

## ACTIVITIES OF THE STATE AND PRIVATE CARTOGRAPHY IN LATVIA

Janis Strauhmanis

Riga Technical University, Latvia

**Abstract.** Beginning from the 1990s, after regaining the independence, the Latvian cartography began to develop successfully. This paper shows in a very general form the present structure of the Latvian state and private cartography. There are described first cartographical works connected with Latvian topographic maps, kinds of maps and data distribution, problems disturbing cartographical works. Currently used methods of cartographic presentations, data collecting, digital databases, state and private companies and cartographical projects are mentioned.

**Key words:** Latvian cartography, topographic maps, private companies

During the years of soviet occupation when the Baltic States – Latvia, Estonia and Lithuania were incorporated in the USSR, the development of national cartography was hindered because the territory of these countries was a special region where thematic cartography was under strict control and censorship, but topographic cartography was banned. After the Baltic States regained their independence at the beginning of the 1990s, national cartography began to develop successfully. In the public sector, cartography was concentrated in the Latvian State Land Service and the first work was the topographic map at the scale of 1: 50 000, which was prepared in cooperation with the Swedish experts. It was made using the space images and topographic maps of the former USSR. Now the topographic maps made by the cartographers of the Agency of Geospatial Information of the Ministry of Defence of Latvia are at scales 1: 10 000, 1: 50 000, 1: 100 000, 1: 250 000.

The aerial photography of the territory of Latvia started in 1994 and in 2004 the second cycle of air photography was continued for the renewal of orthophoto maps at the scale of 1: 10 000. The territory of Latvia is divided into 2557 sheets, at the present time about 45% of this map have been published.

The largest and most famous private cartography company in Latvia is „Jana seta Ltd”. It prepares and publishes town plans and maps for tourists, schools, as well as atlases of geography and history. This company has also published maps, plans and

atlases for Lithuania, Estonia and Russia. It should be mentioned that maps are made not only on paper, but they are also distributed in electronic form.

The main problem of cartography in Latvia is a lack of professional cartographers. The study programme „Geodesy and Cartography” is offered only at the Department of Geomatics of Riga Technical University.

After Latvia, Estonia and Lithuania regained their independence at the beginning of the 1990s, national cartography began to develop successfully.

In compliance with the Concept of the Development of Cartography, maps are compiled at scales 1:2 000, 1: 10 000, 1:25 000, 1: 50 000 and 1: 250 000 [Concept of the development ... 1995].

State cartography was concentrated in the Latvian State Land Service [The State Land ... 2004] and the first work was the topographic map at the scale of 1: 50 000, which was prepared in cooperation with the Swedish experts. It was made using the space images and topographic maps of the former USSR.

The Latvian State Land Service started preparing a new map also at the scale of 1: 50 000 (the Satellite map) [Basic Map ... 2000] because the quality of the above mentioned map was not satisfactory. Topographic maps at the scale of 1:10 000 were also prepared.

All State Land Service regional offices continued work on preparing the simplified version of the topographic map at the scale of 1: 10 000 [Contemporary ... 2001]. The simplified version of this map has been completed and its complete version is still being compiled. Our aim is to produce orthophoto maps that cover the whole territory of Latvia. Currently, 1: 10 000 scale orthophoto maps cover ~ 98% of the territory of the country (except the border area Latvia – Russia): the reason for this gap is the absence of an agreement between the two countries on taking air photographs in this area.

In 2004, the State Land Service completed the compilation of the 1: 50 000 scale national topographic map for military use. At the same time the map at the scale of 1: 50 000 was also renewed, and technical specifications for new military and civilian versions were made. In cooperation with the private company Envirotech Ltd., the vector data of this map were used for publishing the Browser of the Satellite Map in a CD format, meant for wide general use.

In accordance with NATO plans, the 1: 250 000 scale Map of the Baltic States is being compiled. The State Land Service was reformed at the beginning of 2006, and now the chief cartographic institution is the Agency of Geospatial Information of Latvia.

Its main tasks in the field of cartography are the following:

- preparing state topographic maps, ortophotomaps, aeronavigation maps,
- developing the data base of geographic names, the published catalogue is only at the scale of 1: 1 million,
- printing topographic maps,
- distributing cartographic data.

The aerial photography of the territory of Latvia started in 1994, and in 2004 the second cycle of air photography was continued for the renewal of orthophoto maps at the scale of 1: 10 000. The territory of Latvia is divided into 2557 sheets, at the present time about 45% of this map have been published [Strauhmanis 2004].

A licence for preparing cartographic works in Latvia has been issued to 5 companies.

The largest and most famous private cartography company in Latvia is „Jana seta Ltd”. It prepares and publishes town plans and maps for tourists, schools, as well as atlases of geography and history. This company has also published maps, plans and atlases for Lithuania, Estonia and Russia. It should be mentioned that maps are made not only on paper, but they are also distributed in electronic form.

In 2001, the company offered the first system of interactive maps which makes it possible to plan trips around Latvia. In 2003, a new version of this system was published, which included also the satellite map of Latvia. In 2005, the company offered the programme „JS Latvia 3” that covers the whole territory of Europe.

The private cartographic company Envirotech Ltd., produces computer maps. Other private cartographic companies mainly prepare maps for tourists.

The main problem of cartography in Latvia is a lack of professional cartographers. The study programme „Geodesy and Cartography” is offered only at the Department of Geomatics of the Riga Technical University.

The results of the survey conducted by the State Land Service on choosing a future career by secondary school students were satisfactory. More than 2500 respondents mentioned cartography as the most interesting and exciting profession.

The development of cartography in Latvia is hampered by the lack of the main document: the Law on Geodesy and Cartography, which has not been passed in Latvia yet. It is necessary to start developing the National Programme in Geodesy and Cartography in order to attract foreign investments.

## REFERENCES

- Concept of the development of cartography in Latvia, 1995. <http://www.mk.gov.lv> (in Latvian)  
The State Land Service of the Republic of Latvia. Annual Report, 2004.  
Basic Map of Latvia.//journal “Mernieks” 2/2000 (in Latvian).  
Contemporary topographic maps of Latvia. Riga, 2001 (in Latvian).  
Strauhmanis J. 2004. Cartography. Riga Technical University, (in Latvian).

## PAŃSTWOWA I PRYWATNA DZIAŁALNOŚĆ KARTOGRAFICZNA NA ŁOTWIE

**Streszczenie.** Po odzyskaniu niepodległości na początku lat dziewięćdziesiątych XX wieku kartografia łotewska zaczęła rozwijać się niezależnie. Artykuł opisuje w skróconej formie obecną strukturę łotewskiej kartografii państwowej i prywatnej. Opisane są także pierwsze prace nad łotewską mapą topograficzną, podane rodzaje oraz sposoby dystrybucji map i danych kartograficznych, opisano problemy zakłócające prace kartograficzne. Podano również obecnie używane metody prezentacji informacji kartograficznych, sposoby pozyskiwania i udostępniania danych, bazy danych, opisano państwową i prywatną działalność kartograficzną oraz realizowane projekty kartograficzne.

**Słowa kluczowe:** kartografia łotewska, mapy topograficzne, firmy prywatne

Accepted for print – Zaakceptowano do druku: 30.09.2007