INTERPLANETARY NETWORK DIRECTORATE

IND SERVICES AND CAPABLILITIES: Deep Space Network's (DSN) Antennas and Frequency Capabilities

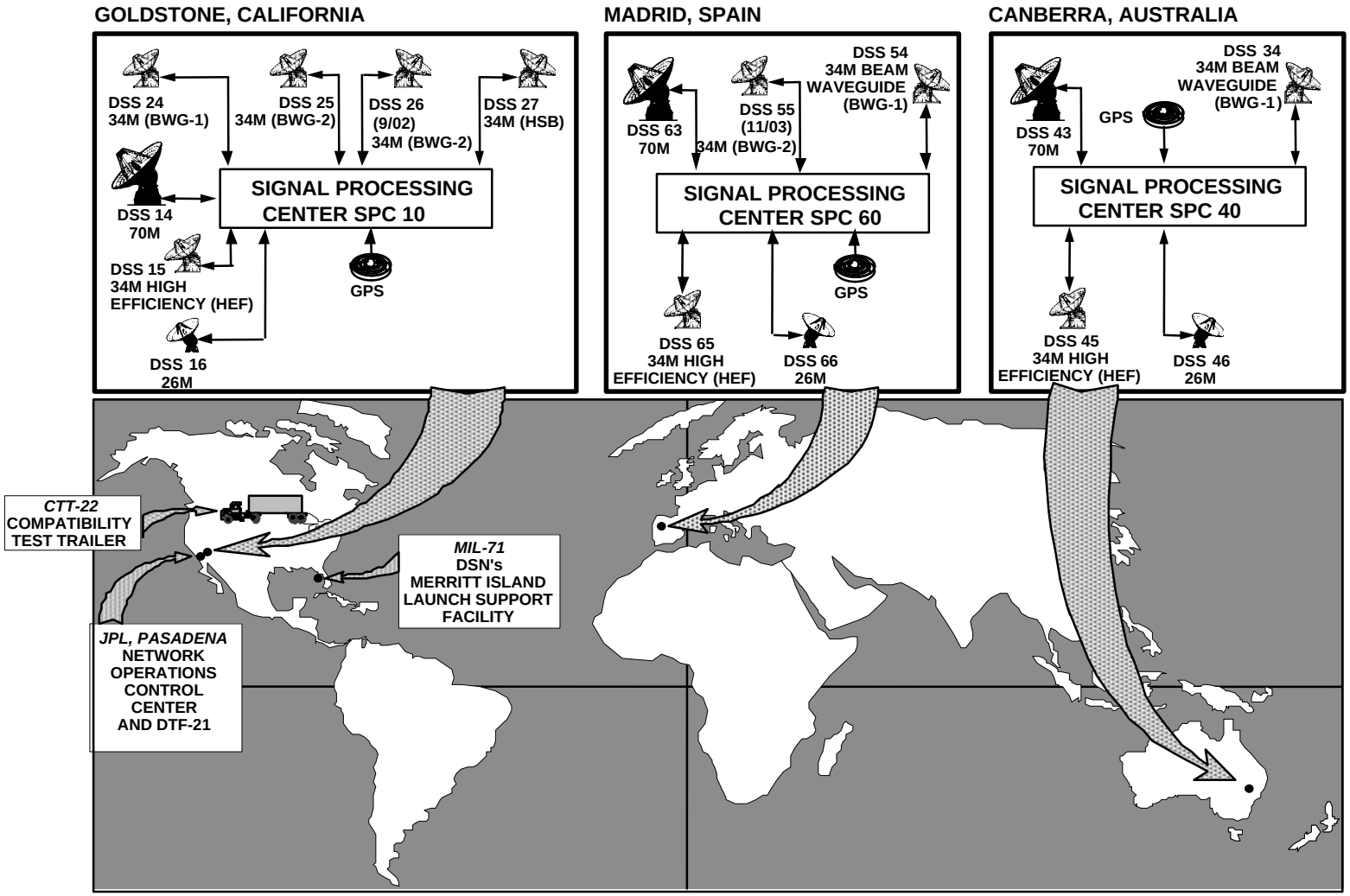
JPL

June 25, 2002

IND DSMS SUPPORT FACILITIES

- **Deep Space Network (DSN)**
  - **DEEP SPACE COMMUNICATIONS COMPLEX (DSCC) SIGNAL PROCESSING CENTERS (SPCs)**
    - **SPC-40 Canberra, Australia**
    - **SPC-10 Goldstone, California**
    - **SPC-60 Madrid, Spain**
  - **DEEP SPACE STATION (DSS) TYPES AT EACH COMPLEX/SPC**
    - **70M**
    - **34M High Efficiency (HEF)**
    - **34M Beam Wave Guide (BWG)**
    - **26M**

