies and conform to FCC requirements.
Antennas may also be mounted on the existing
Holmdel Building and do not extend more than
6 meters above the building.

TRANSMISSION LOCATIONS:

**Latitude 40° 21' 52" North AT&T Bell Laboratories
Longitude 74° 10' 28" West Crawford Corners Road
Holmdel, New Jersey 07733-1988**

**Latitude 40° 23' 38" North AT&T Bell Laboratories
Longitude 74° 11' 06" West Keyport Holmdel Road
Crawford Hill Laboratory
Holmdel, N.J. 07733-0400**

**Latitude 40° 40' 55" North AT&T Bell Laboratories
Longitude 74° 23' 41" West 600 Mountain Avenue
Murray Hill, New Jersey 07974-2070**

POINT OF CONTACT:

**M.J.Gans
Room HOH R-215
201-888-7142**

FEDERAL COMMUNICATIONS COMMISSION
FEE PROCESSING FORM

FOR
FCC
USE
ONLY

FCC/MELLON JUL 09 1991

07-10-91 8320338 001

Please read instructions on back of this form before completing it. Section I MUST be completed. If you are applying for concurrent actions which require you to list more than one Fee Type Code, you must also complete Section II. This form must accompany all payments. Only one Fee Processing Form may be submitted per application or filing. Please type or print legibly. All required blocks must be completed or application/filing will be returned without action.

SECTION I

APPLICANT NAME (Last, first, middle initial)

AT+T

MAILING ADDRESS (Line 1) (Maximum 35 characters - refer to Instruction (2) on reverse of form)

600 MOUNTAIN AVE RM 3B-322

MAILING ADDRESS (Line 2) (If required) (Maximum 35 characters)

CITY

MURRAY HILL

STATE OR COUNTRY (If foreign address)

N.J.

ZIP CODE

07974

CALL SIGN OR OTHER FCC IDENTIFIER (If applicable)

KE2X6F

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in FCC Fee Filing Guides. Enter in Column (B) the Fee Multiple, if applicable. Enter in Column (C) the result obtained from multiplying the value of the Fee Type Code in Column (A) by the number entered in Column (B), if any.

(A)

(B)

(C)

FEE TYPE CODE

FEE MULTIPLE
(if required)

FEE DUE FOR FEE TYPE
CODE IN COLUMN (A)

FOR FCC USE ONLY

(1)

E A E

/

\$ 35.00

SECTION II

— To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)

(B)

(C)

FEE TYPE CODE

FEE MULTIPLE
(if required)

FEE DUE FOR FEE TYPE
CODE IN COLUMN (A)

FOR FCC USE ONLY

(2)

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(3)

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(4)

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(5)

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\$

ADD ALL AMOUNTS SHOWN IN COLUMN C, LINES (1) THROUGH (5), AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.

TOTAL AMOUNT REMITTED
WITH THIS APPLICATION
OR FILING

\$

FOR FCC USE ONLY

35.00