



TRANSMIT
TRAINING RESEARCH AND APPLICATION NETWORK TO SUPPORT THE MITIGATION OF IONOSPHERIC THREATS

WORKSHOP

20-21 March 2012

East Midlands Conference Centre Nottingham UK

TRANSMIT: Scientific Aspects, industrial input and initial results

TRANSMIT is an initiative funded by the European Commission through a Marie Curie Initial Training Network (ITN).

TRANSMIT is an FP7 Marie Curie Initial Training Network focused on the study of ionospheric phenomena and their effects on systems embedded in our daily life. The project will develop a set of integrated real-time state-of-the-art tools capable to mitigate ionospheric threats to Global Navigation Satellite Systems (GNSS) and related applications, in areas such as civil aviation, marine navigation and land transportation.

TRANSMIT is the precursor for the establishment of the Ionospheric Perturbation Detection and Monitoring (IPDM) network (<http://ipdm.nottingham.ac.uk/>), proposed by European experts and supported by the European Space Agency (ESA) as the way forward to deliver the state-of-the-art to protect the range of essential systems vulnerable to these ionospheric threats. At the core of TRANSMIT is the training of a group of young scientists, the TRANSMIT fellows, who will ultimately carry out the project's research work, culminating with a prototype of the IPDM network.

This Workshop is the first TRANSMIT's open event and aims to:

1. expose the "Scientific Aspects, Industrial Input and Initial Results" related to the project, the TRANSMIT concept and expected achievements. The idea behind the IPDM network will be introduced as well as the strategy to develop its prototype, including both the underlying science and the practicalities of the project.
2. offer the opportunity to the related international community, including academia and industry involved in research on or affected by ionospheric threats, to touch base with TRANSMIT's partners and fellows, while also bringing their expertise and experiences to the project. The workshop will be open to participation from all interested in the subject who wish to submit a contribution.

PROGRAM

Session 1

led by Andrzej Wernick, WP1 leader:
TRANSMIT Science

This session deals with Space Weather influences on the ionosphere and consequently on the electromagnetic waves propagation through it. It will focus on ionospheric effects on GNSS radio signals. Theoretical and experimental papers on scintillation modeling, climatology and forecasting are welcome.

Session 2

led by Cathryn Mitchell and Biagio Forte,
WP2/WP3 leaders:

TRANSMIT Data and Model Development

Ground-based as well as space-borne measurements of ionospheric scintillation and TEC can be combined within ionospheric tomographic reconstruction algorithms. This session will focus on the use and assimilation of experimental data into theoretical or numerical models. Contributions dealing with spatial and temporal resolution issues are particularly welcome.

Session 3

led by Marcio Aquino, WP4 leader:
TRANSMIT and Industry

This session will showcase the initial interactions of the project with industry, aiming to expose the threats posed by the ionosphere to GNSS related business, existing counter-measures and new ideas to mitigate these effects. Contributions from industry and academia alike are welcome.

ORGANIZING COMMITTEE

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FOR MORE INFORMATION visit TRANSMIT website: www.transmit-ionosphere.net

