POLSKIE TOWARZYSTWO INFORMACJI PRZESTRZENNEJ
ROCZNIKI GEOMATYKI 2008 ❍ TOM VI ❍ ZESZYT 3

GEOINFORMATION IN SPATIAL PLANNING

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IV Nationwide Symposium in the series *Cracow meetings with INSPIRE* was held in the Wielopolski Palace, the seat of municipal authorities of Cracow on 29–31 June. The main organizer – the City Hall of Cracow was supported by government and self-government regional authorities, AGH University of Science and Technology and Okręgowe Przedsiębiorstwo Geodezyjno-Kartograficzne (District Geodetic and Cartographic Enterprise) in Cracow. Limited capacity of the conference hall of the municipal authorities in Cracow forced organizers to admit only 180 persons to the Seminar, less than requested.

The Symposium was devoted to the subject *Geoinformation in spatial planning.* Its program was planned in such a way that current problems and undertakings were presented one by one referring to:

- implementation of INSPIRE,
- spatial planning in Poland,
- application of IT and remote sensing in the process of spatial planning.

Within the framework of the Symposium 25 papers were delivered by representatives of universities, public administration and private institutions. There were eight sessions with papers, one plenary session and presentation of Oracle, traditional sponsor of the Symposium.

Out of all delivered papers 12 were qualified to be published as reviewed papers in this issue of *Annals of Geomatics.* The authors of this report playing the role of foreword express their gratitude to the chairmen of sessions for preparing and making available their notes from the debates led by them.

Implementation of INSPIRE

In the opening of the Symposium, professor Jerzy Gaździcki highlighted the importance of the ongoing process of transposition of the INSPIRE Directive into national law. The priority task is elaboration and entry into force of the Spatial Information Infrastructure Act together with implementing regulations and provisions amending a dozen or so existing legal acts. This process is to be completed by 15 May 2009, which in Polish conditions is a very demanding deadline. The paper discussed assumptions and procedure of the transposition and described the elaborated draft parliamentary act and the draft regulation of the

Council of Ministers on the participation of public authorities in the spatial information infrastructure.

Now, an important task is to describe by means of metadata spatial data sets and services. Marek Baranowski Ph.D. shared the experience of the team lead by himself in elaboration of Polish national metadata profile. He said that the state geodetic and cartographic resources constitute a distinguished on European scale collection of reference and related materials. However, it is very diversified and elaboration of metadata will be a complex task. The matter requiring urgent settlement is formal acceptance of the national profile and linking it with the draft Spatial Information Infrastructure Act. According to professor Gaździcki, it would be advisable to deal with this profile and to develop it as an open standard.

In the new strategy for development of spatial information infrastructure, presented by vice president Adam Iwaniak Ph.D., the Head Office of Geodesy and Cartography proposes a network solution to integrate data at powiat (county) and voievodeship (region) levels. Kazimierz Bujakowski Ph.D. vice president of the city of Cracow, chairing the session appealed to Ms. Jolanta Orlińska, Surveyor General of Poland to initiate training of geodetic service staff in metadata. Answering this appeal Ms. Orlińska informed that she has already made efforts to get funds for this purpose.

Andrzej Jagusiewicz Ph.D., Chief Inspector of Environmental Protection said that State Environmental Monitoring does not function efficiently. INSPIRE is a chance that flow of information will emerge from functioning environmental subsystems for the needs of environmental assessments and forecasts and dissemination of environmental information. In the opinion of Mr Jagusiewicz, the Ministry of Environment is one of the key stakeholders of INSPIRE. Satellite remote sensing, until quite recent times underestimated by public administration will support monitoring of environment so far conducted only *in situ* by a sparse measurement network.

Changes in geographic space versus development

In this session papers were presented by professor Bogdan Ney (Chairman of Symposium Programme Committee), Kazimierz Bujakowski Ph.D. (Chairman of Symposium Organizing Committee), professors Aleksander Böhm and Zygmunt Ziobrowski, Jadwiga Brzuchowska Ph.D. and professor Tomasz Ossowicz. The presentations allow to formulate the following conclusions.

A dangerous phenomenon in establishing law in Poland is a total, intensifying from time to time, critic of legal instruments, coupled with postulates of their amendment often very radical. Provisions are accused of faults nearly the identical with merits indicated in preparation and approval of these provisions not long ago. However, it turns out quite soon that in practice the new provisions do not eliminate old imperfections and, moreover, carry new threats.

Self-government has insufficient funds to shape spatial development. There is an acute lack of standardization of indices used in spatial planning and of determined sources of reliable data. Collection of data necessary in the planning process often requires much more time and effort than the elaboration of the development plan itself. Also, there is no mechanism to monitor changes in spatial development which, consequently, makes it impossible to detect trends, to describe processes and their dynamics.

The need for modeling processes taking place in space is rising. Lack of data prepared for this purpose is one of the most serious barriers in application of simulation and optimization methods in the practice of spatial development planning and in planning of transportation systems.

Needs and expectations towards geoinformation systems

During this session, three papers were delivered representing different views on the role of geoinformation in the process of spatial planning. Urban planners involved in development from a national perspective (Sławomir Anusz Ph.D.) and local perspective (Magdalena Jaśkiewicz, Ireneusz Jędrychowski Ph.D.) took floor as well as specialists of real estate market (Adam Polanowski).

