



## RADIONET SPOOR MEETING / TELECONFERENCE

DATE May 23, 2017 TIME 11 - 17 (CEST)

PLACE Schiphol/NL

PARTICIPANTS **SPOOR Group:** M.A. Garrett (MAG, chair), F. Colomer (FC), H.J.v.Langevelde (HJvL), T. Venturi (TV), A.Zensus (AZ, RadioNet coordinator), M. de Vos (MdV), R.C. Vermeulen (RCV), K. Schuster (KS), S.T. Garrington (STG), J. Freimanis (JF), I. Rottmann (IR), R. Mauersberger (RM), J. Casado Iglesias (JCI), J.E. Conaway (JEC)/M. Lindquist (ML) (remotely via skype), Leonardo Testi (LT, remotely via skype).

MATERIAL <https://events.mpifr-bonn.mpg.de/indico/event/42/>

VERSION Draft (vers. 10.10.2017)

**NEXT MEETING** **tbd**

AGENDA

- 11:00 - 11:30 Arrival
- 11:30 - 11:40 Welcome & Introduction (MAG) 10'
- 11:40 - 12:20 Current Status of previously completed/on-going actions (RadioNet3) 40'
  - 11.40 QueSERA WP summary (MAG) - 10 min
  - 11.50 ERTRC report, Response and potential follow-up actions (AZ, all) - 15 min, incl discussion.
  - 12.05 RadioNet-work (AZ intro, all) - 15 min, incl. discussion
- 12:20 - 13:00 Info exchange 40'
  - 12.20 Update on national positions/strategy (~5-10 min per party, incl. discussion)
- 13:00 - 13:45 Lunch
- 13:45 - 15:10 Info exchange (cont.) 1h25'
  - 13.45 Update on national positions/strategy (~5-10 min per party, incl. discussion)
  - 14.15 Update from RadioNet (AZ) - 10 mins
  - 14.25 JIV-ERIC (HJvL) - 10 min
  - 14.35 EVN vision (TV) - 10 min
  - 14.45 CRAF (RCV) - 15 min
  - 15.00 ILT-ERIC (RCV) - 10 min
- 15:10 - 15:45 Ucoming issues 35'
  - 15.10 Impact of the SKA & related issues e.g. EC/Community engagement (All)
  - 15.30 What else do we need to prepare for ? e.g. funding agency, EC, Astronet initiatives etc. (All)
- 15:45 - 15:55 Summary of where we are (MAG) 10'
- 15:55 - 16:00 AOB 5'
- 16:00 - 16:01 END

### ACTION ITEMS:

PIECE/DATE	SUBJECT	PERSON
A1/2017-05-23	Keep an eye on the ASTRONET programme and be prepared to respond quickly.	All
A2/2017-05-23	Place topic of National RA facilities in the era of SKA on the next SPOOR meeting agenda.	MAG

Leading of the meeting: M. Garrett (SPOOR leader)



## 1. Welcome & Introduction (M. Garrett)

MAG welcomed the participants and introduced SPOOR and its mission. SPOOR is the Strategic Policy Forum for RadioNet partners, discussing key policy topics that have a strategic impact on the European scale. The RadioNet Board has appointed a small WG (responsible for the task's main deliverables) but activities (e.g. meetings etc.) are open to all interested RadioNet Board members. Major outputs should be approved by the RadioNet board. e.g. Final SPOOR report. Annual meetings are foreseen but may be more frequent (as required). Style of WG f2f meetings: the aim is to avoid formal PowerPoint presentations, in order to be efficient in our use of the available time and resource.

