DMS100, 5ESS, their remotes, and the EWSD

```
Regression with robust standard errors
Number of obs =     2848
                                                    F(  3,  2844) = 2644.93
                                                    Prob > F      =  0.0000
                                                    R-squared     =  0.8012
                                                    Root MSE      =  1.1e+06

------------------------------------------------------------------------------
         |               Robust
cost1997 |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
 hostexp |   962905.2   80917.07     11.900   0.000       804243.2     1121567
holinexp |   102.5551    3.52579     29.087   0.000        95.6417    109.4684
relinexp |   94.47673   6.513826     14.504   0.000       81.70443     107.249
   _cons |   199412.8   24132.37      8.263   0.000       152094.1    246731.5
------------------------------------------------------------------------------
------------------------------------------------------------------------------
```

DMS100, 5ESS, their remotes, EWSD, and the DMS10

```
Regression with robust standard errors                 Number of obs =    3023
                                                     F(  3,  3019) = 2520.84
                                                     Prob > F      =  0.0000
                                                     R-squared     =  0.7994
                                                     Root MSE      =  1.1e+06

------------------------------------------------------------------------------
         |               Robust
cost1997 |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
hostdm10 |   746170.7   69455.02     10.743   0.000       609986.8    882354.6
hsdm10li |   107.2468   3.326741     32.238   0.000       100.7239    113.7697
relinexp |   94.47673   6.513561     14.505   0.000       81.70527    107.2482
   _cons |   199412.8   24131.39      8.264   0.000       152097.2    246728.4
------------------------------------------------------------------------------
```

Explicitely Modeling the DMS-10

Regression with robust standard errors

Number of obs =	3023
F(5, 3017) =	1601.02
Prob > F =	0.0000
R-squared =	0.8052
Root MSE =	1.1e+06

cost1997	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
hostexp	962905.2	80940.59	11.896	0.000	804200.9	1121610
ddms10	40337.89	55652.11	0.725	0.469	-68782.02	149457.8
holinexp	102.5551	3.526815	29.079	0.000	95.63986	109.4703
dm10line	106.7771	12.68863	8.415	0.000	81.89789	131.6564
relinexp	94.47673	6.515719	14.500	0.000	81.70103	107.2524
_cons	199412.8	24139.38	8.261	0.000	152081.5	246744.1

RUS Competitive Bids

Source	SS	df	MS
Model	1.9788e+12	3	6.5960e+11
Residual	1.5549e+11	40	3.8872e+09
Total	2.1343e+12	43	4.9635e+10

Number of obs = 44
F(3, 40) = 169.69
Prob > F = 0.0000
R-squared = 0.9271
Adj R-squared = 0.9217
Root MSE = 62347

total	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
host	538210.6	46106.44	11.673	0.000	445026	631395.2
remoline	87.36579	22.84098	3.825	0.000	41.20245	133.5291
hostline	57.58742	27.8185	2.070	0.045	1.364144	113.8107
_cons	42504.89	15552.48	2.733	0.009	11072.17	73937.62

