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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules To Permit Flexible Service Offerings in the Commercial Mobile Radio Services	)	WT Docket 96-6

DOCKET FILE COPY ORIGINAL

TO: The Commission

COMMENTS OF TELULAR CORPORATION

Telular Corporation ("Telular"), as a leader in the fixed wireless telecommunications industry, has developed unique insights into the value of permitting commercial mobile radio service ("CMRS") providers greater flexibility to provide wireless local loop services. Telular strongly supports the Commission's tentative conclusion that CMRS providers should have additional flexibility to provide wireless local loop services. We believe that licensees should have the discretion to implement any forms of fixed wireless service demanded by the marketplace without unnecessary regulatory restrictions. In these comments, we describe briefly the benefits of fixed wireless service and address certain of the legal issues presented by the issues before the Commission.

I.

Telular designs, develops, manufactures and markets products worldwide based on its proprietary interface technology that bridges wireline customer premises equipment and wireless networks. Telular equipment, which is described

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in Attachment A, can provide fixed wireless alternative access services in place of existing wireline services. It can provide fixed wireless services as primary services when wireline systems are unavailable, unreliable or uneconomical. It can permit companies to employ wireless backup systems for emergency situations when wireline systems become unavailable. And it can provide wireless security alarm transmission systems.

In short, the variety of fixed wireless services that are made possible by Telular's technology and equipment mirrors the potential benefits that fixed wireless service has the capacity to bring to the American public:

- First, fixed wireless service promises to be the first real challenge to the local loop monopoly. Provided that other regulatory and policy issues are resolved (primarily interconnection), fixed wireless services -- radio links between CMRS base stations and stations that can be installed in residences and imbedded into business private branch exchanges ("PBXs") -- have the capacity to bring price and service competition to telephone local exchanges.[1/]

[1/] This is not a next-generation vision; Telular's PhoneCell and PCS^{ONE} technologies can provide these functions today. As depicted on Attachment A, PhoneCell docking stations permit cellular or PCS signals to substitute for wired connections for homes and small offices. Computers and facsimile machines can be connected through these products to the switched network.

- Second, rural and remote areas that now may be served by archaic and unreliable wireline service can leapfrog over expensive and time-consuming wired solutions directly to wireless systems. This incarnation of fixed wireless service is especially valuable in parts of Asia, Eastern Europe and South America, where it is being used extensively for local telephone service; it is similarly valuable in sparsely populated areas of the United States.[2/]
- Third, fixed wireless systems can be imbedded into businesses' PBXs and local area networks to permit continued service even when wireline service is interrupted due to weather or other emergencies.[3/]
- Fourth, fixed wireless systems can provide security when wireline solutions are susceptible to being cut or destroyed by disasters. They similarly are

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[2/] Again, Telular's PhoneCell and PCS^{ONE} products have the capability to provide this service. In addition, Telular 2000 pay phones permit wireless public phones to be placed in geographic areas where it would be cost-prohibitive to install a wired telephone.

[3/] Telular's CPX technology, a multi-line unit that enables a PBX to convert to cellular, PCS or SMR for wireless backup of critical lines, can accomplish this goal. It also can be used in connection with least-cost-routing software to permit companies to utilize wireless or wireline service connections to interexchange carriers or other service providers more cost efficiently.

dependable and flexible for use with utility and energy monitoring services.[4]

It is virtually self-evident that it is in the public interest for Commission licensees to be empowered to provide these innovative and highly demanded services to the American public. The Commission has taken the correct initial steps over the past decade toward a regulatory regime that will provide licensees with sufficient flexibility to provide these services as "incidental" or "ancillary" to mobile service. The Commission should build upon this progress to permit CMRS licensees to deploy all these services without regulatory constraint. With this freedom, Commission licensees will be guided by the demands of the marketplace rather than by the strictures of regulations that cannot hope to keep pace with the dynamic and quickly changing needs of the American public.

II.