## 2. Current Status of previously completed/on-going actions (RadioNet3)

- QueSERA WP summary (MAG)
  - SPOOR builds on RadioNet3 QueSERA – all deliverables were generated and the White Paper placed in the public domain via the arXiv: <https://arxiv.org/abs/1602.04216>
  - QueSERA recommended the creation of RadioNet-work in-between EC contracts in order to sustain core activities e.g. YERAC, CRAF, preparations for EC proposals etc.
- ERTRC report, Response and potential follow-up actions (AZ, all – see also appended presentation)
  - The SKA/ESO recommendation as detailed in the ERTRC report was superseded by events, and the SKA IGO (International Governmental Organisation) ambitions of the global partnership. ASTRONET has reinvented itself – self-funded but many of the main agencies have already signed up. R. Stark (NWO) is the chair. ASTRONET is organising a policy session at the upcoming EWASS meeting.
  - Reflecting on the QueSERA/White Paper/ERTRC experience; there was a feeling that in the future we should be more proactive and less reactive - delivering our views first.
    - **ACTION (all):** Keep an eye on the ASTRONET programme and be prepared to respond quickly.
- RadioNet-work (AZ intro, all – see also appended presentation)
  - The original FP7 message was that we need to consider the sustainability of our collaboration, in the face of reduced (or no) EC funding. QueSERA reviewed this matter, and considered how one might maintain a core European radio astronomy programme under poor funding circumstances. RadioNet-work was proposed from these discussions – a self-funded backup plan to be used in the face of a potential loss of EC funding. The programme would focus on core activities, including the coordination of EC funding opportunities, CRAF, YERAC, EVN TOG, responses to European-wide strategic issues etc. A small secretariat/office was proposed with membership fees, all legally based within a “light” MoU.
  - Events have now overtaken the original RadioNet-work proposal – future funding for RadioNet was secured via RadioNet4, and future funding prospects look good.
  - It was proposed that this group review RadioNet-work as the RadioNet contract comes to an end, keeping the concept warm in order to provide a “soft-landing”, in the case that the funding environment might change over the next few years. It was remarked that the RadioNet-work scenario needs to be implemented at least 1 year before the end of RadioNet in order to be functional.

## 3. Info exchange - Updates

- National positions/strategy
  - UK (STG) – e-MERLIN has submitted a major proposal to maintain e-MERLIN operations (£2.7M p.a.) + a significant development programme (more frequency coverage [S and X-band], cryo-PAF on Lovell, broadbanding to 8GHz, Defford replacement (cost ~ £15M). The Statement of Interest was well received by STFC Science Board, and a panel review meeting is planned for the 5th of July. A site visit will follow in the autumn. STFC balance of programmes: Radio review panel has been assembled to prioritise the UK's radio astronomy programme – excluding mm and sub-mm facilities. The balance therefore addresses funding



# Minutes



for the SKA/LOFAR/e-MERLIN/Researchers. Brexit – it is not clear what the implications will be of Brexit for the UK's participation in EU funded projects. The UK government has guaranteed participation in EC funded projects until at least 2020 (including ERCs).

