

**UNITED NATIONS STATISTICAL COMMISSION and  
ECONOMIC COMMISSION FOR EUROPE  
CONFERENCE OF EUROPEAN STATISTICIANS**

**UNECE Work Session on Statistical Dissemination and Communication**  
(13-15 May 2008, Geneva, Switzerland)

Topic: Communicating statistics in the information age

**VISUALIZATION AND OTHER INSTRUMENTS FOR BETTER DATA  
UNDERSTANDING AND DISSEMINATION**

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1. Again and again we repeat that the Internet became a power tool for statistical and other data dissemination. Some aspects of Internet use in the Rosstat system have been already discussed at previous international meetings. This paper will represent some new features of our strategy for communicating, in particular the following:

- implementation of visualisation,
- use of interactive tables and maps,
- development of a new website section for statistics of municipalities,
- implementation of the Personal inflation calculator.

**I. VISUALIZATION**

2. While all 14 volumes of the Population census-2002 have been published during 2004-2005 and loaded on website [www.perepis2002.ru](http://www.perepis2002.ru) Rosstat undertook measures to implement visualization facilities including graphical and interactive map presentations to illustrate statistical data series.

3. Firstly the diagrams demonstrating age-sex structure of population based on the results of two last population censuses of 1989 and 2002 were implemented. Later the dynamic pyramids with animation were created to illustrate annual changes starting from 1990 in number of female and male, reproduction of population by regions of Russia, number and size of households, life expectancy by age, migration, education attainment by age groups, etc. (Picture 1).

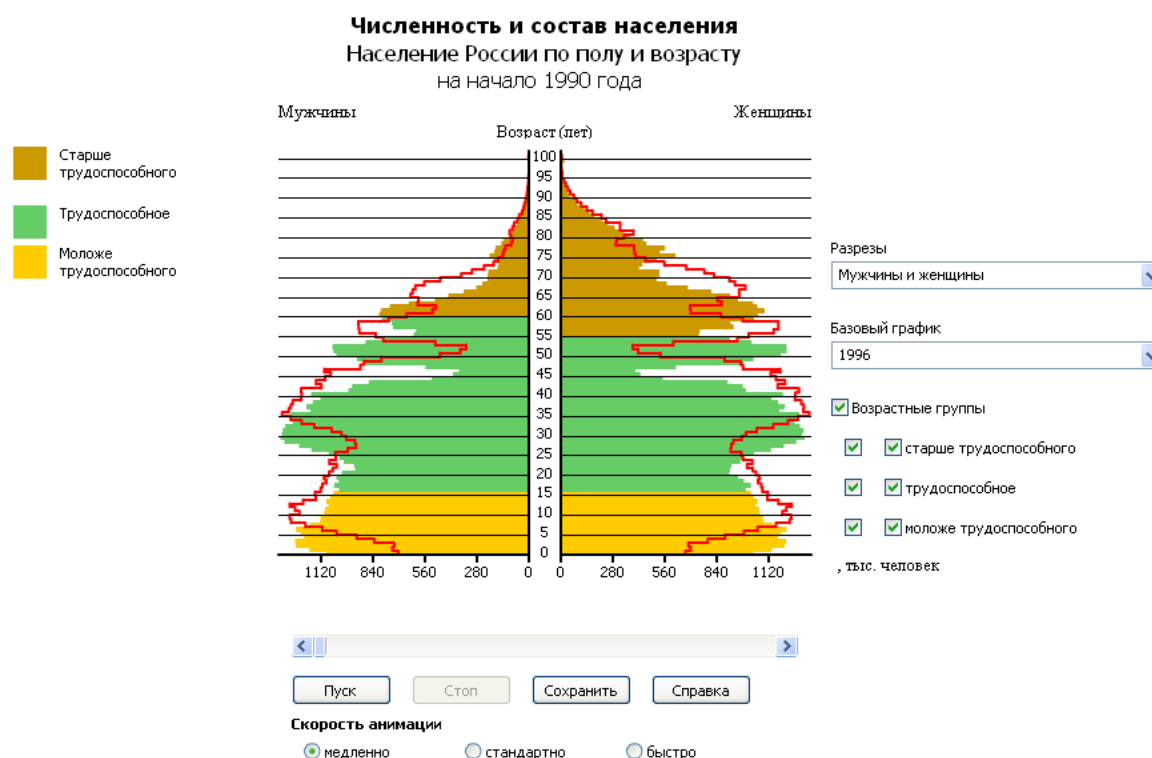
4. Besides the interactive maps were built up demonstrating the name of each region, number of male and female, urban and rural population, median age for each region of the Russian Federation.

