

Annex C – IST-050 RTG PROGRAMME OF WORK

30 March 2004

NATO AC/323 IST

Task Group on HF Interference, Procedures and Tools (IST-050 / RTG-022)

1. MAJOR ITEMS OF WORK

The objectives of the Task Group are to investigate and find out procedures, models and tools for being able to calculate and measure radio noise generated by PLT and xDSL networks in the HF range. This work will consist of the following tasks:

- Task 1: Describe the effects of PLT and xDSL networks contributing to HF radio noise, and the current background noise levels.
- Task 2: Describe power line and telephone line systems in different countries, which will be used for PLT and xDSL, and their special characteristics regarding HF radio noise emission.
- Task 3: There are used different methods for PLT as well as for xDSL. Describe them from the technical point of view. Explain their different characteristics emitting HF radio noise. Identify technical realizations (manufacturer, name, type, technical data, provider, etc.).
- Task 4: Define representative PLT and xDSL systems or parts of them to be modelled as basis for the calculation and measurement of HF radio noise. Find real networks, which best fit to the representative ones.
- Task 5: Investigate methods of measuring the emissions from PLT and xDSL networks operating within the HF range. Determine the ranges for measurement of field strength close to and far from PLT and xDSL networks and the relations of the field strengths of both ranges to each other.
- Task 6: Review and recommend propagation path loss models to be used.
- Task 7: Investigate ways and means to model PLT and xDSL systems. The models should allow calculation of the electric and magnetic field strengths of HF radio noise emitted by the PLT and xDSL networks. Find tools applicable to this modelling. Determine the kind of modelling for the representative PLT and xDSL systems found in (4).
- Task 8: Establish models for the representative PLT and xDSL networks or parts of them found in (4). Calculate HF radio noise field strengths at near and far distances, using the established models.
- Task 9: Verify the models found in (8) by measuring HF radio noise field strengths using methods specified in (5), and comparing them with the field strengths calculated in (8).

2. TIME SCALE

The Task Group on *HF Interference, Procedures and Tools* will address the tasks listed above over a three-year period beginning 2004.

It is planned that three meetings per calendar year will be held at research establishments within participating nations. A final report will be provided after completion of the tasks.

3. PARTICIPATING NATIONS

Membership is sought from all NATO and PfP nations of the IST Panel. Canada, Georgia, Germany, Italy, Norway, Slovakia and United Kingdom have appointed members to the Task Group at the time of the kick-off meeting.

4. PARTICIPANTS

A complete list of participants is provided in Annex E.