

EXPR*e*S Board Meeting

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SA2 report

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EXPReS- Looking Down

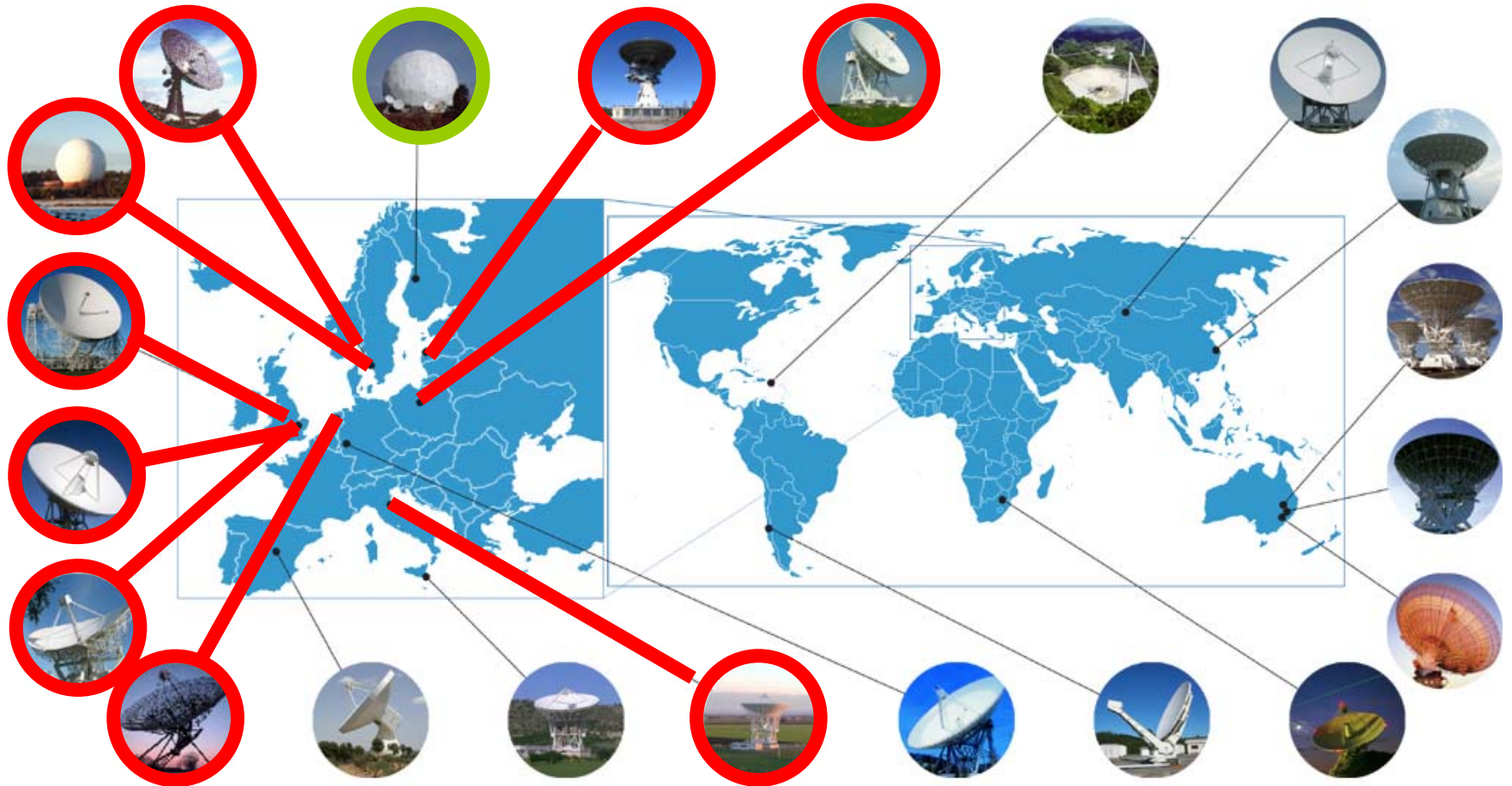


Courtesy of Paul Boven and Google Maps

SA2- Network Provisioning

- 19 institutions, operating 21 radiotelescopes
- Coordination of work and funding at participant national level
- First year is a learning experience, in particular for non-EU partners (China, Australia, etc)
- EC partial funding (8.75:1 in proposal) acts as a great catalyst of work and national funding
- Very uneven cost in Years 1 to 3
 - First year at very lower cost (most deliverables are no-cost feasibility studies)
 - Some/more participants are able to obtain better deals for cheaper/free connectivity
- 10 telescopes connected
 - 6 institutions/sites
 - Other infrastructures delivered in 2007

Site Connectivity



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1 Gbps connected sites 10 Gbps connected sites