5. In 2006 the new version of Rosstat was implemented and in a time GIS technology was used to create interactive maps to represent for the wide audience most important statistical indicators by regions of Russia, in particular living standards (including average wages and salaries, per capita money income, minimum subsistence) the cost of minimum basket of food products, number of unemployed, etc. Users can find these indicators directly on the main page clicking on respective heading on the home page “Cartographic materials” (Picture 2).


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## Age-sex composition of population



Picture 1



### Cartographic materials

Социально-экономическое положение России

#### Уровень жизни населения

[Величина прожиточного минимума \(на 29 января 2008 года\)](#)  
[Средняя начисленная заработная плата \(за 2007 год\)](#)  
[Просроченная задолженность по заработной плате \(на 1 февраля 2008 года\)](#)  
[Денежные доходы в расчете на душу населения \(в 2007 году\)](#)

#### Цены

[Стоимость минимального набора продуктов питания \(в январе 2008 года\)](#)

#### Рынок труда

[Численность безработных \(на конец декабря 2007 года\)](#)

Picture 2

6. During 2006-2007 all subject-matter sections on the Rosstat site home page have been accompanied by maps showing respective data for Russia and its regions (constituent entities of the Russian Federation) which make them more comfortable to be understood and used for different comparison. (Picture 3).

## Per capita money income of population

Денежные доходы в расчете на душу населения

в 2007 году



Picture 3

7. Besides cartographical materials and maps will be widely used to illustrate the varied results of the All-Russia Agricultural census-2006, which will be published in nine volumes in 2008. In particular, the special volume containing only maps characterizing a wide range of indicators, including agricultural land and sowing area, crop capacity, livestock, labour force in agriculture, agricultural infrastructure and many other important indicators by regions of the Russian Federation will be published and loaded on Rosstat website.

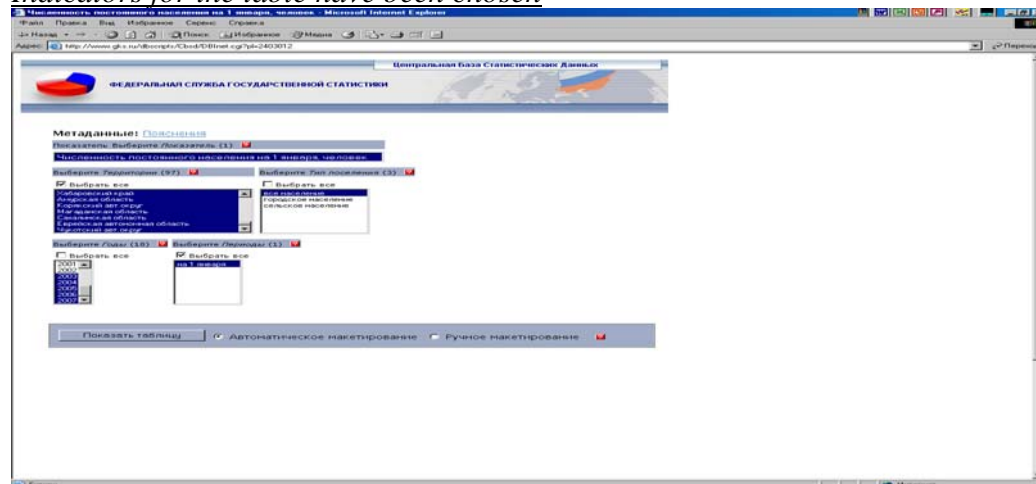
## II. INTERACTIVE TABLES AND MAPS

8. This is obvious that users want to have possibilities to manipulate with statistical data and construct various tables of their specific interest.

9. That is why various so-called “dynamic” tables were implemented during last two years to allow users to interact with statistical subject-matter data bases and are available free on the Rosstat website home page. Entering any subject section users can not only learn ready tables, diagrams and charts but also create dynamic tables. (Picture 4).

