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**EYE-EASE<sup>®</sup>**  
**STENO NOTEBOOK**

**80 Sheets**  
**TUMBLER<sup>®</sup> BOUND**



**36-746**

BOOK NO. \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_

# Remote Radiology

Cost: 1 Radiologist

$$\frac{300}{\cancel{200}}/\text{day} \times 365 = \underline{\$109,500} \approx \frac{110,000}{\text{wages}}$$

## investment

each ER 25,000

microwave 50,000

$$75,000 \div 5\text{yr} = 15,000 \text{ deprec/yr/ER}$$
$$\times 14 \text{ ER} = \underline{210,000}$$

~~main~~

## main station

equip: monitor 6000

switches 2000

frame 12000

$$\frac{20,000}{5} = \$4,000$$

Rent \$15,000

Billing & sec'y \$10,000

phone etc 2,000

~~cost~~

110,000	sal
210,000	depr.
4,000	depr.
15,000	rent
10,000	admin
2,000	admin
<u>\$351,000</u>	

investment

75,000
<u>x 14</u>
1,050,000
20,000
<u>1,025,000</u>

Remote radiology  
Revenues

$$6 \text{ readings/hr} \times 12 \text{ hrs} = 72 \text{ readings/day}$$

$$72 \times 365 = 26,280 \text{ readings/yr.}$$

\$35/reading receipt

$$\rightarrow 919,800 \approx 900,000$$

Profit

900,000
<u>350,000</u>
550,000

r



MDS

out in TV-Radio age. ~1974.

10 MHz - 1 channel

Microband (Rob Wells)

2 yrs ago

Line of sight  
delivery edue, hospitals, hotels etc.  
applicants seek common carrier status

backlog

few granted 214 certif.

law firm:

Kelly Griffith - Dept of Common Carriers  
Tom Keller.

Paul Kagan - MDS newsletter

Motorola - Travis Marshall

- granted 214 in DC.

MDS

510 applis 80-90 cities

460 mult applis

LA: 2 ch

ch 1: 5 appl

ch 2: 6 "

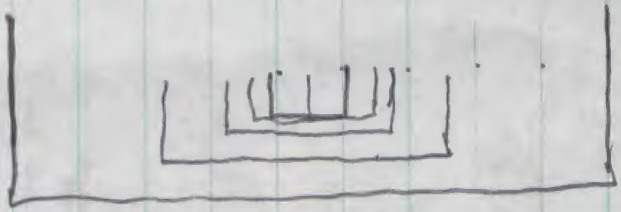
Docket 19905 proposed procedure for proc applis  
may drag on years.

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IFTS:

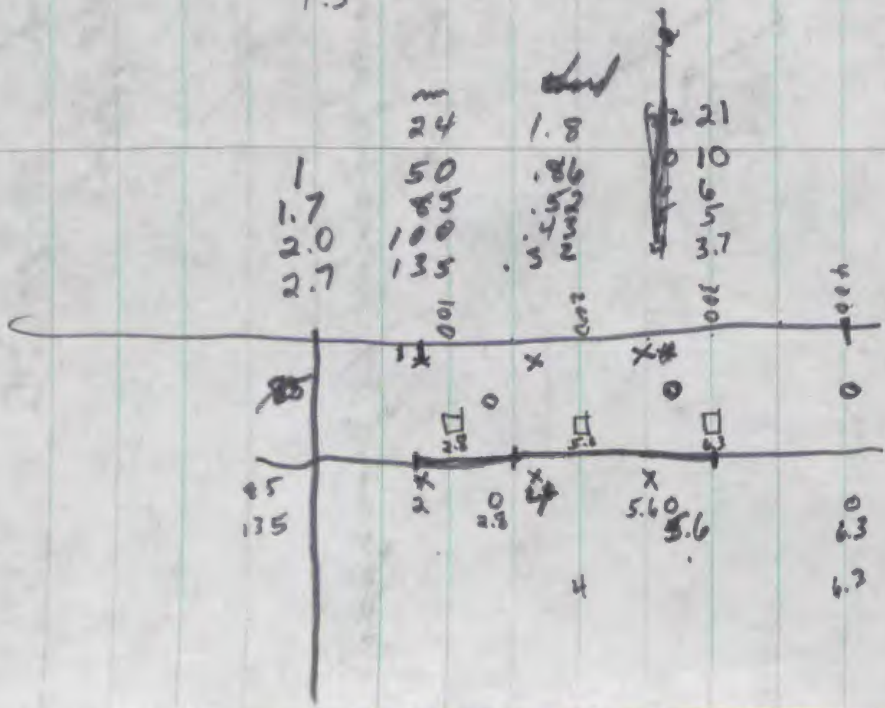
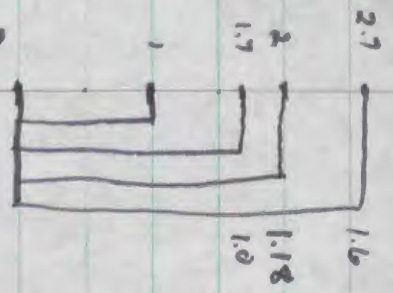
instr or govt organ  
→ non-profit selected

95	.52	10'
50	.86	5
24	1.8	8½
	1.5	18



1	m	1.8	21
1.7	24	.86	10
2.0	50	.52	9.5
2.7	85	.45	3.7
	100	2	
	135		

$$\frac{52}{32} = 1.6$$



85	2x
100	3x
135	
170	
200	
270	
405	



## Mancom

15 GHz - pole mount  
radio 100m more \$7K - 10K

~~1000K~~  
1000K  
+20  
50

range - 5-7 mi

6 mo - 1 yr. maint.

