WORLD METEOROLOGICAL ORGANIZATION

REGIONAL ASSOCIATION II
(ASIA)

WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION II
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STATUS OF WWW IMPLEMENTATION AND OPERATION

Results of the quantitative monitoring of the WWW

Availability of SYNOP, TEMP, CLIMAT and CLIMAT TEMP reports at MTN centres

(Submitted by the Secretariat)

Summary and purpose of document

This document includes an analysis of the results of the quantitative monitoring of the operation of the WWW, showing the availability of SYNOP, TEMP, CLIMAT and CLIMAT TEMP reports at MTN centres.

ACTION PROPOSED

The group is invited to take into account the information provided in the document when considering improvements to be made in the implementation of the GOS and GTS in the Region.

DISCUSSION

Availability of SYNOP and TEMP reports from RBSN stations at MTN centres

2006 Annual Global Monitoring (AGM)

1. The Annual Global Monitoring (AGM) is carried out in October each year. The WWW centres are invited to monitor the SYNOP and TEMP reports from the RBSNs (Regional Basic Synoptic Networks) stations in accordance with the responsibility taken for the exchange of data on the GTS (Global Telecommunication System):

- The NMCs (National Meteorological Centres) should monitor data from their own territory;
- RTHs (Regional Telecommunication Hubs) should at least monitor data from their associated NMCs and their own Region;
- WMCs (World Meteorological Centres) and RTHs located on the MTN (Main Telecommunication Network) should monitor the complete global data set.

Ninety-seven WWW centres, including 21 centres located in Region II, sent their October 2006 AGM monitoring results to the Secretariat through the Internet, on diskette or on paper.

2. The results of the AGM make it possible to compare the availability of the reports received from RBSN stations at the NMC responsible for inserting the data in the Regional Meteorological Telecommunication Network (RMTN), at the associated RTH and at MTN centres. The differences in the availability of data between centres are due to the following main reasons:

- Differences of requirements in the reception of data;
- Shortcomings in the relay of the data on the GTS;
- Data not monitored:
- Differences in the implementation of the monitoring procedures at centres.

3. The results of the 2006 AGM are available at the global and regional levels on the WMO server from ftp://www.wmo.int/GTS_monitoring/AGM/From_WMO/200610/AGM2006.htm.

July 2006, October 2006, January 2007 and April 2007 exercises of the Special MTN monitoring (SMM)

4. The AGM has the following limitations:

- It provides monitoring information over a limited period each year;
- It provides information at the report level but no information at the bulletin level for RBSN stations;
- The differences in the implementation of the monitoring procedures at centres lead to differences in the availability of reports between centres.

5. With a view to complementing the AGM, CBS-XI (Cairo, 1996) decided to implement the Special MTN Monitoring. Taking into account the limited resources available at WWW centres to carry out the monitoring activities, CBS agreed to share the workload of the SMM between the MTN centres.

6. One of the main features of the Special MTN Monitoring (SMM) is that the sets of messages (also called raw data) provided by the various MTN monitoring centres are processed by a pre-analysis centre (unique for each type of data). This feature aims at eliminating the

discrepancies in the availability of data reported by monitoring centres due to differences in the implementation of monitoring procedures like it is the case for the present annual global monitoring, primarily due to different methods of counting the reports. The objective of the pre-analysis is to prepare files having a data-base structure and containing the information extracted from all the sets of messages provided by the monitoring centres. The pre-analysis files represent a unique reference for each type of data for further analysis. One advantage of the SMM is that, when a question is raised on specific bulletins, it is always possible to access the raw data and read the complete text of the bulletins as received by the monitoring centres. The SMM provides a complete monitoring information at the report and bulletin levels for any further analysis.

7. The SMM is carried out four times each year: 1-15 January, April, July and October. A summary of the analysis of the results of the July 2006, October 2006, January 2007 and April 2007 exercises of the Special MTN monitoring (SMM) for SYNOP and TEMP reports is given in Figures 1 and 2 and Tables 1, 2, 5 and 6.

