

Item 4. Particulars of Operation

Frequency (MHz) (A)	Power (B)	Power (C)	Power (D)	Emission (E)	Modulating Signal (F)	Necessary Bandwidth (KHz) (G)
824-849 & 869-894 (Cellular Channel Blocks A & B per Rule §22.905)	N/A	Base Stations - 500 watts ERP; Mobile Stations - 7 watts ERP	N/A	F3E F3D F1D	Per Rule §22.915	40
1850-1910 & 1930-1990 (Broadband PCS per Rule §24.229)	100 watts	Base Stations - 1640 watts EIRP; Mobile Stations - 2 watts EIRP	Peak	Per Rule §24.238	N/A	N/A

BellSouth Mobile Systems, Inc. ("BMSI") seeks authority to perform experimentation on frequencies in the Cellular Radiotelephone Service and the Broadband Personal Communications Service ("PCS"). Such experimentation would be conducted within the technical parameters set forth in Parts 22 and 24, respectively, with one exception as described in Exhibit III. The power limitations, as adjusted for height, specified in the applicable rules in those parts would be the limits for BMSI's experimentation. Similarly, emissions and modulating signals would be restricted to those permitted by the applicable rule sections. In part, the experimentation would test various equipment options that manufacturers make available to BMSI and its cellular and PCS operating entities prior to the FCC granting type-acceptance of such equipment. Thus, a variety of emissions and modulating signals (as well as bandwidths in the case of Broadband PCS) will be tested in the different experiments. Additionally, BMSI would continue to perform propagation tests in the eleven state area for which it seeks a license. The varied topography and urban and rural densities in those states offer different operating environments for a broad range of tests.

Item 5 (a) – (d)

BMSI seeks authority to perform experimentation at various locations throughout the states of Alabama, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Texas. BMSI subsidiaries and affiliates hold directly or indirectly licenses in either the Cellular Radiotelephone Service or the Broadband Personal Communications Service or both in those states.

BMSI proposes to perform experiments utilizing, for the most part, existing facilities that are part of the cellular or PCS systems its subsidiaries and affiliates have or will construct. Grant of the requested authority will permit BMSI to conduct its experimentation in different environments and topography. BMSI cannot provide the specificity requested by Item 5 because the experimentation will be conducted at various locales within the eleven states dependent upon the equipment to be tested and environment and topography needed for the individual experiment.

Item 6

BMSI will use omnidirectional and directional antennas during the course of experimentation. BMSI considers it essential to its program of experimentation to employ a wide variety of antennas from different manufacturers. Given the considerable number of different environmental factors that will impact on the experimentation, BMSI seeks the widest latitude possible for the types of antennas it may use when testing new equipment for deployment and existing equipment for new uses, such as for the next generation of mobile communications services.

BMSI's proposed operation will vary in one respect from the technical parameters specified for operation on Cellular Radiotelephone Service frequencies. Section 22.367(a)(4) of the Commission's rules limits emissions on those frequencies to vertical polarization. BMSI seeks authority to operate with polarization other than vertical. The mobile communications environment of today is dominated by portable handset usage not "mobile" usage, *i.e.*, operating a cellular phone in a cradle in a vehicle. Vertical polarization was certainly appropriate when it was expected that most operations would be a "mobile" nature. BMSI seeks the latitude to do experimentation with polarization that will be other than vertical to determine the impact such operation may have on the cellular networks of the future.

Items 10, 13 & 15

BMSI seeks authority to perform experimentation at various locations throughout the states of Alabama, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Texas. BMSI subsidiaries and affiliates hold directly or indirectly licenses in either the Cellular Radiotelephone Service or the Broadband Personal Communications Service ("PCS") or both in those states. In part, the experimentation would test various equipment options that manufacturers make available to BMSI and its cellular and PCS operating entities prior to the FCC granting type-acceptance of such equipment. Such experimentation is beneficial to BMSI and the manufacturers in that it facilitates the perfection of new developments in the radio art, including equipment that may be used for the next generation of mobile communications services.

BMSI also would perform propagation tests in the eleven-state area for which it seeks a license. The varied topography and urban and rural densities in those states offer BMSI the opportunity to learn more about radio frequency propagation in these different environments. Such knowledge permits BMSI to assist its cellular and PCS entities in designing and implementing more efficient and cost effective mobile communications systems.

BMSI, for the most part, will utilize in the experimentation existing facilities that are part of the cellular or PCS systems its subsidiaries and affiliates currently have constructed or will construct. Prior to any experimentation in an area on frequencies not licensed to one of its subsidiaries or affiliates, BMSI will coordinate with existing mobile communications licensees or, in the PCS spectrum, point-to-point microwave licensees whose facilities as yet have not been relocated.

BMSI respectfully submits, based on the foregoing, that the public interest, convenience and necessity will be served by grant of the instant application.