

# WWW Annual Technical Report on the development of Global Data Processing and Forecasting System (2004)

Country: **Kazakhstan**

Centre: **Kazhydromet**

## 1. Summary of main factors:

In 2004 the further modernization of soft-hardware complexes was accomplished.

The soft-hardware Unimas-WEB was put into operation.

The routers CISCO-2500, Switch 2512, SAS 2224, DSR 2216 were put into operation for communication channels and local network of the Kazhydromet.

Postal server for operational data collection and processing, postal server for e-mail users, DNC server were setup and put into operation. The mentioned servers are intended for automatic collection of hydrometeorological information from the republican network and as well local network of the Kazhydromet.

In 15 meteorological stations of Kazakhstan the computers are installed for information and reports transmission by e-mail.

The works are carried out on establishing meteor-burst communication in meteorological stations and hydrological posts in the region of the Aral Sea.

From 10-cluster radio stations and regional centers of Kazakhstan the data exchange is carried out by e-mail and the Internet system.

## 2. Equipment, which the Center use.

MTS	- Pentium III 650MHz.
AWS-weather	- Pentium III 800MHz.
GIS-meteo	- Pentium II 500MHz.
E-mail server	- Pentium IV 1,5MHz.
Satellites	- Pentium III 633MHz.
E-mail	- Pentium III 1100MHz.
Switch 2512, SAS 2224, DSR 2216, Cisco 2500.	
Server	- Pentium IV 1,4MHz.
Server	- Netserver LC 2000U3 1,4MHz.
Modems	- MultiModem, M-144, TAINET, Zyxel.

The soft hardware of weather maps preparation – Seleron-1100MHz, DesignJet - 350C, DesignJet - 450C.

## 3-6. Without any change.

## 7. Forecasting system:

Conventional methods of weather forecasting are applied in the Hydrometeorological Service of Kazakhstan based on analysis of actual information using baric fields forecast, which is being received from the World Meteorological Centre (Washington) and European Centre for Medium Range Weather Forecasts (Reading, Moscow).

Every day meteorological, sea, hydrological and agrometeorological forecasts are drawing up. Regularly the week, decade and month weather forecasts are issued for all the regions of Kazakhstan. One of the main tasks of the Hydrometeorological Service of Kazakhstan is to make forecasts of the dangerous and natural phenomena, reports of the dramatic weather changes and bring them for the public. In 2004, validation of short term forecast was 92-95%, middle-range – 83-88%, long-range forecast was on temperature - 80%, on precipitation 58%.

NWP methods application is at the design stage.

## **9. Prospects.**

The further modernization of transceiving system is expected through soft hardware upgrading. Upgrading of MTS soft hardware.

Also installation and putting into operation the automatic stations in the hydrometeorological network of Kazakhstan. Setting computers and installation of soft hardware in some meteorological stations.