- Italy (TV) – no major proposals submitted currently, bit of a hiatus w.r.t. RA programme – new Head of RA in Rome to be appointed soon. Additional institute directors will be located in Bologna and Cagliari.
- Germany (AZ) – Max-Planck Soc. continues to operate 100-metre telescope – indefinite lifetime foreseen. APEX continues and is to be upgraded, strong support for IRAM facilities. Growth in RA interest via LOFAR at the universities, this is also a fertile area of growth for the SKA. Contributions are being made to SKA programme (e.g. dish prototype) – a more formal participation in the SKA is being considered.
- Spain (FC) – landscape includes many independent RA groups spread across the country. IGN has a solid commitment to support EVN and JIVE; lots of activity in geodesy (VGOS) – 4 antennas (2 ready, 2 planned/under construction), IRAM commitment also strong. There is an effort to get Spain more formally involved in the SKA – Lots of interest from ministry to join but negotiations have still to be concluded. Some interest in hosting a LOFAR station. Spain is involved in the new ASTRONET initiative.
- NL (RCV) – number of LOFAR stations cont. to grow (53rd station in IRL under construction, station in Latvia (LV) planned, potentially more sites e.g. IT, ES etc). LOFAR 2.0 coming along, NL to sign up to SKA IGO – this will make funding requirements explicit to government. NL takes a leading role in shaping the coordination of an SKA Regional [science] Centre. LOFAR 2.0 – 10-20M€ investment required – enhanced CEP (already funded – corr + processing), station h/w upgrade to include– larger bandwidth, HBA and LBA simultaneous ops, better RFI suppression, improved beam-former for HBA, additional stations to improve uv-coverage.
- IRAM (KS) – 9 antennas ready, waiting for installation of new corr. 10th antenna roll out in winter this year. Phase 1 of NOEMA project will then be finished – 33M€. NOEMA has 50% of the sensitivity of ALMA, Phase 2 will cost 18M€ – baseline extension secured, new partners coming on board (e.g. US, China), also other European partners. Significant involvement in a VLBI capability for EHT. 30-m - new instrumentation includes cont. imager linked to increased cosmology research interest via Planck mission.
- France (KS) – Best knowledge personal view - nenuFAR continues to make progress. About half a year ago a high-level decision confirmed FR interest in SKA but so far as a passive, rather than active partner. Priorities still lie elsewhere but this may change with time, and as other projects progress.
- Latvia (JF) – strategic aspects – LV is involved in ASTRONET. RadioNet-work – some feedback: difficulty with any joining fee given pre-existing commitments to the EVN and JIVE-ERIC. Problem issues – VLBI recording with flexbuf system, expertise in s/w correlators sought – LV interested to be involved in such efforts, astrometric projects also of general interest scientifically.
- SE (ML/JEC) – review of priorities in RA has been conducted – similar to UK exercise. SKA & ALMA involvement places pressure on national obs. - limited lifetime for LOFAR, APEX etc. VLBI – seen as a unique thing but worries about the number of users. Geodetic-VLBI – combination with astronomy is highly valued – but astronomy is paying for VLBI – mapping agency may take over some of the costs eventually. Future direction may focus on instrumentation development rather than telescopes – enough inertia in system for change to be slow but difficult challenges and questions are being raised. Other countries recognise similar environment developing – impact on long term perspective for national RA facilities may be of concern in many places once SKA operations kick in. This might be an important agenda item for future SPOOR meetings.
  - **ACTION (MAG):** place topic of National RA facilities in the era of SKA on the next SPOOR meeting agenda.
- ESO (LT) – priorities expected to evolve as new Director General takes up his appointment – APEX agreement extended for 5 years – seen in synergy with ALMA in a positive way – after 5 years future of APEX will need to be revisited. Exactly how ESO should serve the community for single dish sub-mm telescopes is under discussion. ALMA strategy for user support is



encompassed within the various ARC nodes – these are a little fragile since they depend on national funding streams – long-term perspective different from one country to another – but this activity cannot be fully supported centrally. Sustainability of VLBI at mm and sub-mm wavelengths – not always easy to justify investment as significant effort and resources required. Up until now, ESO was very careful with its involvement in European funding schemes – RadioNet is an exception but at a fairly low-level - this may change – new director may find EU funding more interesting and participation in European activities e.g. IA NAs – expect more ESO involvement, possible co-funding opportunities etc.