8. Table A is a condensed summary of the SMM results for SYNOP and TEMP reports.

Table A

Type of data	Reports received on average during the July and October 2006 SMM, and the January and April 2007	Reports expected to be prepared*
SYNOP	87%	98%
Part A of TEMP	77%	94%

Note: the percentages are calculated with the RBSN as the reference
* At stations implemented according to WMO-No. 9, Vol. A (March 2007).

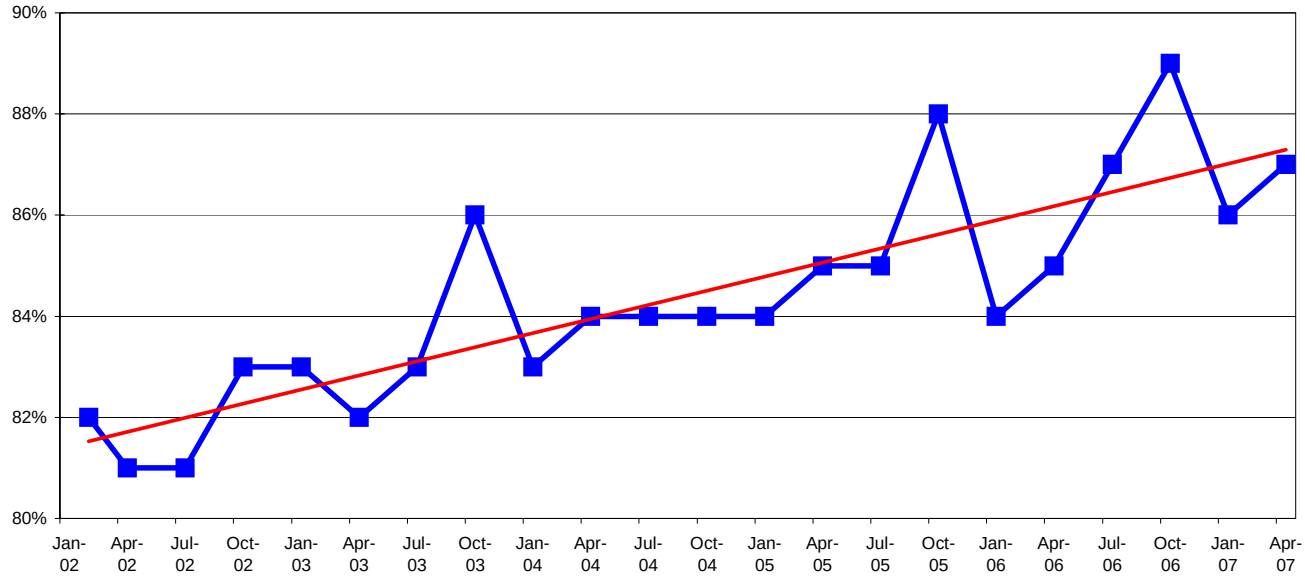
9. The following deficiencies were found during the four SMM exercises:

- As regard SYNOP reports, 76 stations out of the 1313 RBSN surface stations were silent during the four SMM exercises (see Table 5). Less than 21 per cent of the expected SYNOP reports were received from Afghanistan, Islamic Republic of, Bahrain, Cambodia, Iraq, Nepal and Yemen (see Table 1).

- As regard TEMP reports, 23 stations out of the 282 RBSN upper-air stations were silent during the four SMM exercises (see Table 6). Less than 29 per cent of the expected TEMP reports were received from Afghanistan, Islamic Republic of, Bangladesh, Cambodia, Democratic People's Republic of Korea, Iraq, Mongolia, Myanmar, Pakistan, Qatar, Tajikistan, Turkmenistan, United Arab Emirates, Uzbekistan and Yemen (see Table 2).