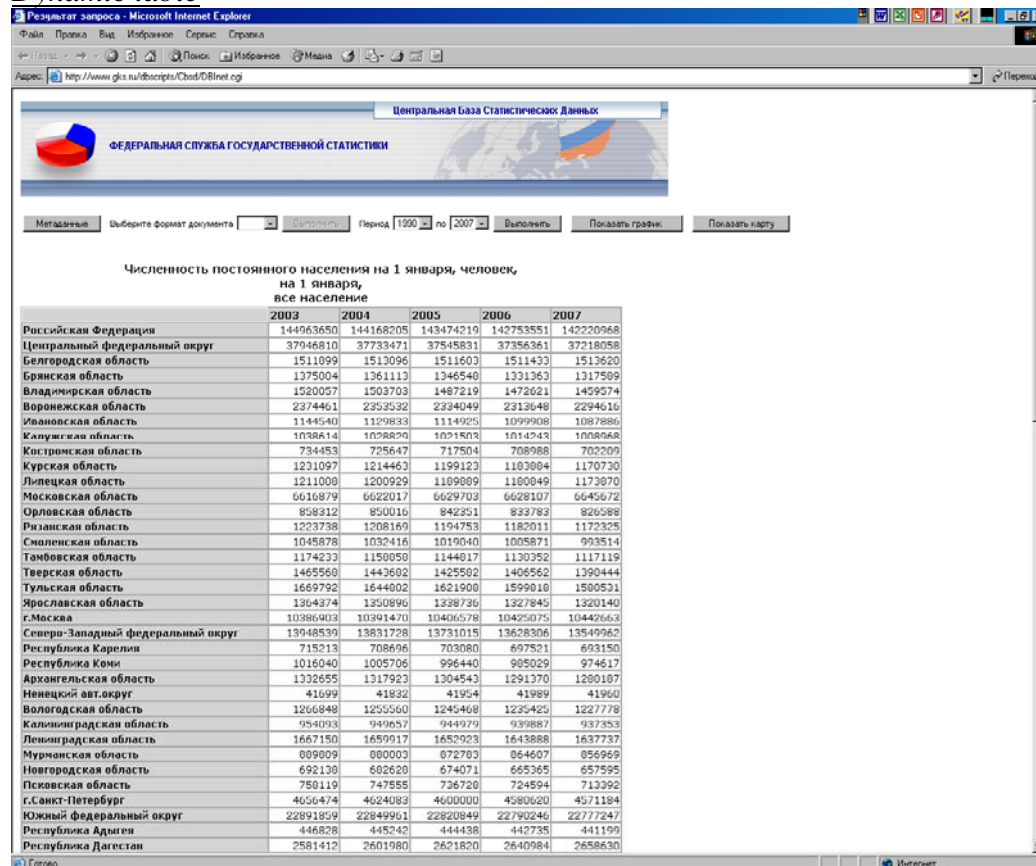
10. One may select definite indicators, choose required time interval and regions of Russia and then receive the respective table. Indicators from data base have been defined