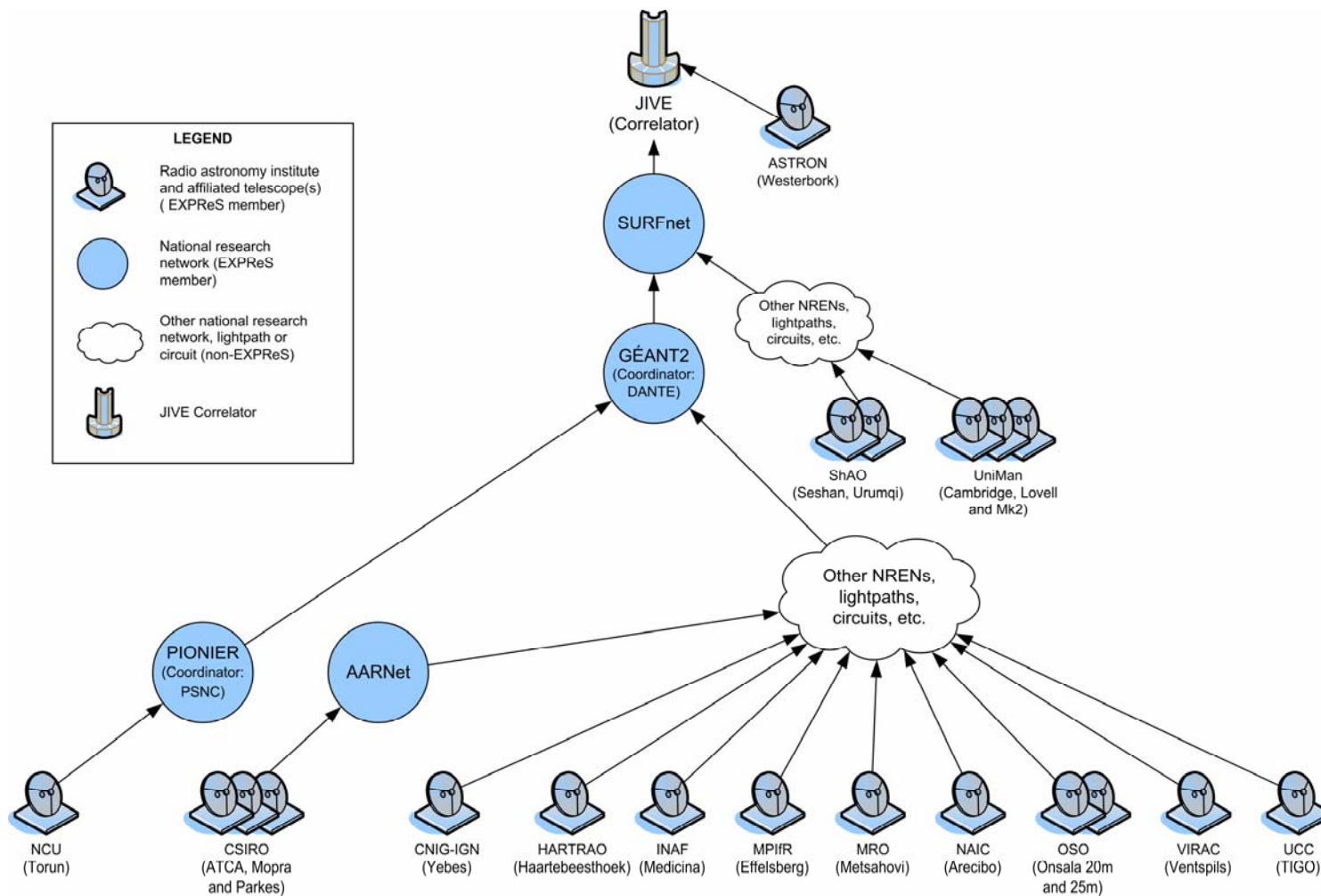
EXPReS SA2

- Workpackages:
 - WP1: Feasibility study of last-mile connection of telescopes to JIVE via GÉANT2
 - WP2: Provision of the infrastructure and equipment
 - WP3: Connectivity tests
- Deliverables
 - Feasibility studies
 - Infrastructures ready for 9 sites
 - Six sites (9 telescopes) operating routinely at 256 Mbps
- Milestones

Connectivity status

Telescope	Current BW	Expected BW	Year	Notes
JIVE correlator	7 x 1 Gbps	16 x 1 Gbps	2007/8	connected
WSRT (14x25m)	1 Gbps		< 2006	connected
Onsala (20+25m)	1 Gbps	10 Gbps	2007	connected
Jodrell Bank (76m)	1 Gbps	10 Gbps	< 2007	connected
Cambridge (32m)	1 Gbps		< 2006	connected
Torun (32m)	1 Gbps	10 Gbps	2007	connected
Metsähovi (14m)	10 Gbps		2006	connected
CNIG-Yebes (40m)	2 Mbps	1 Gbps	2007	
Effelsberg (100m)	2 Mbps	1 Gbps	2007	
Medicina (32m)	1 Gbps		2006	connected
Sardinia (64m)		2,5 / 10 Gbps	2009	
Shanghai (25m)	100 Mbps	1 Gbps	2007	
Urumqi (25m)		1 Gbps	2007	
Miyun (50m)		1 Gbps	2007	
Yunnan (10m)		1 Gbps	2007	
VIRAC (32m)		1 Gbps	2007	still needs RA receiver