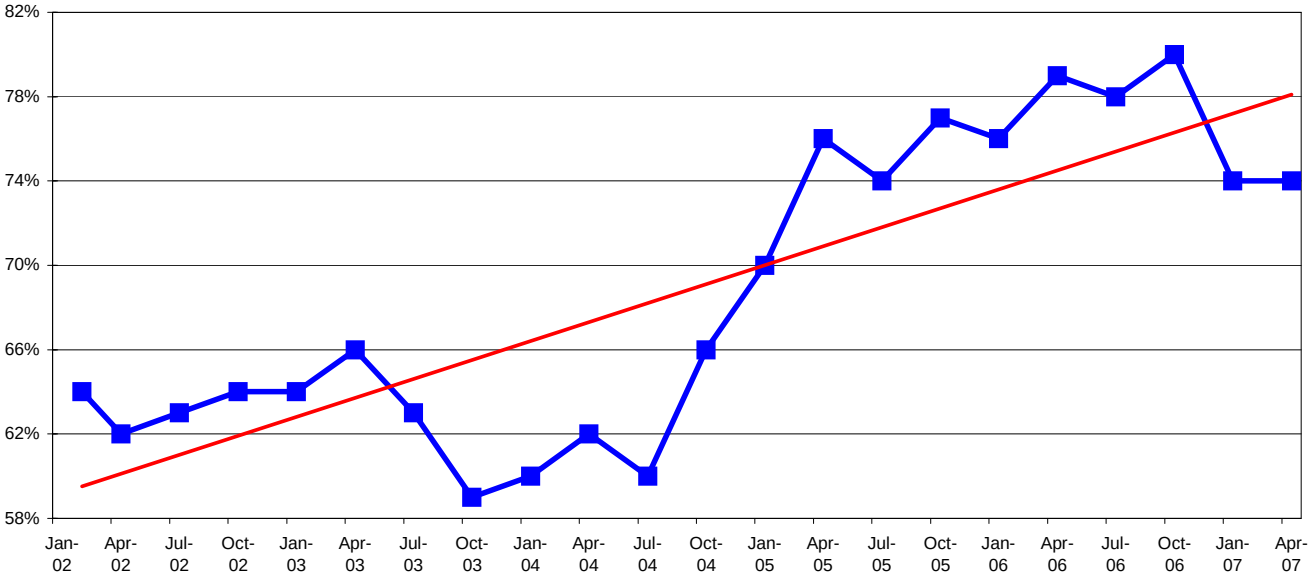
10. Tables B and C show the availability of SYNOP and TEMP reports from RBSN stations located in Region II from 2002 to 2007 during the October Annual Global Monitoring (AGM) and the January, April and July SMM . During that period, the availability of SYNOP reports increased from 82 to 87 per cent (+ 5 per cent) and the availability of TEMP reports from 60 to 77 per cent (+ 17 per cent). During the same period, the number of RBSN surface stations increased from 1234 to 1313 stations (+ 6 per cent) and the number of RBSN upper-air stations decreased from 294 to 282 (- 4 per cent).

Table B - Percentage of SYNOP reports received during the AGM and SMM exercises from the RBSN stations located in Region II from 2002 to 2007



	Feb-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Jul-03	Oct-03	Jan-04	Apr-04	Jul-04	Oct-04	Jan-05	Apr-05	Jul-05	Oct-05	Jan-06	Apr-06	Jul-06	Oct-06	Jan-07	Apr-07
SYNOP reports	82%	81%	81%	83%	83%	82%	83%	86%	83%	84%	84%	84%	84%	85%	85%	88%	84%	85%	87%	89%	86%	87%

Table C - Percentage of TEMP reports received during the AGM and SMM exercises from the RBSN stations located in Region II from 2002 to 2007



	Feb-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Jul-03	Oct-03	Jan-04	Apr-04	Jul-04	Oct-04	Jan-05	Apr-05	Jul-05	Oct-05	Jan-06	Apr-06	Jul-06	Oct-06	Jan-07	Apr-07
TEMP reports	64%	62%	63%	64%	64%	66%	63%	59%	60%	62%	60%	66%	70%	76%	74%	77%	76%	79%	78%	80%	74%	74%