### *Indicators for the table have been chosen*



Picture 4

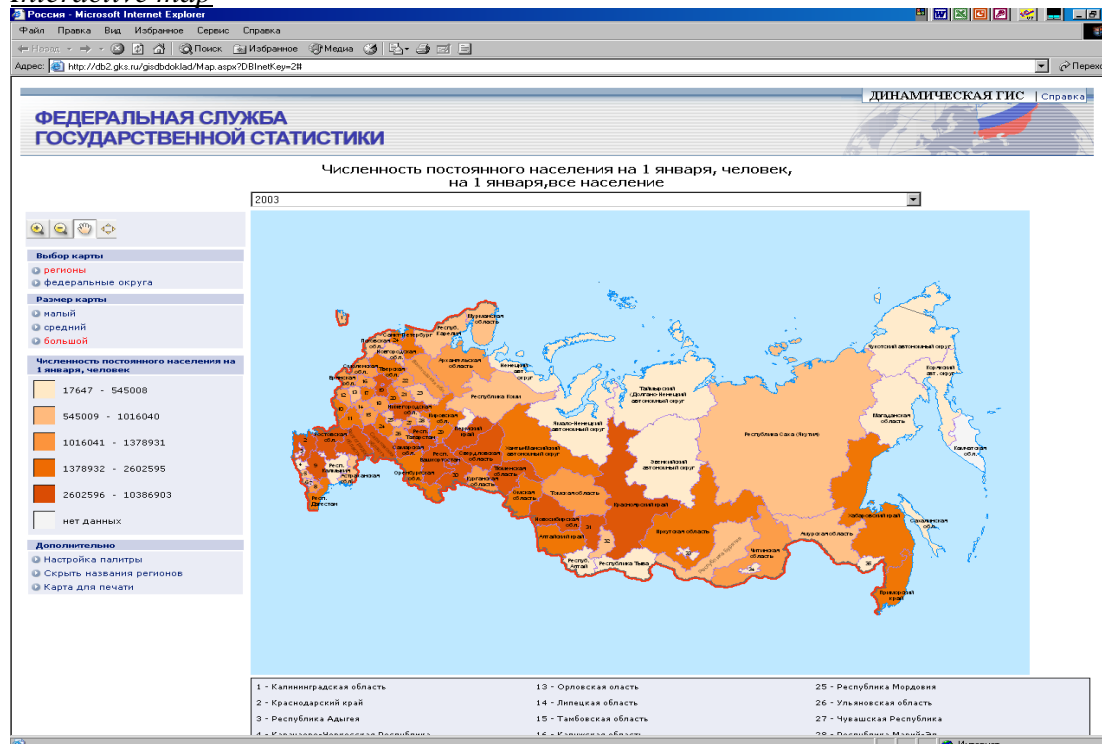
### *Dynamic table*



Picture 5

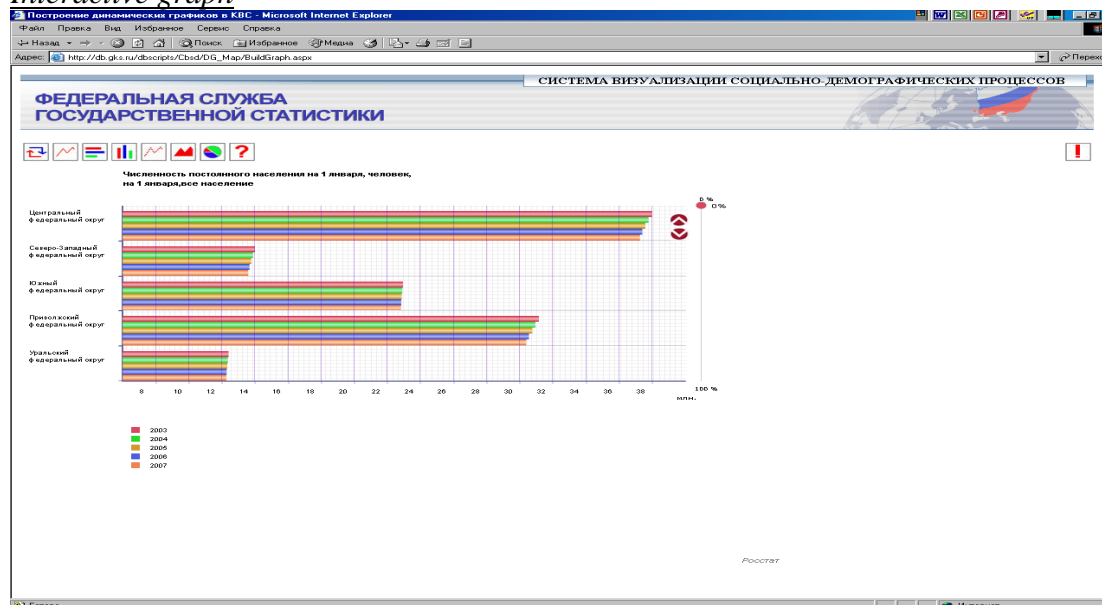
11. Since March 2008 all official statistical information and publication are available free and besides users can access the Central statistical data base which contains more than 2500 annual, quarterly and monthly indicators for Russia as a whole, for its regions, sectors of the economy, by kinds of economic activities, ownership, etc. for 1990-2007. Users also have possibility to construct tables according to chosen indicators and periods (automatically or manually) and then build different graphs, diagrams and maps. Working with the received maps users can move them, zoom, change intervals of indicators and change their color. Now the trail period of the Central statistical data base is being carried out, user's remarks and proposals will be accumulated, possible improvements made during 2008.