DSN CONFIGURATION



Resource Allocation Planning & Scheduling Office (RAPSO)

SIZE (meters)	TYPE	LOCATION	I.D. (Station)	DATE ON-LINE	S-BAND UP	S-BAND DOWN	X-BAND UP	X-BAND DOWN	K-BAND UP	K-BAND DOWN	RCVR. TYPE
26	E. O. [1]	Goldstone	DSS-16	Exist.	2025-2120[9]	2200-2300	-	-	-	-	MFR
26	E. O. [1]	Canberra	DSS-46	Exist.	2025-2120[9]	2200-2300	-	-	-	-	MFR
26	E. O. [1]	Madrid	DSS-66	Exist.	2025-2120[9]	2200-2300	-	-	-	-	MFR
34	HSB [1]	Goldstone	DSS-27	Exist.	2025-2120[10]	2200-2300	-	-	-	-	MFR
34	HEF [3]	Goldstone	DSS-15	Exist.	-	2200-2300	7145-7190[9]	8400-8500	-	TBD[5,7]	Blk. V
34	HEF [3]	Canberra	DSS-45	Exist.	-	2200-2300	7145-7190[9]	8400-8500	-	TBD[5,7]	Blk. V
34	HEF [3]	Madrid	DSS-65	Exist.	-	2200-2300	7145-7190[9]	8400-8500	-	TBD[5,7]	Blk. V
34	BWG1 [1, 3]	Goldstone	DSS-24	Exist.	2025-2120[11]	2200-2300	7145-7190[9]	8400-8500	-	10/1/05[5,7]	Blk. V
34	BWG1 [1, 3]	Canberra	DSS-34	Exist.	2025-2120[11]	2200-2300	7145-7190[9]	8400-8500	-	1/1/05[5,7]	Blk. V
34	BWG1 [1, 3]	Madrid	DSS-54	Exist.	2025-2120[11]	2200-2300	7145-7190[15,19]	8400-8500	-	8/1/06[5,7]	Blk. V
34	BWG2 [3]	Goldstone	DSS-25	Exist.	-	-	7145-7190[15,16]	8400-8500	34200-34700[4]	31800-32300	Blk. V
34	BWG2 [3]	Goldstone	DSS-26	Exist.	-	-	7145-7190[9]	8400-8500	-	31800-32300	Blk. V
34	BWG2[3]	Madrid	DSS-55	11/1/03	-	-	7145-7190[9]	8400-8500	-	11/1/03[5,7]	Blk. V
70	D. S. [3]	Goldstone	DSS-14	Exist.	2110-2120[11,12] 2090-2094[13]	2200-2300	7145-7190[9]	8400-8450	-	TBD[5,7]	Blk. V
70	D. S. [3]	Canberra	DSS-43	Exist.	2110-2120[11,12] 2090-2094[13]	2200-2300	7145-7190[9]	8400-8500	-	TBD[5,7]	Blk. V
70	D. S. [3]	Madrid	DSS-63	Exist.	2110-2120[11,12] 2090-2094[13]	2200-2300	7145-7190[9]	8400-8500	-	TBD[5,7]	Blk. V

NOTES:

1. These stations used for Earth Orbiting (Category A) missions.
2. N/A
3. These stations used for deep space (Category B) missions.
4. Transmit power range: 8 to 800 W
5. Operational Date.
6. 7145-7190 MHz
7. 31800-32300 MHz
8. 34200-34700 MHz
9. Transmit power range: 200 W to 20 KW
10. Transmit power range: 50 W to 200 W
11. Transmit power range: 500 W to 20 KW
12. Transmit power range: 5 KW to 400 KW
13. Transmit power range: 5 KW to 150 KW
14. N/A
15. Transmit power range: 200 W to 4 KW
16. Note #9 operational on 9/1/03
17. N/A
18. Note #9 operational on 4/7/03
19. Note #9 operational on 9/8/03

Resource Allocation Planning & Scheduling Office (RAPSO)

LOCATION	Size	Type	I. D.
• GOLDSTONE	26M	E. O.	DSS-16
	34M	HEF	DSS-15
	34M	BWG	DSS-24
	34M	BWG	DSS-25
	34M	BWG	DSS-26
	34M	HSBWG	DSS-27
	70M	D. S.	DSS-14
• CANBERRA	26M	E. O.	DSS-46
	34M	HEF	DSS-45
	34M	BWG	DSS-34
	70M	D. S.	DSS-43
• MADRID	26M	E. O.	DSS-66
	34M	HEF	DSS-65
	34M	BWG	DSS-54
	34M	BWG	DSS-55
	70M	D. S.	DSS-63

Legend:

E. O.	Earth Orbiter
HEF	High Efficiency
BWG	Beam Wave Guide
HSBWG	High Speed Beam Wave Guide
D. S.	Deep Space