- RadioNet (AZ –see also appended presentation)
  - 4 year project, 10M€ – 28 partners – some new ones: RuG, DIAS, TCD and UNIGLAS. Some RadioNet3 partners no longer involved – UCAM, UORL and CSIRO. It should be noted that RadioNet does not cover all radio astronomy (RA) interests in Europe but does involve most of the major RA facilities. Focus of last call was on supporting existing infrastructures (rather than future facilities), sustainability also important (addressed via this activity – SPOOR). Due to funding constraints, it was not possible to include several excellent NA, TNA, JRA initiatives e.g. ToCoolPAF, plus a major Outreach effort, in the final proposal.
- JIV-ERIC (HJvL)
  - Latvia is now a member of JIVE (JIV-ERIC). Jumping JIVE funded via a specific call for ERICs – 10 WPs – FC is PM and Policy Officer. JIVE approaching countries such as PL, PT, FI etc. with the perspective of joining JIVE. Jumping JIVE WPs include integrating new telescopes, developing geodetic capabilities for the EVN correlator, generation of a new EVN roadmap, updating global VLBI interfaces (including scheduling), building collaboration with Africa, appointing a SKA-VLBI expert at the SKA HQ at Jodrell Bank, including an operational model. Long term role for JIVE in SKA1-mid era is emerging e.g. VLBI-SKA correlation. Long-term funding model for ERICs is likely to evolve, and JIVE is well positioned to benefit. One question for the future is how TNA can facilitate access to the SKA for European scientists of those countries that are not members of the SKA IGO.
- EVN vision (TV)
  - This is one of the WPs (and deliverables) of Jumping JIVE (led by TV) – it will lay out a science vision for the EVN – some other JJ WPs are closely related to this activity. A core team of experts (~10 people) has been assembled – key science areas defined, experts will be nominated to cover these topics – they will be charged with contributing text to the chapters and engaging colleagues. A telecom is planned soon – broad community meeting planned. Goal is to deliver the document in 2019. A complementary technology roadmap is also foreseen. Target audience for both documents is the astronomical community, funding agencies etc. It will also advise EVN board strategy.
- CRAF (RCV)
  - CRAF is an expert committee of the ESF – influential in global circles e.g. ITU meetings etc. MoU was last revised in 2004, a review of the CRAF's governance and legal status triggered by changes in ESF role/hosting. The conclusion is that the ESF is still the best host of CRAF. The spirit of the 2004 MoU is preserved but changes are required to improve engagement of member institutes, including the stakeholders (there are 6 full fee-paying members). Stakeholder council meetings will be organised and a terms of reference document is being developed – the council will provide support and input to CRAF, and will also seek to attract more full fee paying members. An increase in the overall budget of CRAF is necessary for it to be fully functional and to protect the passive RA environment.
  - KS noted that the shift of car radar systems up to 80 GHz was a catastrophic mistake. He worried that there was too much time being spent on talking about governance issues, and not enough on CRAF's mandate in the field and how to ensure it is equipped with sharpened tools to protect the spectrum. ALMA was to provide 1 person for CRAF activities.
- ILT-ERIC (RCV)
  - ILT has 6 participants, funding stability is an issue, station ownership also complicated - some similarities to EVN/JIVE situation and ambitions to make ILT a stronger organisation, better anchored in the partner countries. It might be possible to achieve these goals in partnership



with the JIV-ERIC (some data connections are already shared). A JJ WP will produce a comprehensive list of the pros & cons on establishing an ERIC, or of being part of JIV-ERIC.

## 4. Upcoming issues

- Impact of the SKA & related issues e.g. EC/Community engagement
  - There was a short discussion on the impact of the SKA & related issues e.g. EC/Community engagement. These issues need to be explored more carefully at a future meeting of the SPOOR WG.
- What else do we need to prepare for? e.g. funding agency, EC, ASTRONET initiatives etc.
  - No major (short-term) issues were identified – in particular, no major initiatives from ASTRONET were expected on timescales that would require a response before the next SPOOR WG meeting. The WG noted that RadioNet and Jumping JIVE presentations had been proposed for EWASS in Prague.
  - Lobbying for a strong role for research infrastructures within FP9 was an on-going action item for all RadioNet board members, especially those with strong connections to national EC contact points. In particular, it is absolutely essential that we continue to align our various national strategies, so that we give a consistent and united message about the importance of RadioNet funding in the context of the next Framework Programme.

## 5. Summary of where we are

- MAG summarised the day's discussions, including the action items noted here.

## 6. AOB

- The meeting adjourned at 16.00.
- There was no further business to discuss.



