

**CCTF WG on TWSTFT
Delft
15-16 November 2005**

**NPL TWSTFT Status Report
Peter Whibberley**

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- NPL organisation
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- Relocation to new building
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NPL organisation of T&F

NPL Management Ltd.

Steve McQuillan

Enabling Metrology Division

Stuart Pollitt

Time and Quantum Detection team

Duncan Jarvis

Time, Frequency & the Metre group

Gill Money

“Core Time Area” staff

- Management:
 - Gill Money
- Scientific staff:
 - John Davis (Technical Leader)
 - Peter Whibberley
 - Peter Stacey
 - Deborah Baines

“Core Time Area” activities

- Scientific activities:
 - UTC(NPL)
 - 3 AHM, 1 Cs
 - Clock modelling & time scale algorithms
 - Integration of new freq standards
 - Time transfer
 - TWSTFT
 - GPS common-view
 - 5 TFS Timetrace receivers
 - GPS carrier phase, P3
 - Ashtech Z12-T (IGS station: NPLD)
 - Javad Legacy

“Core Time Area” services

- Services:
 - MSF 60 kHz
 - Off-air monitoring: LF, GPS
 - GPS common-view service
 - Characterisations of freq standards and GPSDOs
 - Computer time services
 - Telephone Time Service
 - Internet Time Service (NTP)
 - Consultancy
 - Galileo

T&F relocation

- Still located in old buildings
- Move to new NPL building (same site) currently scheduled for April – June 2006
- Intention is 3 months of parallel operation at new and old locations



TWSTFT relocation

- Restricted views of sky
- Clearance required from Ofcom
- Aim to operate both TWSTFT stations
 - Before, during and after relocation
 - Requires new code for second station
 - Possible disruptions during moves
 - Upgraded hardware
 - Phase-stable cables, RF & 1PPS distribution
 - Recalibration required after relocation

NPL TWSTFT

- Two independent Earth stations
- NPL01 - operational:
 - 2.4m Era Ku-band dish
 - Miteq up & down converters
 - Satre 74 modem
- NPL02 – not currently operational:
 - 1.8m Channel Master Ku-band dish
 - KST 12000 Earth station terminal (external)
 - Satre 38 modem (upgraded)
- Frequency reference:
 - Active H-maser, UTC(NPL)
 - 1PPS generated locally (known offset)

NPL TWSTFT changes

- Recent developments
 - Operating & analysis software re-written in LabView
 - Switch to 2-hourly schedule
 - Calibration, 31 Oct – 1 Nov 2005
- Current activities
 - Complete procurement of equipment for second station
 - Software development & documentation
 - Bring NPL02 back into operation

Contact Details

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