Garden variety \$15-20K radio & ant  
+ A/C room + outside antennas.

range 10-25 mi

Collins etc.

BW = video + 6-8 MHz.

rule of thumb.

real estate, install & labor

\$2-3K / mile

multi-hop.

50-100' xmts to ant roof

# Remote radiology

Radiologist	
\$300/day x 365	\$110,000
Rent	20,000
Seizy	10,000
Accty & billing	10,000
Utilities, cleaning, etc	5,000
Maintenance	<del>24,000</del>
\$500/mo central etc = 6000	
\$500/yr / microwave = 7000	30,000
\$100/mo/ER x 14 = 16,800	

## Deprec

25,000 turn  
 30,000 microwave  
55,000 each turn  
 x4 = 770,000  
 ÷5 = 154,000 = 154,000

## central

6000 monitors  
 2000 switches  
 12,000 furn  
20,000  
 + 15,000 misc electronic  
 35,000  
 ÷5 = 7,000

161

900K  
 346K  
454K

161  
~~117,200~~

~~232,000~~  
346,000  
~~700,000~~  
346,000  
~~500,000~~



20 days

Catfish in Rocky Mtns experiment.

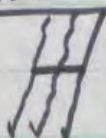
4K

Horley } govt \$ for remote road demo  
Rovick }  
AF? + ARPA?

**TRAC**

4x5 TV screen.

5-10K/unit  
high res.



Tom 'O'Sullivan - looking med grade.  
int in prototype applic.

Hal Peterson - (works Sam Genensky)

# Resonance radiology

## Capital

Fixed \$35K

$$\div 5 = 7K$$

Variable \$55K per terminal

$$\div 5 = 11K/\text{term}$$

## Expenses

Fixed \$161K

Variable 1.7K per terminal

$$\text{rev} = \$65K/ER$$

w/degree

$$\left. \begin{array}{l} \text{cost} = \$168K + 12.7K/\text{Term.} \\ \text{rev} = \$65K/\text{term} \end{array} \right\} \text{net } \$52.3K/\text{term}$$

break-even at  $3.2 \approx 4$  ER

4 at ER or ~~2.5 ER's~~

## 2 Santa Monica Hoop size ER's

$$\text{rev} = 65 \times 2 \times 2 = \$260\text{K}$$

$$\text{cost} = 161 + 2 \times 12.7 = \$187$$

$$\left. \begin{array}{l} \text{rev} = \$260\text{K} \\ \text{cost} = \$187 \end{array} \right\} \text{profit} = \$73\text{K/yr}$$

$$\left. \begin{array}{l} \text{rev} = \$260\text{K} \\ \text{cost} = \$187 \end{array} \right\} \text{capital} = \cancel{\$105\text{K}} \\ = 35 + 110 = \$145\text{K}$$

~~1 SMER~~

~~rev = \$130K~~

~~cost =~~

1 SMER

$$\text{rev} = \$130\text{K}$$

$$\text{cost} = 174\text{K}$$

$$\left. \begin{array}{l} \text{rev} = \$130\text{K} \\ \text{cost} = 174\text{K} \end{array} \right\} \text{loss } 44\text{K}$$

$$\left. \begin{array}{l} \text{rev} = \$130\text{K} \\ \text{cost} = 174\text{K} \end{array} \right\} \text{capital} = \$90\text{K}$$

