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In the middle of 1986 when the structure of the AT condensed into its final form the estimated total requirement for Data Sets was 120. Seven years and 160 units later that total has doubled, not including a general desire "to have a few more handy around, as they are a good thing". In preparation for bringing production to an end this paper attempts to identify all real present and future requirements. "Real" in this context is not tautological as the available output from expert and other systems constitute a confusion of partial and overlapping lists.

Regrettably the great module database anticipated by AT/13.1/012 and /013 has not emerged, but their terminology has been adopted to provide a means of uniquely identifying each application via its physical location. This process was not helped by the near total absence of codes and part numbers for racks outside the 22m antennae, a situation partly rectified since. The associated communications address (P.DSA) information added a strong and independent indicator as well as a key into the control/monitor database for cross-checking.

The tabulation comprises rack code, rack-bin-slot location, a description of the module's function as provided by the "principle user", the comms port and address, module type, installation status and principle user i.d. The identity of the relevant ACC or other control computer can be easily inferred from the location and application. A brief analysis follows.

For convenience module space has been divided into a number of natural subsystems as follows:

#### Subsystems

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- 1) CA1..6
- 2) Mopra
- 3) Parkes
- 4) HotSpare ("test setup")
- 5) ColdSpare (stock of spares)
- 6) CulScrnRm
- 7) MopCtrlRm
- 8) PksCtrlRm
- 9) Aussat
- 10) NrwbandBE
- 11) SundryCul
- 12) EppLabs

CA1..6 are presumed to be identical, and thus define a 'standard antenna' (SA) for this purpose.

Mopra and HotSpare are taken as SAs, with occasional variations noted according to their particular circumstances.

Parkes and ColdSpare are presumed to be SAs for want of better knowledge.

Regular subsystems like Aussat are counted separately even when they appear to fall into some other category.

Aussat is initially planned for three sites.

Narrow-Band Back-End is planned for 4 sites (CUL, MOP, PKS & HBT).

No provision is made for extra test & development modules at the observatories since the 20% spare overhead already provides adequate resources.

<u>Rack</u> =====	<u>Position</u> =====	<u>Description</u> =====	<u>P.DSA</u> =====	<u>Module</u> =====	<u>Status</u> =====	<u>User</u> =====	<u>Notes</u> =====
1) ..5)							
Standard Antenna *****							
Pedestal -----							
SWEO	A10-B1-S7	SWEO_AZ	P2.00	D2	OK	DMcC	
SWEO	A10-B1-S11	SWEO_EL	P3.00	D2	OK	DMcC	
ELVE	A11-B3-S?	Secondary Mon	P1.??	D3	~12/93	PJH	
ELVE	A11-B3-S1	Subr, Turr&Swco	P1.??	D2	~04/93	PJH	
ELVE	A11-B5-S9	Power Supply	P1.??	D3	~03/94	GGM	
ELVE	A11-B6-S1	Fibres	P1.03	D3	~12/93	MJA	
Vertex -----							
DCP	P1-B7-S11	Power supply	P1.09	D3	OK	GGM	
CONV	C1-B1-S5	W/F Front End	P1.12	D2	?	GGM	1,3
CONV	C1-B1-S7	K/Q Front End	P1.13	D2	? /94	GGM	2,4
CONV	C1-B1-S9	C/X Front End	P1.14	D2	OK	GGM	
CONV	C1-B1-S11	L/S Front End	P1.15	D2	OK	GGM	
CONV	C1-B3-S11	Splitter/Convsn	P1.17	D2	OK	GRG	5
CONV	C1-B4-S11	IF/SynchDemod	P1.18	D2	OK	GRG	
CONV	C1-B5-S11	DigSynchDemod	P1.19	D1	? /94	GRG	
LO	L0-B1-S1	W/F	P1.20	D3?	?	GGM	3
LO	L0-B2-S1	K/Q	P1.21	D3?	? /94	GGM	4
LO	L0-B3-S1	L/S-C/X	P1.22	D3	OK	MJA	
LO	L0-B4-S1	UHF	P1.23	D3	OK	MJA	
LO	L0-B5-S1	Sampler LOs	P1.24	D3	OK	MJA	
SAMP	S0-B4-S2	Fibres	P1.29	D3	OK	MJA	
SAMP	S0-B3-S8	Samplers	P1.30	D3	OK	WEW	
6)							
CulScrnRm *****							
CORR	X55-B5-S1	CorrPwr	P1.01	D3	? /93	ERD	
CORR	X55-B5-S5	CorrPwr	P1.02	D3	? /93	ERD	
CORR	X55-B5-S7	CorrPwr	P1.03	D3	? /93	ERD	
CORR	X55-B5-S11	CorrPwr	P1.04	D3	? /93	ERD	
DEL	Z51-B1-S3	DelayPwr1,2,3	P1.05	D3	? /93	ERD	
DEL	Z51-B1-S5	DelayPwr4,5,6	P1.06	D3	? /93	ERD	
FIBR	B?-B1-S1	Laser3kIF1IF2	P1.19	D3	? /93	MJA	
FIBR	B?-B3-S1	Laser6k	P1.20	D3	? /93	MJA	
PXFR	L?-B7-S1	LO_PhaseXfer	P1.22	D3	? /93	MJA	
DEL	B?-B1-S1	Laser3kIF3IF4	P1.23	D3	? /93	MJA	
7)							
MopCtrlRm *****							
FIBR	B?-B6-S3	Fibres	P1.20	D3	~03/94	MJA	
DEL	Z60-B?-S?	Delays,CorrPwr	P1.?	D3	~07/93	ERD	
8)							
PksCtrlRm *****							
???	??-B?-S8	Samplers	P1.30	D3	OK	WEW	
DEL	Z?-B6-S5	Delays,CorrPwr	P1.??	D3	? /93	WEW	

