APPENDIX G

TWO-WAY TRIAL – PROJECT OUTLINE

1. Once the Zurich and Pretoria based Two-ways have been successfully re-configured then a four week trial commences.

The objectives for this trial are:

- **To help identify from the impact of the products sent from the user two-way:**
  the timeliness (compared with existing terrestrial links) of receipt of products at the UK Met. Office message switch
  the technical and operational effectiveness of the re-configured infrastructure,including the enhanced hub and reconfigured VSATS
  the flow of traffic through the UKMO message switch – TROPICS

To satisfy the objectives of this trial, and to provide a realistic simulation of the type of bulletins the Two-Way VSATs will be used to transmit when they become operational, and the following bulletins used in the trial:

Swiss bulletins	South African bulletins	UK Bulletins
FTSW31 LSSW	FCZA40 FAPR	FCUK53 EGRR
FCSW31 LSSW	FTZA31 FAPR	FCUK54 EGRR
FCSW32 LSSW	FTZA32 FAPR	FTUK41 EGRR
SASW31 LSSW	FTZA40 FAPR	SAUK39 EGRR
SASW32 LSSW	SAZA31 FAPR	SAUK51 EGRR
SASW41 LSSW		
QGDC57 LSSW	QYLA99 FAPR	PGDE15 EGRR
		PGAE06 EGRR

The bulletins are predominantly OPMET information (TAFs and METARs) which was the data type identified by the MOTNEG as significantly benefiting from Two-Way SADIS communication. A small number of T.4 bulletins are also included to simulate the likely future Two-Way SADIS requirement, as forecast in the Strategic Assessment Tables, and to evaluate the operational effectiveness of the system in handling larger bulletins sizes.

2. Meteo Swiss and the South African Weather Bureau have been contacted to initiate sending the T.4 bulletins QGDC57 LSSW and QYLA99 FAPR on the GTS to Bracknell for the duration of the trial. All of the OPMET bulletins are already routinely received. Additionally, all of the above bulletins will be broadcast from the respective Two-Way SADIS systems of their originating centres. For the duration of this trial, the assumption is made that the bulletins are transmitted from their respective sources on the normal terrestrial link and the Two-Way SADIS at approximately the same time. Clarification will be sought from Meteo Swiss and the South African Weather Bureau that this is the case.

3. When the trial commences The Met. Office will automatically log the time at which all of the Swiss and South African originated bulletins are received at Bracknell on the terrestrial link, and at Bracknell via Whitehill (the Two-Way satellite dissemination/reception hub in Oxfordshire, UK) from the Two-Way SADIS systems. This will allow an evaluation to take place of the timeliness of receipt of products from the Two-Ways compared with the terrestrial line. Results will be collated and presented in an information paper.
Additionally, if the content of the bulletins received via the Two-Way SADIS systems differs from that received via the terrestrial link, then this will be logged at Bracknell and investigated. Assuming that the bulletins are the same, then data suppression will be used by TROPICS to ensure that only one version of the bulletin is "switched".

4. Whilst the data is being transmitted and evaluated for the duration of this trial, it will become immediately obvious if there are any significant problems with individual Two-Way VSATs and/or the enhanced hub infrastructure at Whitehill. The Met. Office will ensure that any problems are thoroughly investigated upon identification. Engineers at MMS will be notified of this trial and their co-operation will be requested in investigating any technical problems that may come to light through its duration.

– – – – – – – –