1. Project Summary

RadioNet is an Integrated Infrastructure Initiative that has pulled together ***all*** of Europe's leading radioastronomy facilities to produce a focused, coherent and integrated project that will significantly enhance the quality and quantity of science performed by European astronomers.

RadioNet has 24 participants. They range from operators of radio telescope facilities to laboratories that specialize in micro-electronics, MMIC design and superconducting component fabrication. The RadioNet project has brought these institutes together in a unique partnership that builds on and extends the successful, but smaller, collaborations that that currently exist.

RadioNet has three parts: a set of 8 Networking Activities; 7 Transnational Access Activities and 3 Joint Research Activities. These form an integrated, inter-dependent and focused plan which has several major objectives:

- The provision of an integrated radio astronomy network which will provide European scientists with access to world-class facilities;
- The provision of a research and development plan aimed at supporting and enhancing these facilities;
- The development of a networking series which will ensure close collaboration in engineering, software, user support and last, but not least, science;
- The training of the next generation users (both astronomers and engineers) of the RadioNet Facilities;
- The preparation and fostering of the European community for the next generation of European facilities: ALMA and the SKA;
- The strengthening of the entire European community through the development of close links with OPTICON and ILIAS, the other partner astronomy I3s.

The RadioNet management plan is strong and well structured. It builds on the close collaboration that many of the institutes have developed over the last 25 years of operation of the European VLBI Network.

The funding of RadioNet will have a long-lasting integrating effect on European astronomy. The close collaborations that will arise from the networking activities and JRAs can only be beneficial to science. The transparent access to world-class facilities, developed further via the JRAs, will have a major impact on European science and scientists. Finally, the activities that focus on the future will have a long-term structuring effect on this highly visible area of science and will be of great benefit to the European Research Area.

2. Overall Description and fundamental objectives of the I3

2.1 Integration of the Activities.

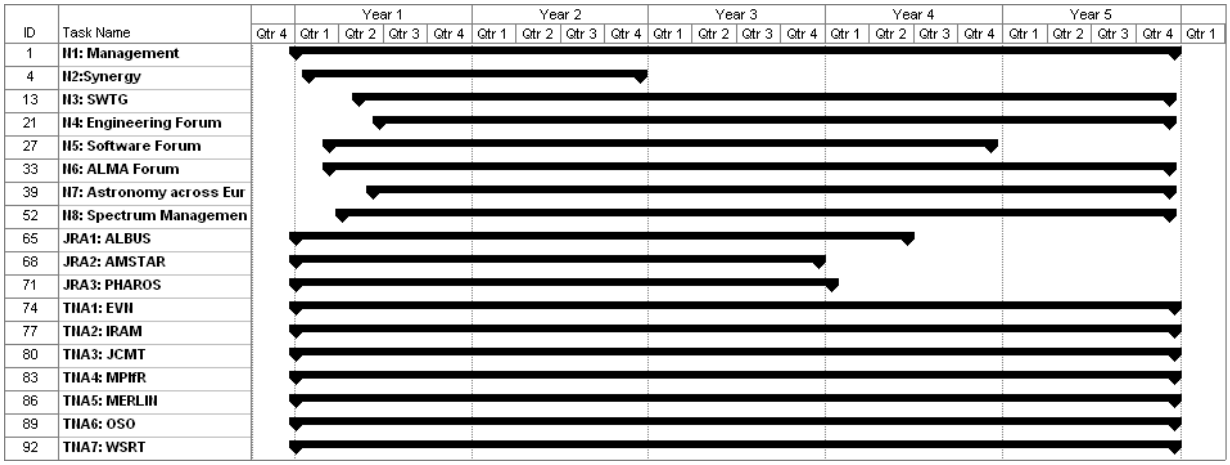
The integrated nature of the RadioNet programme of activities is evident in several areas:

a) ***Transnational access***: RadioNet contains 7 TNA Activities; two of the principal aims of the TNAs are to offer users an integrated, professional and consistent level of support; and to simultaneously improve the data products delivered by these facilities. This is being achieved by ensuring that the facilities are all represented within networking activity N2: Synergy. The goals of this activity are to develop a coherent 'proposal interface' to the RadioNet facilities and a uniform level of user support. Networking activity N3: Science,

will play an important role in providing an opportunity for astronomers to present and discuss the latest results they obtain via the TNA programme.