We agree with the Commission that its rules should be clarified to make it crystal clear that CMRS licensees can provide fixed wireless services without restriction. At the outset, however, the Commission should recognize that its rules already provide PCS, cellular and SMR licensees a great deal of flexibility to implement fixed wireless services. We

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[4] In particular, Telular's TelGuard wireless security alarms enable the transmission of intruder and fire alarms over cellular, PCS or SMR systems when wired lines are cut or service is interrupted.

believe, in particular, that PCS bidders would not have contributed nearly $8 billion to the Federal Treasury for Block A and B PCS licenses, and an amount that may well exceed that for Block C licenses, without the expectation that the Commission's rules would permit them to compete in the local loop by providing fixed wireless services.

Under existing rules, the analysis for cellular, PCS or specialized mobile radio ("SMR") is essentially a two-step process. The first issue is whether the proposed service would be considered "mobile." The Commission's rules define a "mobile station" as a "one or more transmitters that are capable of operation while in motion."[5/] Technologies that can receive and transmit signals while being moved should be considered "mobile" and thus not "fixed." Docking stations such as Telular's PCS[ONE], which are capable of operating as they are being moved from one point to another, are "mobile." Thus, these services already can be introduced by consumers and licensees without any regulatory impediments.

[5/] 47 C.F.R. § 22.99 (1994) (see Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services, 9 F.C.C. Rcd. 6513, 6588 (1994) ("Revision Order")). Because neither PCS nor SMR rules contain a different definition and because the Commission has shown a strong intent to interpret its rules to provide regulatory parity between potentially competitive services, this definition should provide guidance for all three services. See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Third Report and Order, 9 F.C.C. Rcd. 7988, 8086-87 (1994) (finding that restrictions on fixed communications in Part 22 and Part 90 are "similar").

Relatively permanent technologies that are imbedded into a subscriber's home or into a business' PBX, however, would not be considered "mobile." This group of fixed services can be provided only if the proposed fixed service is "ancillary" to PCS service or "incidental" to cellular service.[6] In proposing this test for PCS in 1992 and adopting it in 1993, the Commission employed parallel reasoning:

> There is only a limited amount of spectrum for these new PCS services, and fixed service uses generally can be accommodated by other means or in other frequency bands. Therefore, the primary focus of PCS will be to meet communications requirements of people on the move.[7]

The Commission's staff has emphasized that fixed PCS is, in fact, permissible under existing rules and has specified certain uses that the Commission would consider "ancillary":

> In this regard, the staff believes that PCS includes fixed services ancillary to or in support of the provision of a wide range of portable and mobile wireless services to individuals and businesses. The Commission anticipated that PCS will be provided by a variety of technologies and will be integrated

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[6] The Commission's most recent statements on fixed wireless services have been in its PCS rules, which provide that "[f]ixed services may be provided only if ancillary to mobile operations." 47 C.F.R. § 24.3 (1994). There are no explicit restrictions as to fixed service in the SMR rules, but, again, these rules should be read to be consistent with applicable cellular and PCS rules on fixed service.

[7] Amendment of the Commission's Rules to Establish New Personal Communications Services, Notice of Proposed Rule Making, 7 F.C.C. Rcd. 5676, 5689 (1992); see Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order, 8 F.C.C. Rcd. 7700, 7712 (1993) ("there is only a limited amount of spectrum available to meet the primary purpose of serving people on the move").

> into, and work with, competing networks. The staff believes that examples of permissible fixed services include links connecting PCS base stations and other network operations facilities; transmission of PCS network control and signalling information; and facilities linking users' premises to PCS networks.[8]

Given this reasoning, it should be clear that fixed PCS services that "link[] users' premises to PCS networks" are permissible so long as sufficient PCS capacity is available to meet the needs of "people on the move." Id. at 1.

This view is consistent with the Commission's policy permitting cellular licensees to provide fixed wireless service when it is "incidental" to mobile use. Under this test, "[a]s long as a cellular radio licensee can offer fixed cellular service without damaging, diminishing, or otherwise interfering with its licensed cellular service and without increasing the cost to its mobile subscribers not using the fixed service, it will be permitted to offer fixed cellular as an incidental service."[9] The Commission permits cellular

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[8] Letter from Regina M. Keeney, Chief, Wireless Telecommunications Task Force, FCC, to A. Thomas Carroccio, Esq., Nov. 15, 1994, at 1-2.