Availability of CLIMAT and CLIMAT TEMP reports from RBCN stations at MTN centres

11. The analysis of the Annual Global Monitoring (AGM) and of the Special MTN Monitoring (SMM) shows lower figures for the availability of the CLIMAT and CLIMAT TEMP reports at MTN centres for the SMM exercises than for the AGM exercises. This is mainly due to the fact that the AGM statistics include the availability of the reports at 14 MTN centres instead of three for the SMM, and that the pre-analysis of the SMM raw data made by Cairo systematically rejects the reports for which the format of presentation is not conform to the WMO standards. The monitoring of the exchange of CLIMAT and CLIMAT TEMP bulletins on the GTS shows major deficiencies in the application of WMO standards for the presentation of CLIMAT and CLIMAT TEMP bulletins. In 2004, the WMO Secretariat had investigated deficiencies in the application of WMO standards in the presentation of CLIMAT and CLIMAT TEMP bulletins. A summary of the findings is available from http://www.wmo.int/pages/prog/www/WDM/Documentation/Deficiencies-CLIMAT_CL-TEMP.pdf. The WMO Secretariat informed the WMO Member countries of the deficiencies found for each country and invited them to take action in order to eliminate the deficiencies.

12. A summary of the analysis of the results of the October 2006 AGM for CLIMAT and CLIMAT TEMP reports received at MTN centres is given in Figures 3 and 4 and Tables 3, 4, 7 and 8. Table D is a condensed summary of the AGM results.

Table D

Type of data	Reports received at MTN centres during the October 2006 AGM	Reports expected to be prepared*
CLIMAT	81%	87%
CLIMAT TEMP	80%	76%

Note: the percentages are calculated with the RBCN as the reference
* At stations implemented according to WMO-No. 9, Vol. A (July 2006).

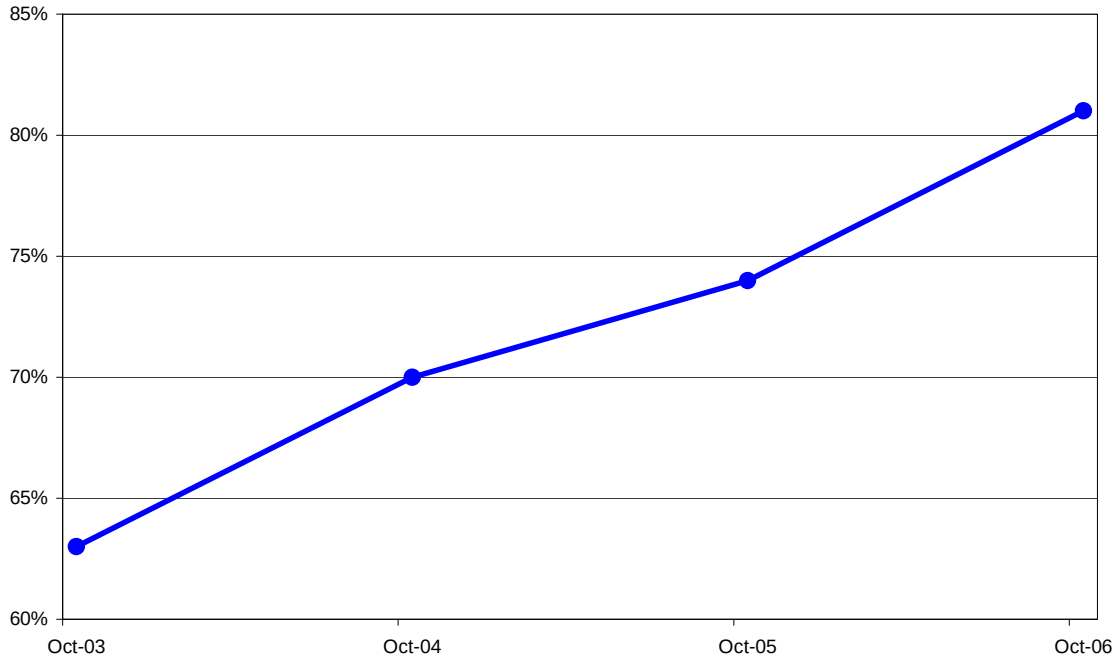
13. The following deficiencies were found during the 2006 AGM exercise:

a. No CLIMAT reports were received by MTN centres from 91 stations out of the 663 RBCN surface stations (see Table 7). Less than 23 per cent of the expected CLIMAT reports were received from Afghanistan, Islamic Republic of, Bangladesh, Cambodia, Iran, Islamic Republic of, Iraq, Kuwait, Maldives, Myanmar, Qatar, Tajikistan, Turkmenistan, and Yemen (see Table 3).

b. No CLIMAT TEMP reports were received by MTN centres from 27 stations out of the 182 RBCN upper-air stations (see Table 8). Less than 29 per cent of the expected CLIMAT TEMP reports Afghanistan, Islamic Republic of, Bangladesh, Cambodia, Iraq, Kazakhstan, Kuwait, Lao People's Democratic Republic, Maldives, Qatar, Sri Lanka, Tajikistan, Turkmenistan, United Arab Emirates and Uzbekistan (see Table 4).