Hartebeesthoek (26m)		1 Gbps	2007 ?	
TIGO (6m)	1 - 7 Mbps	64 Mbps		
Arecibo (305m)	< 32 Mbps	1 Gbps	2007	
ATNF/CSIRO (Parkes, Mopra, ATCA)	1 Gbps (local)	2 Gbps (to JIVE)	2007	

Network structure



EXPReS SA2 Achievements

- EVN European institutions
 - Previous to EXPReS SA2: Connection ready for JIVE to: Westerbork, Onsala, Torun, Jodrell Bank, Metsähovi, Medicina (Aug 2006)
 - Feasibility studies:
 - Finished for all EU sites: Effelsberg, Yebes, Metsähovi, VIRAC
 - Effelsberg and Yebes will connect in 2007
 - VIRAC is locally connected but lacks EVN equipment
 - Routine operations achieved up to 256 Mbps.
 - 512 Mbps achieved with 5 stations in January 2007

EXPReS SA2 Achievements

- EVN non-European institutions
 - Feasibility studies
 - Finished, but international part ongoing: ShAO, NAIC, HRAO
 - Connectivity tests
 - Planning tests for ShAO, NAIC
- Non EVN institutions
 - Feasibility studies
 - Finished for non-EU sites, but international part ongoing: CSIRO, TIGO
 - Connectivity tests
 - Planning tests for CSIRO

Financial status (1st Year)