[9] Amendment of the Commission's Rules to Facilitate the Development of Cellular Radio Telecommunications Service in the Rural Areas of the Country ("Rural Cellular Service"), 58 R.R.2d 517, 521 (1985). Prior to providing service to fixed locations, cellular licensees must notify the Commission by filing a letter describing the service; this specific requirement, however, has not been imposed upon PCS or SMR licensees. 47 C.F.R. § 323(d) (1994). This notification also need not specify each fixed location, and cellular carriers need not submit additional notifications when new fixed subscribers are added. See Rural Cellular Service, 58 R.R.2d at 521 n.8.

licensees to implement such "incidental" services if they do not prevent the licensee from effectively providing service to mobile stations or increase costs to mobile subscribers.[10/] The terms "ancillary" and "incidental," although not precisely identical, thus should be given a consistent meaning.

Under the Commission's existing rules, then, any licensee that offers service for mobile applications would be permitted to offer "fixed" PCS, cellular or SMR services so long as its service to fixed points does not interfere with or increase the cost of its service to mobile stations. Accordingly, even applications that are unquestionably "fixed" -- residences or offices with permanently mounted base stations, for example -- are permissible so long as they do not prevent the licensee from offering mobile services.

III.

Although existing rules do, in fact, permit wireless fixed services, we agree that it would provide CMRS licensees additional guidance if the Commission clarifies that wireless local loop services always will be considered permissible. It also would be equitable and spur competition if the Commission made clear that the regulatory requirements for fixed wireless service by all CMRS providers will be identical.

[10/] See 47 C.F.R. §§ 22.323; 22.901 (1994). Under revised section 22.901, a carrier must determine that the incidental service will not interfere with the primary mobile service. See 47 C.F.R. § 22.901(d)(1).

The primary justification for the modest limitations the Commission has placed upon fixed services in the past no longer is persuasive -- there simply is no regulatory need to ensure that sufficient spectrum will be available for mobile services in addition to fixed services because a highly competitive emerging marketplace will ensure that licensees serve the public efficiently. Regulatory restrictions that may have been advisable in a two-licensee market consisting only of cellular may no longer be necessary in a marketplace that includes two cellular licensees, from three to five PCS licensees, at least one SMR licensee, and potentially other competitors offering voice and data services via satellite or local multipoint distribution systems.[11/]

Telular also agrees with the Commission's proposal to treat wireless local loop services as an integral part of a carrier's CMRS services and not impose any additional regulatory or oversight requirements over wireless local loop service. It would be inappropriate and unnecessary to regulate fixed wireless services any more pervasively than mobile services; imposing additional regulatory structures would impede the very flexibility that the Commission would engender by adopting its proposed changes to the rules. Similarly, it is simply to early to judge whether universal

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[11/] We also do not believe that any additional technical rules are needed to govern wireless local loop uses in the broadband PCS bands. The Commission's existing rules provide sufficient interference protection for the greater traffic that may be anticipated in a wireless local loop environment.

service benefits or obligations should be extended to CMRS providers providing wireless local loop service. There will be time enough when the market matures and the Commission can assess the actual operation of wireless local loop services to determine the extent to which wireless carriers should contribute to, or benefit from, universal service funds.

* * *

Telular applauds the Commission for proposing to clarify its rules to more explicitly permit fixed wireless service. We urge the Commission to resolve this rule making expeditiously so that Block A & B PCS licensees that are constructing their systems, and Block C PCS licensees that soon will be planning their systems, can integrate appropriate elements of wireless local loop service into their initial offerings.