RUS Negotiated Contracts

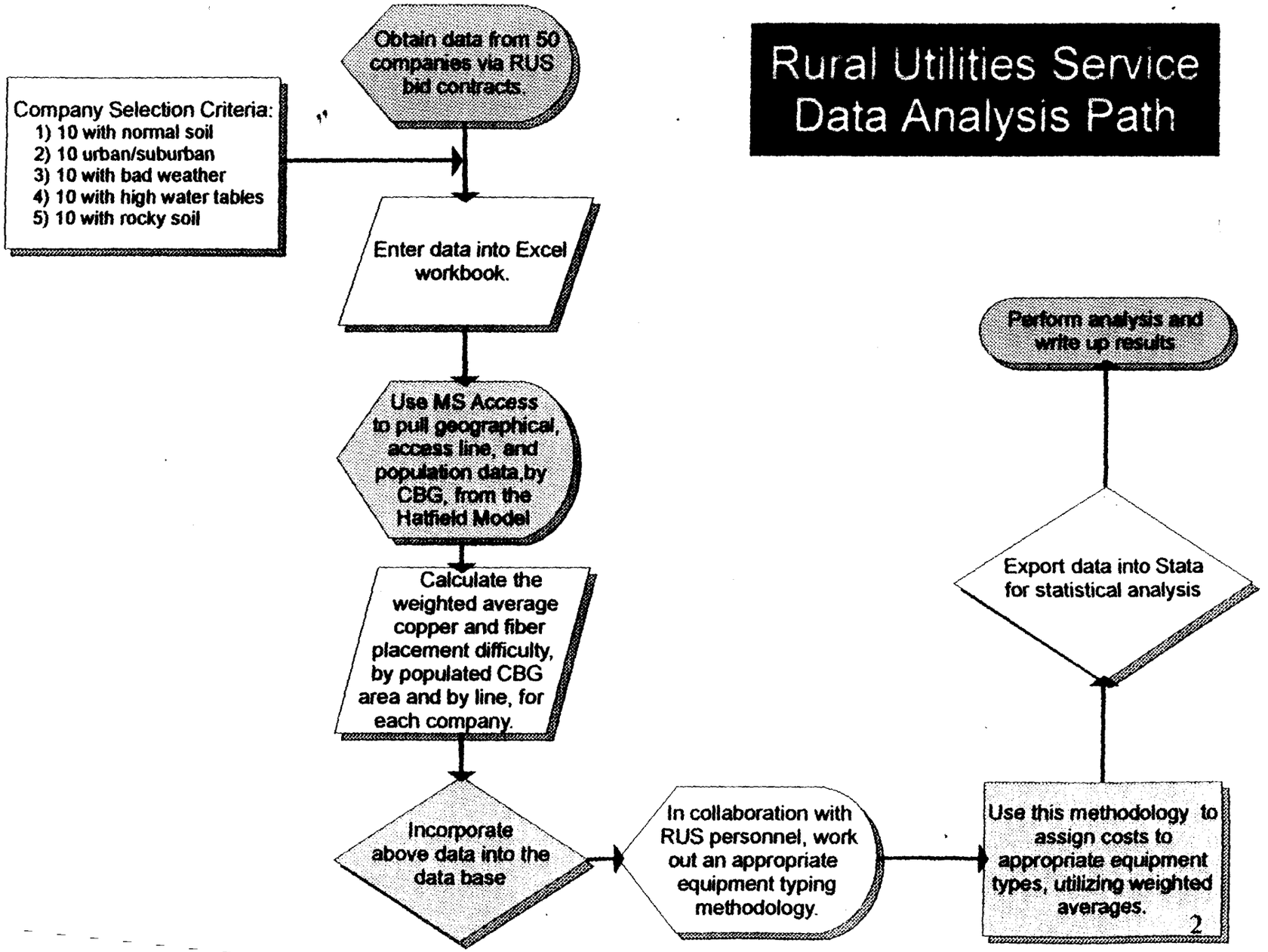
Source	SS	df	MS		
				Number of obs =	81
				F(3, 77) =	69.07
Model	3.0045e+12	3	1.0015e+12	Prob > F =	0.0000
Residual	1.1165e+12	77	1.4500e+10	R-squared =	0.7291
				Adj R-squared =	0.7185
Total	4.1211e+12	80	5.1513e+10	Root MSE =	1.2e+05

total	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
host	505106.3	59914.68	8.430	0.000	385800.9	624411.7
remoline	152.312	20.19457	7.542	0.000	112.0995	192.5246
hostline	43.12614	8.124278	5.308	0.000	26.94863	59.30364
_cons	69794.98	18597.88	3.753	0.000	32761.87	106828.1

Advantage of Explicit Modeling

- Aggregate Data imperfectly captures the cost of the remote/host connection. The cost of the terminating the remote on the host is bundled in with the host specific costs.
- Aggregate data can include investments not associated with POTS
- Cost of using the central processor for various functions can be explicitly identified
- Provides Port/TS data Per Par. 136 of 7/18/97 FNPR--97-256

Explicit Modeling (Con't)

- Estimate the Cost of UNEs. The RBOC data set does not give an indication of the cost of providing ISDN. Neither does the data allow us to directly measure the cost of such activities as call-forwarding, or vertical features. On the other hand, the cost of these vertical features are part of the port and fixed cost estimates.
- Identify cost impact of internet traffic.

Rural Utilities Service Data Analysis Path