The Computer Network of the National Academy of Sciences of Belarus (BASNET) was created in the Republic of Belarus to exchange data between various research organizations and scientific groups. Since 1997 BASNET together with the Belarusian State University networks “BASNET” and Ministry of Education network UNIGBEL have formed the Unified Research and Informational Computer Network (URICON) of the Republic of Belarus.

Until now BASNET is the most advanced and dynamically developing research computer network in the Republic of Belarus. BASNET provides international connectivity to other Belarusian NRENs and provides various Internet services in all regional cities of Belarus - Brest, Grodno, Mogilev, Vitebsk and capital – Minsk. Since May, 2007 BASNET is administrated by the UIIP NASB which is recognized in Belarus NREN provider to unite various research centers, educational and high-tech IT-institutions and IT-research laboratories in Belarus.

**MAIN TASKS**

- **Providing the customers with the services of data communication and storage.**
- **Creation of the corporate library network of the Republic of Belarus.**
- **Creation of the telecommunication network of the Republic of Belarus.**
- **Creation of the telecommunication subsystem for the space information.**
- **Creation of the telecommunication system for the provision of the customers of Russia and Belarus with the space information.**
- **Designing of the project of BASNET modernization.**

**YEARS 2008-2010 MAIN TASKS**

- **Expansion of the capacity of the external communication channel.**
- **Organization of the backup external communication channel.**
- **Expansion of the capacity of the regional communication channels.**
- **Improvement of the network architecture.**
- **Improvement of the Network Operation Center.**
- **Creation of the modern data processing center.**
- **Implementation of IPv6 protocol, other network services and new generation technologies.**

**STAGES OF BASNET DEVELOPMENT**

<table>
<thead>
<tr>
<th>YEARS</th>
<th>MAIN RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>Backbone fiber-optic network BASNET with the gateway to Internet.</td>
</tr>
<tr>
<td>1998</td>
<td>Radio relay segment of academic network BASNET.</td>
</tr>
<tr>
<td>1999</td>
<td>BASNET network node on “Beltelecom”. First stage of URICON.</td>
</tr>
<tr>
<td>2000</td>
<td>Satellite channel for the access of URICON to Internet.</td>
</tr>
<tr>
<td>2003</td>
<td>Creation of the telecommunication network of the Republic of Belarus.</td>
</tr>
<tr>
<td>2004</td>
<td>Expansion of the access channel to GEANT up to 155 Mbps.</td>
</tr>
<tr>
<td>2007</td>
<td>Creation 2 new fiber-optic access nodes.</td>
</tr>
</tbody>
</table>

**BASNET today**

106 corporate users, including:
- 61 research institutions
- 11 universities
- 14 republican and regional libraries
- State Committee of Science and Technologies
- Ministry of Healthcare
- Ministry of Industry
- Ministry of Agriculture
- State Committee of Chernobyl
- 20 nodes
- 40 km FO channels
- 701 ports
- Backbone 100-1000 Mbps

**EXPECTED RESULTS IN 2010**

- Provision of the new generation network services and technologies
- Multimedia technologies, including videoconference communication
- IP-telephony and video telephony communication
- Multicast data transmission technologies
- Belarus - part of the European Scientific Grid network: via Baltic Grid to EGEE
- Membership in pan-European Grid network
- Provision of the customers with the services of data processing and storage centers
- Modern Network Operation Center
- External communication link 1-10 Gbps
- Regional communication links 100-1000 Mbps
- Fail-safe backbone network (10 Gbps) with guaranteed route reservation

**BASNET external connectivity**

**Supercomputers SKIF K-1000, K-500**

BASNET is a member of the European Center of Internet registration. It possesses LR Status.

On a base of the Central Scientific Library of the Republic of Belarus the Internet-server is organized in BASNET to provide for all registered Belarusian customers an access to e-publications of the Scientific Electronic Library (SEL), organized under the Russian Foundation of Basic Research. In June 2002 all BASNET users obtained the additional service to get on-line access to EBSCO company (over 3500 titles) and magazines of “Blackwell Scientific” (over 300 titles). It is planned in cooperation with BMHEF and DFN (Germany) to provide a free access to the STN Library in Karlsruhe. Since March 2002 on-line access is organized to e-versions of 31 scientific journals from 80 ordered by the Central Scientific Library as “hard copies”. Also the Library additionally has got access to e-versions of 174 scientific journals of “Taylor & Francis Group”. Due to agreement with SEL, in May 2002 access was organized to e-versions of over 100 foreign R&D journals.

**Connection of BASNET to GEANT**

Since May 2007 BASNET is administrated by the UIIP NASB who is recognized as Belarus NREN provider to unite various research centers, educational and high-tech IT-institutions and IT-research laboratories in Belarus.