### Interactive map



Picture 6 a

### Interactive graph



Picture 6 b

## III. MUNICIPAL STATISTICS

12. One of the important current tasks for the development of the economic and social spheres is the strict distribution of responsibilities between different levels of state management for the fulfillment of the National target programs oriented on the increase of fertility rate, the development of social environment, improvement of housing and living conditions of population. According to the Federal law "On the common principles of local self-governing in the Russian Federation" the municipal level is supposed to play the increasing role to resolve these tasks and ensure effective use of state budget funds allocated for these purposes. But the information base of the official statistics did not include a number of indicators to monitor some important economic and social events at the municipal level. That is why now Rosstat in cooperation

with the federal, regional authorities and the municipal self-governing bodies undertakes the complex of organisational and methodological measures to elaborate the basis of municipal statistics.

13. Since January 2007 unified statistical questionnaires were approved and implemented to collect data on average number of employees, wages, turnover of enterprises subordinated to municipal authorities and their local units, indicators characterizing all aspects of social infra-structure including education and health care service, as well as housing, living conditions and income of population for each municipality (total number more than 200 indicators). So now the data base was created to characterize economic and social status of each municipality for 2006. This data base will be updated and available for wide audience.

14. Different dynamic tables can be also received (with the same tools mentioned in item 2) for special section of Rosstat website "Municipal statistics". Implementation of the municipal statistics data base will help both local authorities and citizens learn and study more about their own municipality developments (and not only about the whole region).

#### **IV. PERSONAL INFLATION CALCULATOR (PIC)**

15. Consumer price index is one of the most important statistical indicators characterizing the level of inflation and is used for the government financial and monetary-crediting policy, for analysis and forecast of economic processes, to determine the country's measures to ensure minimal guarantees for its citizens, recalculation of the SNA indicators from current to constant prices, to resolve some legal disputes, etc. Metadata available on Rosstat website give users possibility to learn the methodology of CPI compilation at the subheading "Prices".

16. But taking into account the importance of this statistical indicator and as well as that the planned level of inflation has not been reached during last two years, Rosstat decided to give citizens of Russia possibilities to calculate their own level of personal inflation.

17. For this purposes the methodology was elaborated and special tender to design application software was announced last year. The application was tested and loaded on Rosstat website in March 2008 proposing a chance for any family or person to estimate own rate and compare it with the average for Russia as a whole.

18. Thus users can receive information on the project, its goals and tasks, learn necessary explanations, instructions how to define their consumer basket of goods and service and methodology of calculations (Picture 6).

19. Nowadays Internet facilities are installed in almost each secondary school and the number of Internet users is growing up essentially. According to data of "Public opinion fund" [www.fom.ru](http://www.fom.ru) (based on the data of Nielsen/NetRating Global Internet Trends) about 30 mln. persons of 18 years old and over or some 25% of total population were users of Internet in winter time 2007/2008 compared to 17.6 mln. people (16%) for the same period 2004-2005, i.e. almost two times as many. But taking into account that young population, including secondary school pupils and students under 18 years became the active part of the world wide web, for the last year the number of Internet users in Russia according to the domestic estimate reached some 40 mln. people or more than 28% of total population.

20. Thus, practically all families in Russia may define their own level of inflation with due regard for peculiarities of their consumption of goods and service. It's reasonable to note here that possibilities to use the Personal Inflation Calculator will definitely also assist in improving statistical literacy of population.



### Personal Inflation Calculator



Picture 7

## V. CONCLUSION

21. Of course talking about communicating and disseminating statistics in the information age we understand that a wide spectrum of communication means participate in these processes – they are rather traditional newspapers, journals, magazines, books, radio, TV and modern electronic networks and data bases and naturally Internet. (by the way, now almost all newspapers, journals, radio and TV have their websites). Under these circumstances national statistical offices should occupy the adequate place in the information environment and the agenda of our Work Session for sure proves that corresponding measures are being undertaken.

22. We just touched upon shortly on selected questions connected with the use of Internet facilities and some steps and developments aimed to meet the needs of both our customers and wide audience to get from official statistics something more attractive than bare pictures and dry tables.

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