b) ***Joint Research Activities***: the 3 JRAs are focused primarily on developing and significantly improving the existing RadioNet facilities. The experience obtained through the JRAs will be transferred to the wider community through the networking activities. Specifically, N2: Synergy, N4: Engineering and N5: Software are designed to enable the communication of new techniques, ideas, best practice and the like to engineers and support scientists from all of the RadioNet facilities.

c) ***Networking activities***: as mentioned above, several of the networking activities are designed to support the operations and engineering side of RadioNet. However, others are designed to promote the science performed with the facilities and to develop and train the next generation of astronomers. N3: Science and N6: ALMA are networking activities whose main goals are the discussion and dissemination of science and the training of young astronomers. Two other networking activities, N7: Astronomy Across Europe and N8: Radio Frequency Management look to the future. N8 will provide funding to enable astronomers to better deal with the sustainability of the discipline in the face of interference, to seek compatible solutions with active users of the RF spectrum and to make astronomers who use other wavebands aware of the potential for future problems. N7 will further develop and enhance the links across the community and will enable European radio astronomers to maximise their impact and influence within the Square Km Array (SKA) project.



2.2 Impact on infrastructures.

The funding of the TNA programmes is expected to provide a significant increase in the level of usage of the RadioNet facilities by non-traditional radio astronomy groups. A major effort will be directed towards encouraging such groups to attend RadioNet-sponsored workshops and to apply to use RadioNet-supported facilities. The impact will be monitored through the gathering of statistics on all users, not just those eligible for RadioNet support; and by gathering statistics on scientists who receive support via the networking activities. Based on past experience, the radio astronomy user-base will hopefully grow.

The TNA facilities are planning on enhancing their user support. Through the N2: Synergy activity they plan on producing a simple and coherent web-based interface to all RadioNet facilities. TNA funds will also be used to enhance the facilities offered to the users. It is expected that this will result in an overall increase in the efficiency of the telescopes in a manner that will continue after the FP6 funding has ceased. Telescope efficiency will be monitored through the gathering of statistics on equipment and weather down-time.

2.3 Long-term structuring and sustainability.

The group ethos that is expressed in RadioNet grew from the early EVN collaboration. European radio astronomers know the benefits of closer co-operation and integration, and have a strong desire to build on the current situation to enable the strengthening of the whole community. The JRAs and networking activities will enable and encourage even stronger cross-fertilisation of ideas, philosophies and best practice than currently exists. It is expected that the partnerships that will be forged through the JRAs will continue long after they have achieved their aims. The lessons learned through RadioNet will be invaluable for the construction of the SKA.

2.4 Ethical issues

Not applicable.

2.5 Gender issues

It is self-evident that astronomy as a whole is dominated by males. This is not a deliberate policy on behalf of the governing institutions of the science but appears to be a consequence of social pressures. All institutes involved in RadioNet have a policy of promoting and developing their staff equally, regardless of gender or race. In some countries, e.g. France and Italy it is common to find females occupying senior posts within institutes; in others that is less common. What is noticeable over recent years is that there are an increasing number of young female astronomers and engineers entering the profession. It is hoped that this will develop into a more equitable distribution of the genders in the future. The RadioNet Board will ensure that appointments to positions of responsibility within the project will be entirely on merit.

2.6 Public Outreach

Although there is no networking activity within RadioNet devoted to public outreach the individual observatories and institutes will endeavour to develop a coherent and visible outreach programme. Several of the participants already have successful programmes of this type. The participants will ensure that, when possible, public lectures on the science performed by the RadioNet-supported facilities will be given. The participants will also make every attempt to create stronger links than those currently existing with amateur astronomy organisations.