P #	Short Name	Funded Amount (Euros)		Costs 1 st Year (Euros)	
		3 year total	Months 1-18	Total	Claimed EC
1	JIVE	40,000	8,500	0	0
2	AARNET	10,000	1,700	0	0
6	ASTRON	10,000	2,550	0	0
7	CNIG-IGN	100,000	25,500	0	0
8	CSIRO	10,000	4,250	1377612	20000
9	NRF	10,000	1,700	0	0
10	INAF	110,000	42,500	4975	4975
11	MPG	210,000	85,000	2524	2524
12	TKK	38,000	25,500	26968	13248
13	CORNELL	50,000	17,000	0	0
14	UMK	25,000	4,250	0	0
15	OSO	30,000	8,500	0	0
16	SHAO	75,000	21,250	407279	25000
17	UDEC	30,000	8,500	25789	21547
18	UNIMAN	12,000	4,250	0	0
19	VIRAC	40,000	8,500	193126	40303
	TOTAL	800,000	269,450	2038273	127597

About low spending

- Partners should worry if their spending profile is too low
- SA2 EC money covers only a fraction of total cost (1:8)
- Even if matching is “required”, EC may pay up to 100% of eligible costs in SAs. Hard limits:
 - Costs to be approved by the local auditor
 - Beware of depreciation costs
 - No VAT is eligible
 - Connectivity (rent of services) funding limited to 50%
- PLEASE INFORM THE MANAGEMENT IF YOU ARE IN TROUBLE !!!

EXPReS SA2 next 18-months

- EVN European institutions
 - Effelsberg will connect in October 2007, plus 10 Gbps link between MPIfR and JIVE (shared with LOFAR)
 - Yebes (CNIG-IGN) will connect @ 1 Gbps in late 2007
 - Medicina will change to shorter (48 km) dark fiber – with new equipment will allow up to 10 Gbps
 - Connectivity tests: MRO – JBO at 10 Gbps
 - Expand routine operations to > 256 Mbps

EXPReS SA2 next 18-months

- EVN non-European institutions
 - HRAO will get 190 Mbps within 6 weeks (SANReN)
 - MK5 upgrade, e-VLBI on Thu-Fri (-IVS)
 - Connectivity tests ongoing for ShAO, NAIC
- Non EVN institutions: CSIRO, TIGO
 - Local infrastructures are in place @ 1 Gbps
 - TIGO: Need to solve international part.
 - CSIRO: connectivity tests ongoing

Financial forecast of next 18 months

P #	Short Name	Total cost (Euros)		Difference	EC finances	Cost of Next 18-months
		Contract	Revised			
1	JIVE	180000	0	-180000	0	0
2	AARNET	50000	50000	0	10000	37500
5	SurfNet	0	180000	180000	40000	135000
6	ASTRON	45000	45000	0	10000	34000
7	CNIG-IGN	530000	210000	-320000	100000	165000
8	CSIRO	50000	1707186	1657186	25000	247000
9	NRF	55000	55000	0	10000	40000
10	INAF	2780000	271000	-2509000	110000	196000
11	MPG	2250000	2250000	0	210000	2220000
12	TKK	330000	82000	-248000	38000	40000
13	CORNELL	396000	396000	0	50000	50000
14	UMK	60000	60000	0	25000	45000
15	OSO	115000	64000	-51000	30000	48000
16	SHAO	650000	1153000	503000	75000	557600
17	UDEC	70000	70000	0	30000	40000
18	UNIMAN	120000	120000	0	12000	88000
19	VIRAC	151000	194000	43000	40000	0
	TOTAL	7832000	6907186	-924814	815000	3943100

Summary

- Major deliverables are being pursued and achieved.
- Most partners have lower costs, as expected.
- Total SA2 cost lowered from 7.8 M€ to 6.9 M€ (savings of 0.9 M€). EC contribution is 0.8 M€.
- Feasibility studies (no cost item) finished for European partners; international part for non-EU partners still ongoing.
- Partners should worry if spending remains low in 2007.
- Major infrastructures to be available in 2007 (MPI, CNIG).
- Good prospects for non-EU partners to reach Europe (CSIRO, HRAO, ShAO, TIGO, NAIC).
- Useful to extend SA2 (1 year?) to justify larger spending.