**Appendix: Presentation made by AZ**



# RadioNet – SPOOR Meeting 1

Anton Zensus - Coordinator

RadioNet-SPOOR  
Schiphol, 23 May 2017  
[www.radionet-org.eu](http://www.radionet-org.eu)

EC Contract: 730562

# Status of previously completed/ on-going actions (RadioNet3)



## ERTRC report, response and potential follow-up actions :

*Created with RadioNet3 and [published](#) on June 11, 2015 by ASTRONET. It contains two important recommendations (Chapter 12.2):*

- ▣ No 7 – We recommend that local and national **radio institutes remain independent**, as local support and expertise centres for radio astronomy, but that their **joint activities**, such as EVN and RadioNet, **become more robustly** and permanently organised and funded (but not through the same body that organises the European participation in the SKA)
- ▣ No 8 – We recommend that the **European involvement in the SKA be organised through a treaty organisation** that is robustly mandated and funded, to ensure the strongest impact of and participation in SKA by Europe. The ETRC considers ESO to be a prime candidate to be that organisation.



# Status of previously completed/ on-going actions (RadioNet3)



## ERTRC report, response and potential follow-up actions :

- ▣ RadioNet3 -Letter of support for ASTRONET
- ▣ RadioNet3 lobbying for a new call under H2020
- ▣ Successful proposal preparation & submission for a new project RadioNet under H2020
- ▣ 2016 – a year without RadioNet
  - ▣ YERAC & conferences were organised,
  - ▣ the infrastructures didn't experience a lack of users
  - ▣ JIVE supported PC external memebrrs
- ▣ RadioNet project started on January 1, 2017



A report by ASTRONET's  
European Radio Telescope  
Review Committee

# Status of previously completed/ on-going actions (RadioNet3)



## RadioNet-work: Mission

*a scenario elaborated to foresee collaboration without external funding*

- ▣ To foster collaborative activities among European radio astronomy institutes and laboratories, in support of their common interests
- ▣ Lobbying for and coordination of joint applications to EU funding opportunities in radio astronomy
- ▣ To maintain a modest, self-funded collaborative programme of networking activities (YERAC schools, meetings, CRAF)
- ▣ To coordinate a joint representation in the European research area (ASTRONET, SKA)

# Status of previously completed/ on-going actions (RadioNet3)



## RadioNet-work: Structure

- ▣ MoU based collaboration defined for 5 yrs
- ▣ 2 types of memberships; full (fee and voting rights) and associated (without fee and without voting rights)
- ▣ Board: each member; Chair/Vice (eventually secretary) elected for 3 years duration; coordinator (could be=coordinator of EU project)
- ▣ Office (min): coordinator + assistant, independent location
- ▣ Budget: bank account, approx. 10.000€/yr fee
- ▣ Initial annual budget:
  - ▣ Office (50k): chair (0,1FTE in kind), assistant (0,5FTE), office rent
  - ▣ Board meeting (10k€): organisation, travel of officer and invited persons, lobbying activities
  - ▣ Networking events (40k): YERAC, ERIS/single dish, TOG/GMVA, CRAF, selected TAC

# Status of previously completed/ on-going actions (RadioNet3)



## RadioNet-work: 2016

---

<b>25 Feb 2015</b>	<b>RN3 Board elected next coordinator</b>
25 Nov 2015	RN3 Board accepted the White paper
31 Dec 2015	RN3 ended
29 Feb 2016	RN3 final reports submitted
31 Mar 2016	New RN proposal submitted
15 Jul 2016	RN3 – final closing (after budget distribution)
26 Aug 2016	RN – positive evaluation
21 Nov 2017	RN – Consortium Agreement signed
21 Dec 2016	RN- Grant Agreement signed
<b>1 January 2017</b>	<b>RN started</b>

---

# Status of previously completed/ on-going actions (RadioNet3)



## Steps for creation of RadioNet-work:

- ▣ Outgoing Board or stakeholders meeting
  - Decision of Scope and process owner/coordinator
- ▣ MOU draft + work programme + structure
  - Iteration with stakeholders
- ▣ Member' organisation signatures
- ▣ Creation of the Board
  - Appointment of the coordinator
- ▣ Implementation of RN-work office