7 SMER

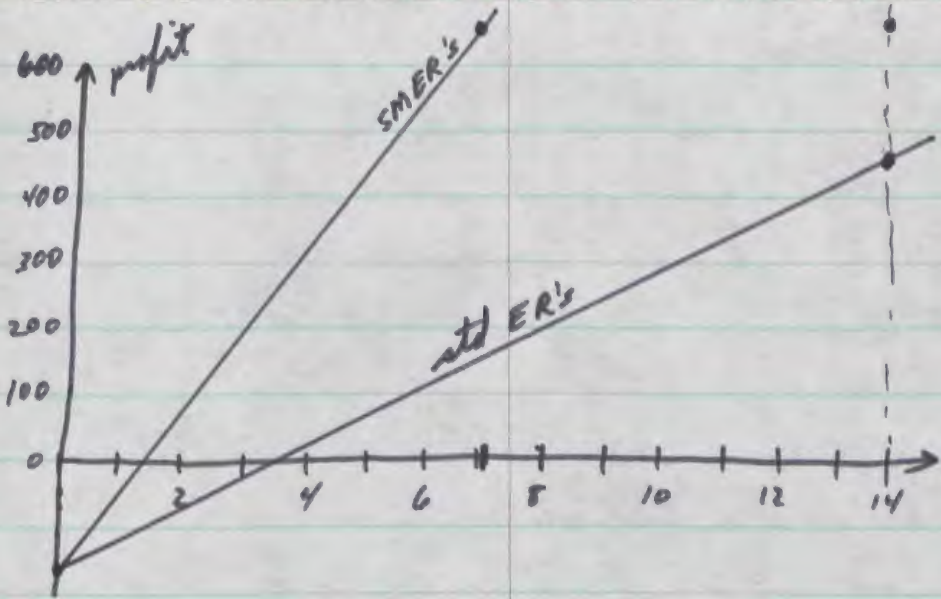
$$\text{rev} = \$910\text{K}$$

$$\text{cost} = 161 + 12.7 \times 7 = \$250\text{K}$$

$$\left. \begin{array}{l} \text{rev} = \$910\text{K} \\ \text{cost} = \$250\text{K} \end{array} \right\} \text{profit} = \$660\text{K}$$

$$\left. \begin{array}{l} \text{rev} = \$910\text{K} \\ \text{cost} = \$250\text{K} \end{array} \right\} \text{capital} = 35 + 385 = \$420\text{K}$$





e.g.

Year	1	2	3	4	5	6	7	8	9	10
SER	0	1	2	4	6	8	10	12	14	16
SMER	1	2	3	4	5	6	7	8	9	10
turn	1	3	5	8	11	14	17	20	23	26
2xSER	2	5	8	12	16	20	24	28	32	36

	SER'	rev	exp	max profit	cost	profit
1	2	130	90	90	174	-44
2	5	325	200	110	199	126
3	8	520	310	110	225	295
4	12	780	475	165	263	517
5	16	1040	675	200	462	578
6	20	1300	840	165	500	800
7	24	1560	1005	165	538	1022
8	28	1820	1170	165	577	1243
9	32	2080	1370	200	776	1304
10	36	2340	1535	165	814	1526

e.g. cont'd

$$\text{ins \& legal fees} = 20K + 5K/\text{SER}'$$

$$\text{admin} = \$40K \text{ for } 1^{\text{st}} 14\text{SER}' + 20K \text{ per } 14\text{SER}'$$

year	adj profit	ROR marg	ROR avg	ROR cum avg
1	-114	-127%	-127%	<del>127%</del>
2	41	141%	21%	
3	195 -	140%	63%	
* 4	397	122%	84%	
5	418	11%	62%	
6	620	122%	74%	
7	822	122%	82%	
* 8	1023	122%	87%	
9	1044	11%	76%	
10	1246	122%	81%	



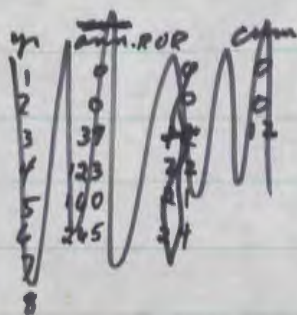
Taking new capital from profit

Borrowing  $\frac{1}{2}$  initial capital at 10% ;

then down to  $\frac{1}{4}$  at 10% as profit allows.

Stop at 12 SER + 8 SMER

year	debt	cap	adj prof	cash flow	comp profit equity	cash posit personal	yr.	comm
1	45	45	-119	-101	0	-146	-146	
2	100	100	+31	71	71	-55	-201	
3	139	100	181	243	165	78	-123	
4	139	100	383	478	<del>230</del>	248	125	
5	169	100	401	<del>421</del> 536	214	322	447	
6	210	100	599	767	234	533	980	
7	251	100	797	998	233	765	1745	
8	293	100	994	1228	165	994	2739	
↓ no growth	9	293	100	994	1228	200		
10	293	100	994	1228	165			
11	293	100	994	1228	255			
12					275			
					275			
					365			



ROR  
to year 8: income 38%    before tax 27%  
                  assets 25%        after tax 21%

sale value ~ 10 million: 63%    57%

total 70%    63%



Grow as fast as capital avail allows  
 up to year 8.  $v$  = new business started

yr	#R	adj m/		cash
1	1		-149	-146
2	1		+31	-201
3	1		181	-123
$v$ 4	2		264	125+55=180
$v$ 5	5		194	45+110=155
6	7 (8)		<del>604</del> $v$ (485)	<sup>+78</sup> 178+110=366 (220)
$v$ 7	11 (14)		1148 $v$ (939)	<sup>+148 +110</sup> 137 +78 = 693 (190)
$v$ 8	17 (29)		2256 $v$ (1904)	<sup>+78 +125</sup> 126 +148 +110 = 1049 (287)
9	(28)		4040	
10	(32)		6228	
11			8299	
12			9971	
13			12,147	
14			13,925	
15	30 (44)		14,910 (21,868)	
16			14,910 (20,877)	(