The IDS today and tomorrow

G. Tavernier (CNES)
M. Feissel-Vernier (Paris Observatory and IGN)
F. Lemoine (GSFC)
C. Noll (GSFC/CDDIS)
J. Ries (UTEX/CSR)
L. Soudarin (CLS)
P. Willis (IGN/JPL)
International DORIS Service: history

- IUGG, July 1999, Birmingham
  - IAG : DORIS Pilot Experiment
  - Assess the need and feasibility of an International DORIS Service

- September 1999: call for participation

- Analysis campaigns

- IUGG, July 2003, Sapporo:
  - IDS accepted as an IAG service

- IGS + IVS + ILRS + IDS = backbone of the future International Geodetic Observing System (IGGOS)
**IDS structure**

Users → Central Bureau → Data Centers → Satellites (C.C.) → Network → Stations

Central Bureau → Governing Board

Governing Board → Analysis W. Group → Analysis Coordinator

Analysis W. Group → Data Flow Coordinator

Data Flow Coordinator → IAG Exec. Com.

IAG Exec. Com. → IERS Dir. Board

The IDS today and tomorrow
Governing Board

- Gilles Tavernier  
  CNES  
  Chairperson

- Martine Feissel-Vernier  
  Paris Observatory and IGN  
  Analysis coordinator

- Frank Lemoine  
  NASA GSFC  
  Stations Selection Group Chairperson

- Carey Noll  
  NASA GSFC  
  Data Flow coordinator

- John Ries  
  University of Texas CSR

- Laurent Soudarin  
  CLS  
  Central Bureau Web server

- Pascal Willis  
  IGN / JPL
Central Bureau

▶ CNES/IGN/CLS
  - Jean-Pierre Granier, Gilles Tavernier
  - Laurent Soudarin, Jean-Jacques Valette
  - Hervé Fagard, Pascal Willis

▶ Website :

▶ DORIS Mails
  - http://list.ensg.ign.fr/wws/arc/dorismail
IDS Analysis campaigns

➤ Analysis coordination: Martine Feissel-Vernier PO IGN
  ● Analysis coordination page: http://lareg.ensg.ign.fr/IDS/

➤ 2002 Analysis campaign
  ● Time series of stations coordinates
  ● Earth orientation parameters
  ● Geocenter
  ● Orbits

➤ 2003 Grace Analysis campaign
Data flow coordination

Data Centers

- Data flow coordination: Carey Noll, NASA GSFC

Data Centers:
- preprocessed DORIS measurements from 7 satellites
- ancillary data
- Analysis Centers products

- NASA GSFC CDDIS - USA
  - Carey Noll
  - ftp://cddisa.gsfc.nasa.gov/pub/doris/

- IGN LAREG - France
  - Edouard Gaulué
  - ftp://lareg.ensg.ign.fr/pub/doris/
Data delivery delays

TOPEX Delays (days)

ENVISAT Delays (days)
Stations Selection Group

- Frank Lemoine GSFC (Kristine Larson Univ. of Colorado)
- Geoscience Australia Ramesh Govind
  - Lambert glacier, Antarctica: January 2003
  - Burnie: permanent altimeter calibration site in Bass Straight
- BKG - Wettzell W. Schlüter, H. Hase
  - Wettzell: fundamental geodesy, May 2003
  - TIGO-Conception: fundamental geodesy
- TU Crete S. Mertikas
  - Gavdos Island: permanent altimeter calibration site, September 2003
- IAA/AWI J.L. Hormaechea, H. W. Schenke
  - Belgrano II, Antarctica, February 2004
Meetings

- DORIS Days, Toulouse, May 2-3, 2000

- IDS Workshop, Biarritz, June 13-14, 2002

- IDS Analysis Workshop, Marne La Vallée, February 20-21, 2003

- IDS Plenary Meeting, Paris, May 3-4, 2004
IDS tomorrow: Satellites

The IDS today and tomorrow
IDS tomorrow: Stations

- **System limitations**
  - Stations jamming
  - Shifted frequencies
    - 3.0 beacons
    - 2nd generation receiver: Jason-1, ENVISAT (SPOT5)
  - Uplink
    - 1 channel: SPOT2, TOPEX/POSEIDON, SPOT-4
    - 2 channels: Jason-1, ENVISAT, SPOT-5 (CRYOSAT)
    - 6 channels: 2GXX receivers

- **Limited amount of available beacons**
  - 5 3.0 beacons available for IDS
    - Wetzell/TIGO
    - GAVDOS
IDS tomorrow: Analysis

➤ At least 3 Analysis Centers for each product
  ● Comparison
  ● Combination

➤ IERS Pilot Project
  ● Time series of station coordinates and polar motion
  ● Regular delivery
  ● Delay

➤ Which products?
  ● Time series of stations coordinates/Earth orientation parameters
  ● Geocenter
  ● Orbits
  ● Ionosphere, troposphere
Proposal for an IDS Meeting:
- In association with the Jason-1 SWT
- Fall 2005
- Location to be defined