0,5 – 1 Year

## Update on national positions/strategy

- ▣ MPG
- ▣ SKA
- ▣ JIV-ERIC
- ▣ EVN
- ▣ USA
- ▣ EHT

## Radionet –work → details to be sorted out

- ▣ Official start, membership types, the leading person, distribution of the roles
  - which of the 2 types of membership types is appropriate for organisation
  - when should Radionet-work should start? Who should take the initiative of its organisation?
  - how will the coordinator of Radionet be chosen?
  - what are the roles of the coordinator/assistant/Board members etc.
- ▣ The raison d'être of Radionet:
  - external funding / cooperation / tech. development /common voice on a EU level?
- ▣ Expectation (GOAL) from Radionet:
  - searching for external funding, → sustainability of YERAC/ERIS/CRAF, → common voice in Europe
- ▣ What are possible reasons *not* to join the Radionet:
  - membership fee (less<10.000<more),
  - have or not to have the voting rights,
  - lack of external funding,
- ▣ Aspects not defined yet – but important:
  - Voting rights, → decision making; → IPR, non-discloser agreement, conflicts could based on the Radionet Consortium Agreement
- ▣ Legality Aspects:
  - can a cooperation on MoU make legally binding decisions, manage a budget, support member organisations, employ?

## Update from Radionet

- ▣ 4 yrs project, start on Jan 1, 2017 with 10 M€ (9,5 M)
- ▣ 28 partners
  - ▣ new: RUG, DIAS, TCD & UNIGLAS
  - ▣ lost: UCAM, UORL & CSIRO
- ▣ 14 work packages:
  - ▣ 3 NAs combined into: Dissemination, Training & Sustainability
  - ▣ 3 new JRAs: AETHRA, BRAND EVN & RINGS
  - ▣ 6 TA (no SRT and no WSRT) & 1 VA (ALTA)
- ▣ Focus on existing infrastructures (not SKA) & sustainability



## Update from RadioNet: not supported proposals

<b>JRA</b>	ASTILBE: a small N, small D VLBI station concept SEVN: Simultaneous multiband capabilities at mm wavelengths for the EVN ToCoolPAF - Toolbox for cm and mm cryogenic Cooled PAFs Ufpoff - Unleashing the full power of FPGAs
<b>NA</b>	Bridging to the public Skills Growth Africa-Europe Radio Astronomy Collaboration Spectrum Awareness
<b>TA</b>	Onsala 20 m telescope

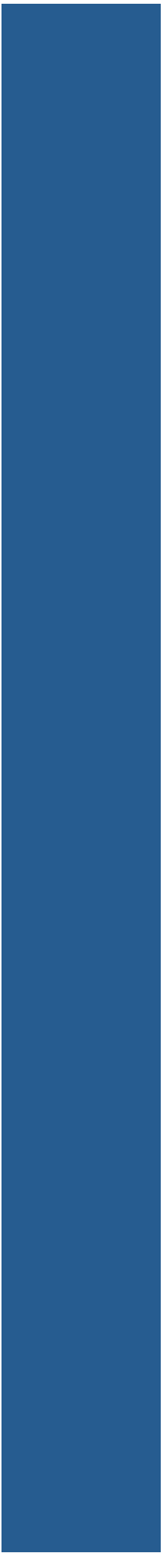
Of a total 25 submitted

## Impact of the SKA & related issues e.g. EC/Community engagement

- ▣ RadioNet development is not SKA orient any more (RN3)
- ▣ RadioNet lobbying by EC - participation in
  - ▣ Future perspectives for research infrastructures advanced communities – Brussels – 14.11.2016
  - ▣ Survey – Evaluation of H2020 – 15.1.2017
  - ▣ Interim Evaluation of H2020 – Brussels – 28.4.2017
  - ▣ Research & Innovation – shaping our future (FP9) – Brussels – 3.7.2017
- ▣ FP9: 3 pillars (excellence science, industrial leadership & social challenges), RI (advanced communities), excellence, staff exchange, JRA with higher TRL (pilot projects in H2020)

What else do we need to prepare for ? e.g. funding agency, EC, Astronet initiatives etc.

- ▣ EC – lobbying for the RI
- ▣ ASTRONET – follow (LoI),
- ▣ EWASS 2017
- ▣ Cooperation; Europlanet, Opticon, AHEAD



Thank you