Respectfully submitted,

TELULAR CORPORATION

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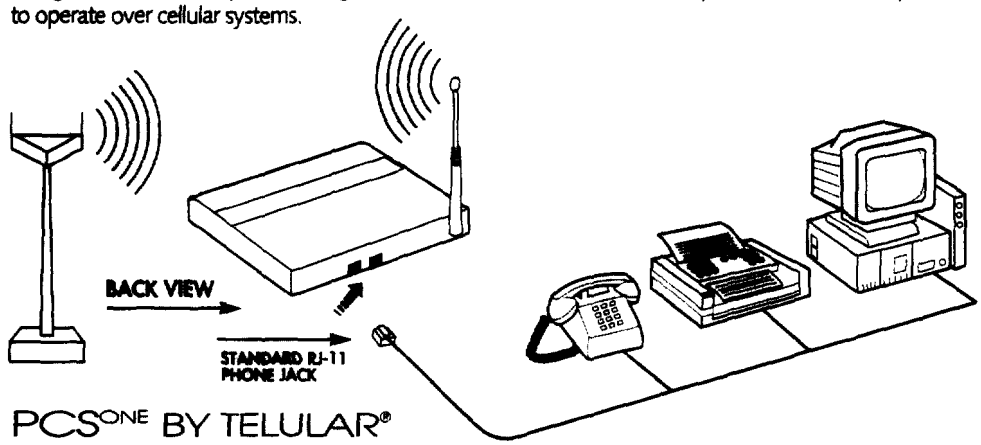
March 1, 1996

ATTACHMENT A

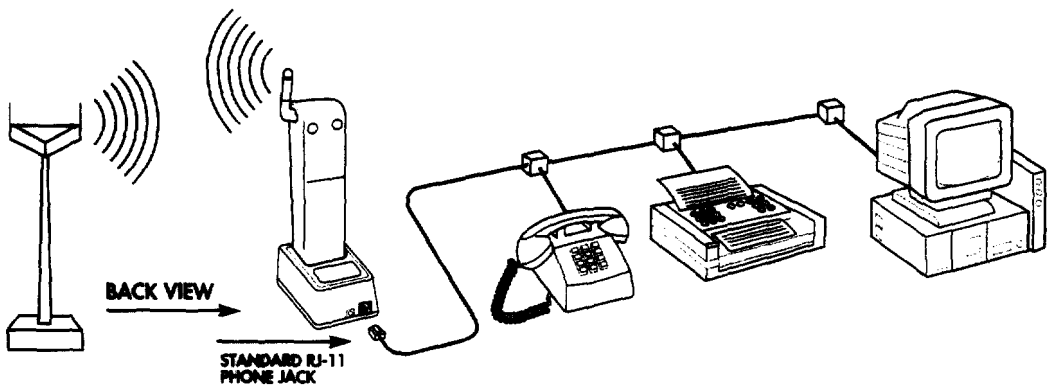
PHONECELL™ BY TELULAR®

Using a standard RJ-11 port, the single-line PhoneCell enables standard telephones, faxes or computers to operate over cellular systems.



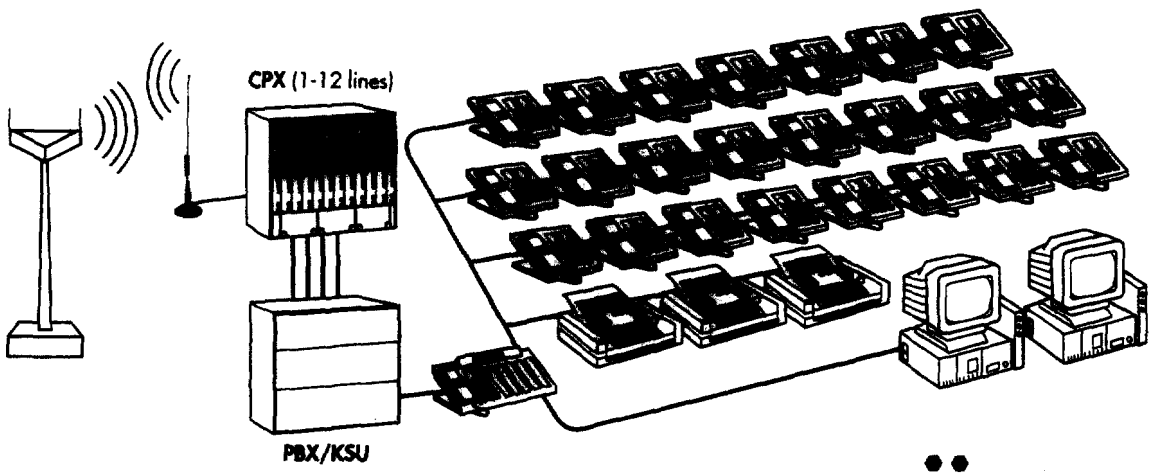
PCS^ONE BY TELULAR®

PCS^ONE allows users to interconnect certain models of hand-held cellular phones with existing standard home and/or office systems, supporting every telecommunications function including computer, fax, answering machine and speakerphone. PCS^ONE also allows one number flexibility for home, office or car.