<u>Rack</u>	<u>Position</u>	<u>Description</u>	<u>P.DSA</u>	<u>Module</u>	<u>Status</u>	<u>User</u>	<u>Notes</u>
9) <span style="float: right;">Aussat (per site)</span>							
							*****
TIME	T50-B2-S9	Power, Aussat	P1.24	D3	? /94	MJA	
TIME	T50-B5-S1	Phase Transfer	P1.25	D3	? /94	MJA	
10) <span style="float: right;">NrwbBandBE (per site)</span>							
							*****
???	N?-B?-S?	NB Filters	P1.??	D1	? /93	RHF	
11) <span style="float: right;">SundryCul</span>							
							*****
PMON	E1-B6-S3	Primary Mons	P1.00	D3	OK	PJH	
12) <span style="float: right;">EppLabs</span>							
							*****
---	-----	Test & Devt	-----	D1*3	--	---	
---	-----	Test & Devt	-----	D2*1	--	---	
---	-----	Test & Devt	-----	D3*3	--	---	

Notes

- 1 Presently "Kluge 1", a D1. This function should evaporate during 1993.
- 2 Presently "Kluge 2", a D2. This function should evaporate during 1993.
- 3 Only for Mopra in 1993, other antennae not yet determined.
- 4 Only for Parkes in 1993, other antennae probably 1994.
- 5 At present a D1 is sufficient in this slot.
- 6 These units inactive until the "Screened Room ACC" materialises, late 1993.

## Totals

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Modules	D1	D2	D3	Sum
=====	--	--	---	---
Per SA	1	9	11	21
All SAs	10	90	110	210
All Others	7	1	24	32
-----	--	--	---	---
Total	17	91	134	242
=====	==	==	===	===
Assembled #1	17	66	78	161
Destroyed #2	0	2	1	3
-----	--	--	---	---
Available #3	17	64	77	158
Total	17	91	134	242
-----	--	--	---	---
Remainder	0	27	57	84
=====	==	==	===	===
Remainder				
less Parkes	1	9	11	21
	--	--	---	---
	(1)	18	46	63
	--	--	---	---
& K/Q,W/F	0	18	18	36
	--	--	---	---
	(1)	0	28	27
	--	--	---	---
& Aussat	0	0	6	6
	--	--	---	---
	(1)	0	22	21
	==	==	===	===

Cards	Analog	Digital	Front Panel
=====	-----	-----	-----
Serials	0..193 ==> 194	0..218 ==> 219	0..224 ==> 225
Destroyed	3	3	3
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Net	191	216	222
Required	91+134 ==> 225	242	242
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Deficit	34	26	20
	===	===	===

- #1 Module 042C is a complete myth.  
#2 D2.001A attacked by cannibals: beyond restoration.  
D2.002A attacked by cannibals: beyond restoration.  
D3.097C exploded by bang, now in the Visitor's Centre.  
#3 D2.000A restricted to Epping for its own safety (see #2).  
D3.003B restricted to Epping for its own safety (see #2).

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