

TELESIS TECHNOLOGIES LABORATORIES EXPERIMENTAL LICENSE KM2XOF						
EXHIBIT No. 1						
4. Particulars of Operations						
Frequency(state whether kHz or MHz)		POWER		EMISSION	MODULATING SIGNAL	NECESSARY BANDWIDTH (KHZ)
(A)	(B)	(C)	(D)	(E)	(F)	(G)
2150-2160 MHz		2000 Watts	Peak	NON, 6M25C3F, F3E, G3E		6000
2500-2686 MHz		2000 Watts	Peak	NON, 6M25C3F, F3E, G3E		6000
3700-4200 MHz	20 Watts		Mean	NON, 30MF2B, F3E, F3F, F7W, F8W, 30MOD7W, D2W, DXW,		30000
5925-6425 MHz	20 Watts		Mean	NON, 30MOB2B, B8W, 30MF2B, F3E, F3F, F7W, F8W, 30MOD7W, D2W,		30000
10700-11700 MHz	10 Watts		Mean	NON, 30MF2B, F3E, F3F, F7W, F8W, 30MOD7W, D2W, DXW,		40000
				40MOD7W, D2W, DXW,		
40500-42500 MHz	1000 Watts		Mean	NON		1000000

(G) Carson's Rule for Bandwidth

*D2W not valid line
(D2W & DXW should be OK)*

TELESIS TECHNOLOGIES LABORATORY

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EXHIBIT No. 2

Telesis Technologies Laboratories (TTL) plans to use transmitting equipment throughout California, at temporary fixed locations, to determine propagation characteristics of Local Multipoint Distribution (LMDS), other similar wireless cable systems (MMDS digital, etc.) as well as point-to-point and multipoint-to-multipoint video, data, etc., delivery systems. Particular attention will be focused on rain and vegetation attenuation in various California environs (rural to suburban to dense urban locations, dry desert to temperate to humid coastal climates and flat desert to mountainous and hilly terrain).

Additionally, fading, signal absorption, multipath interference will be examined. The objective is to determine the viability of various delivery systems under a variety of conditions using prototypical equipment at various frequencies. Additionally, detailed analysis of both radio and signal transmission under the various conditions will be documented as will maximum distances with acceptable service delivery.

The specific objectives of these tests will be to determine the feasibility of providing wireless services, concentrating on video, using various frequencies and technologies in a wide variety of configurations. The goal is to provide existing and new services to areas not presently served or to offer an alternative to existing services.

Experimentation into additional applications such as two-way voice wide-band data, low speed video as well as program quality video will be explored. Our original experimentation into millimeter wave needs to be augmented to include other frequency bands with compressed video using digital modulation techniques. Additional experimentation to obtain engineering data and the techniques needed to minimize degradation caused by the effects of multipath and simulcast as well as the use of repeaters, passive and active reflectors and the effects of various environmental conditions on digital wireless transport is needed.