CPX® BY TELULAR®

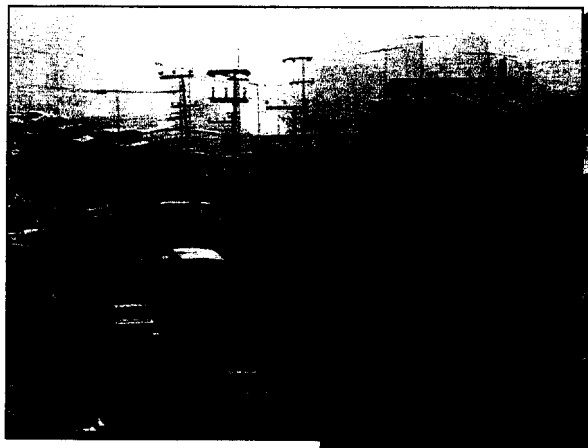
CPX is a multi-line unit that enables a PBX or key system to convert to cellular systems for wireless back-up of critical lines as well as primary wireless service.



TELULAR

IN CONNECTION WITH THE OFFERINGS, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK OF THE COMPANY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH TRANSACTIONS MAY BE EFFECTED IN THE OVER-THE-COUNTER MARKET OR OTHERWISE. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

TELULAR®



Wireless Basic Phone Service
PhoneCell enables the rapid deployment and cost-efficient installation of primary wireless telecommunications systems in conjunction with or as an alternative to the expansion of basic wireline systems.

Remote Wireless Data Monitoring
PhoneCell can be used to facilitate wireless data telemetry, monitoring and collection in remote locations such as railroad crossings, oil and gas wells and electric power facilities.

Using a standard RJ-11 port the single-line **PhoneCell** enables standard telephones, faxes or computers to operate over cellular systems.

CPX is a multi-line unit that enables a PBX or key system to convert to cellular systems for wireless back-up of critical lines as well as primary wireless service.

PhoneCell DX is specifically designed to accommodate the new TDMA digital cellular transceivers. The DX can be easily modified to incorporate future versions of digital transceivers, such as CDMA, GSM, etc.

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Wireless Alternative Access/ Personal Communications Applications

If technological advances continue (digital cellular, ESMR and PCS) and airtime prices continue to decrease relative to land line prices, additional opportunities for fixed wireless service, including local loop service and direct wireless access to long distance carriers, may emerge in the United States and other developed countries.

Wireless Backup Phone Service

Telular's PhoneCell provides backup phone service whenever traditional wireline service is disrupted by automatically converting a PBX, key system, fax or computer to available cellular service.

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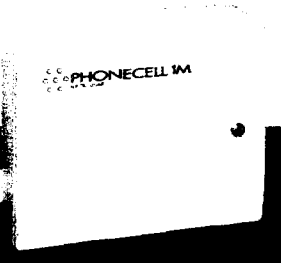

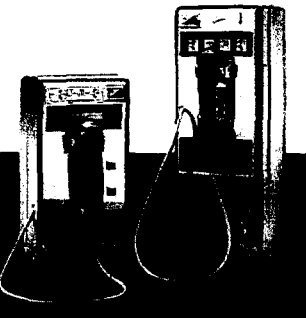

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Telguard wireless security alarms enable the transmission of burglar and fire alarm signals over cellular system when wired lines are cut or otherwise inoperable.

PhoneCell 1M and 1E models are ruggedly built and weatherproofed to withstand hostile environments, making them especially suited for unattended field voice and data communications such as telemetry and SCADA.

PhoneCell pay phones provide wireless public phone service in places too expensive or too difficult to reach with wireline service.