

HAYSTACK OBSERVATORY

19 JAN 88

To: VLBA Data Acquisition/Recorder Group

From: Alan E.E. Rogers

Subject: Approximate cost comparison for 1 vs 2 DAR racks/site

1 rack with 8 BBCs and expanded formatter capable of 512 Mb/s throughput - opt 1

with - 2 racks with 4 BBCs each - opt 2

I use Materials and Services only (In Haystack "pre-production" labor is approx. 30% M&S)

Module	Opt 1 Qty	Opt 2 Qty	Cost 1	Cost 2
+15V	2	4	0.88	1.76
+5V 90A	1	2	1.50	3.00
+5V	2	4	0.70	1.40
32M	1	2	0.84	1.68
SAMPLER	2	2	1.00	1.00
BBC	8	8	33.22	33.22
5M	1	2	0.80	1.60
IFD	2	4	6.96	13.92
Formatter/D/B	1	2	21.90	43.80
Form expansion	1	0	7.50	0.00
Outputrate syn	1	2	1.00	2.00
Rack/hardware	1	2	6.00	12.00
		TOTAL	82.30	115.38

Difference = 33.08 k\$

Features lost in opt 1

- 1) Redundancy in formatter, power supplies, support modules
- 2) No further expansion possible without 2nd rack, power supplies, IFDs and support modules

Notes:

- 1) Expanded formatter needs 3 more cards (approx. 2.5 k\$ each) plus new software
- 2) In Opt 2 decoder and data buffer could be omitted in 2nd rack at a saving of approx. 5 k\$ reducing the cost difference to 28.08 k\$