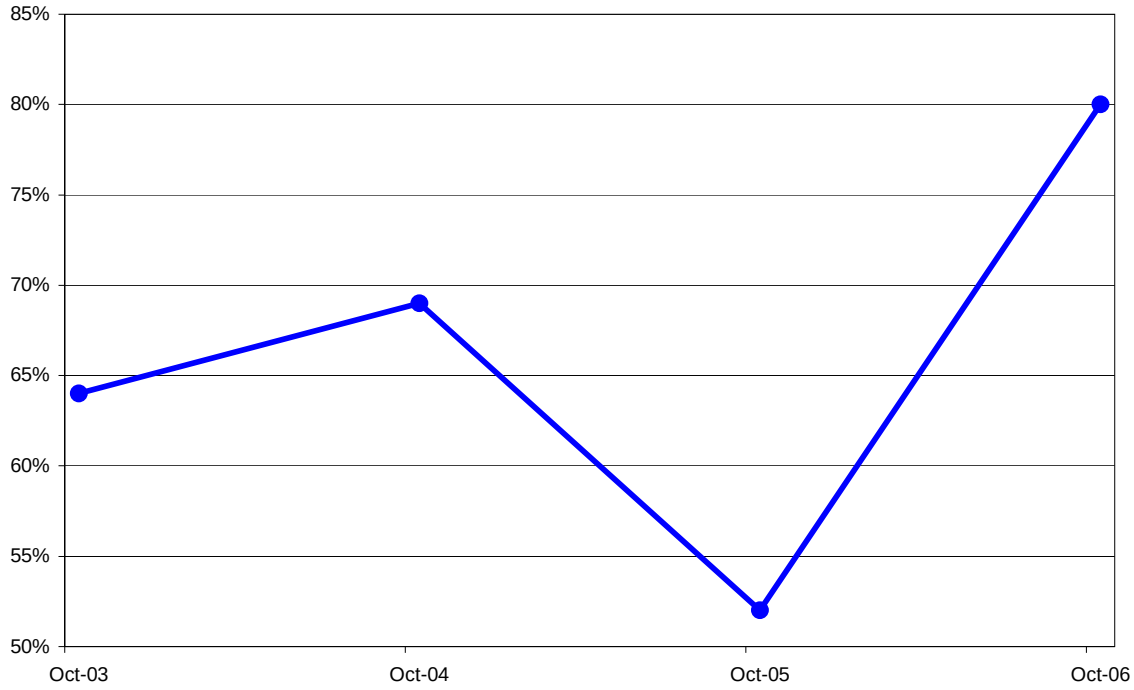
14. Tables E and F show the availability of CLIMAT and CLIMAT TEMP reports from RBCN stations located in Region II from 2003 to 2006 during the October AGM exercises. During that period, the availability of CLIMAT reports increased from 63 to 81 per cent (+ 18 per cent) and the availability of CLIMAT TEMP reports from 64 to 80 per cent (+ 16 per cent). During the same period, the number of RBCN surface stations increased from 593 to 663 stations (+ 12 per cent) and the number of RBCN upper-air stations decreased from 194 to 182 (- 9 per cent).

Table E - Percentage of CLIMAT reports received during the 2003 to 2006 October AGM from the RBCN stations located in Region II



	Oct-03	Oct-04	Oct-05	Oct-06
CLIMAT reports	63%	70%	74%	81%

Table F - Percentage of CLIMAT TEMP reports received during the 2003 to 2006 AGM from the RBCN stations located in Region II



	Oct-03	Oct-04	Oct-05	Oct-06
CLIMAT TEMP reports	64%	69%	52%	80%