Participants of the Symposium learned that there are only limited possibilities to use GIS in the works on the concept of spatial development of the country. Expert teams experience lack of data and information due to insufficient monitoring of planning and spatial development. Urban planners want spatial information used in elaboration of plans to be comprehensive, up to date and easily available. A few absurd examples were cited of charging fees for spatial data. In turn, representatives of real estate market have to obtain on their own the information allowing to assess appositeness of investment location. Information available in Public Information Bulletins is modest and the method of its publication allows only to see the data without the possibility of their operational use.

IT as support in the process of spatial planning

Experience of Biuro Rozwoju Wrocławia in implementing computer technology to support spatial planning raised considerable interest. This was confronted with the experience of Biuro Planowania Przestrzennego in Cracow. Both entities showed how to manage the use of plans elaborated in different technologies and how to ensure that the plan is at the same time a legal and operational document used by various groups of users. A general problem with planning in village communes – it was emphasized – is not following in practice the rules of sustainable development without any legal or administrative consequences for local self-governments. Next two papers proved that social consultations provi-

de a new field of IT application in the process of spatial planning. Attractive geovisualization may be an effective instrument of social participation in the process of creating spatial order (Figure).

Model of a spatial planning system

Undoubtedly, the most heated discussion was held during the panel session with the participation of Olgierd Dziekoński, undersecretary of state in the Ministry of Infrastructure. The minister outlined basic changes being prepared in among others in construction law and the law on spatial planning and development. Mr. Olgierd Dziekoński indicated as motives for changes the following elements: inefficient investment process and low quality of spatial planning, resulting in insufficient urban quality of newly built residential complexes. Provisions of EU Directives concerning environmental impact assessment, social participation in elaboration of plans and programs and access of citizen to information are not observed.

Other participants of the panel session (Bujakowski, Böhm, Ossowicz, Ziobrowski) shared the opinion about the necessity of changes in legislation. The idea of integrated residential construction was liked, but some detailed changes proposed were considered as very controversial, for instance changes consisting in:

- introduction of urban realization plan worked out by the investor and approved in an administrative procedure by the commune,
- application of „urban planning consent" formula as the premise for a building project and for conducting the investment,
- change of agricultural designation of land for residential construction within the boundaries of sewage agglomeration determined in the study of conditions and directions of spatial development.

The role of geodesy and cartography in shaping space

The session proved that there are close links between geodetic information and the process of spatial planning. But the legislation is not coherent and several amendments were suggested, e.g. liquidation of obligatory suspension of land subdivision procedures. In the aspect of expected increase of the role of spatial development study, indicated by minister Dziekoński, there are new possibilities of using Topographic Database as well as other thematic elaborations (sozological and hydrographic maps, elaborations initiated by regional surveyors).

Selected problems of spatial development

The session was dominated by two issues: spatial planning of metropolitan areas and the use of remote sensing technique for inventory and monitoring of the cover and use of land. In spite of the lack of legal basis, many cities carry out works on plans of metropolitan areas, for example Warsaw and Cracow. These projects reveal as a lens the lack of a system of data acquisition for the needs of planning, especially the lack of data showing dynamics of changes. In this context, the more important is the use of relatively easily available multitemporal satellite images which make it possible to obtain an image of space with differentiated degree of detail – from regional approach to details related to individual objects.

Summing up

Every Symposium in the series Cracow Meetings with INSPIRE is held under different theme indicating the scope of debates. In 2005, during I Symposium the place of geodesy in creating Spatial Information Infrastructure was discussed as well as modeling of the state of natural environment. During II Symposium the role of spatial information in crisis management was presented in the aspect of preventing, limiting and eliminating effects of crisis situations. III Symposium gave evidence how great importance cultural heritage has for civilization progress and what challenges it creates for spatial information infrastructure.

The theme selected in 2008 *Geoinformation in spatial planning* proved not only interesting but also very up to date from the point of view of urgent need to introduce changes in law concerning spatial management in Poland. Works on these changes coincide with the transposition process of INSPIRE Directive, which show the need and at the same time possibilities to take into account relations between the legal acts created in both areas.

During the session summing up the Symposium a vivid discussion arose on implementation of INSPIRE, especially on transposition and effects of implementing the Directive. Professor Jerzy Gaździcki chairing the session answered the questions stressing that the Directive is only the beginning of the process of establishing law in the area of spatial information infrastructure in Europe. This process will proceed parallel at EU level and at the level of Member States, including Poland. This creates certain implementation problems which should be taken into account in order to successfully overcome them.

Organization of the Symposium and its results were appreciated by the participants which is evidenced by the following resolution:

The participants of the Symposium highly appreciate selection of subjects, relevance and general level of the papers delivered. The debate concerning the package of draft laws was of utmost importance. The laws should provide comprehensive provisions regulating

the system of spatial planning and realization of investment process, significantly increasing the role of monitoring changes in geospace. This way, the importance of INSPIRE Directive was stressed and, at the same time attention was drawn to negative effects of possible delays and lack of complete transposition.
The participants of the Symposium express their gratitude to The City Hall of Cracow – our Polish and at the same time European fast developing city of Cracow – for efficient organization, hospitality and friendly atmosphere of the debates.

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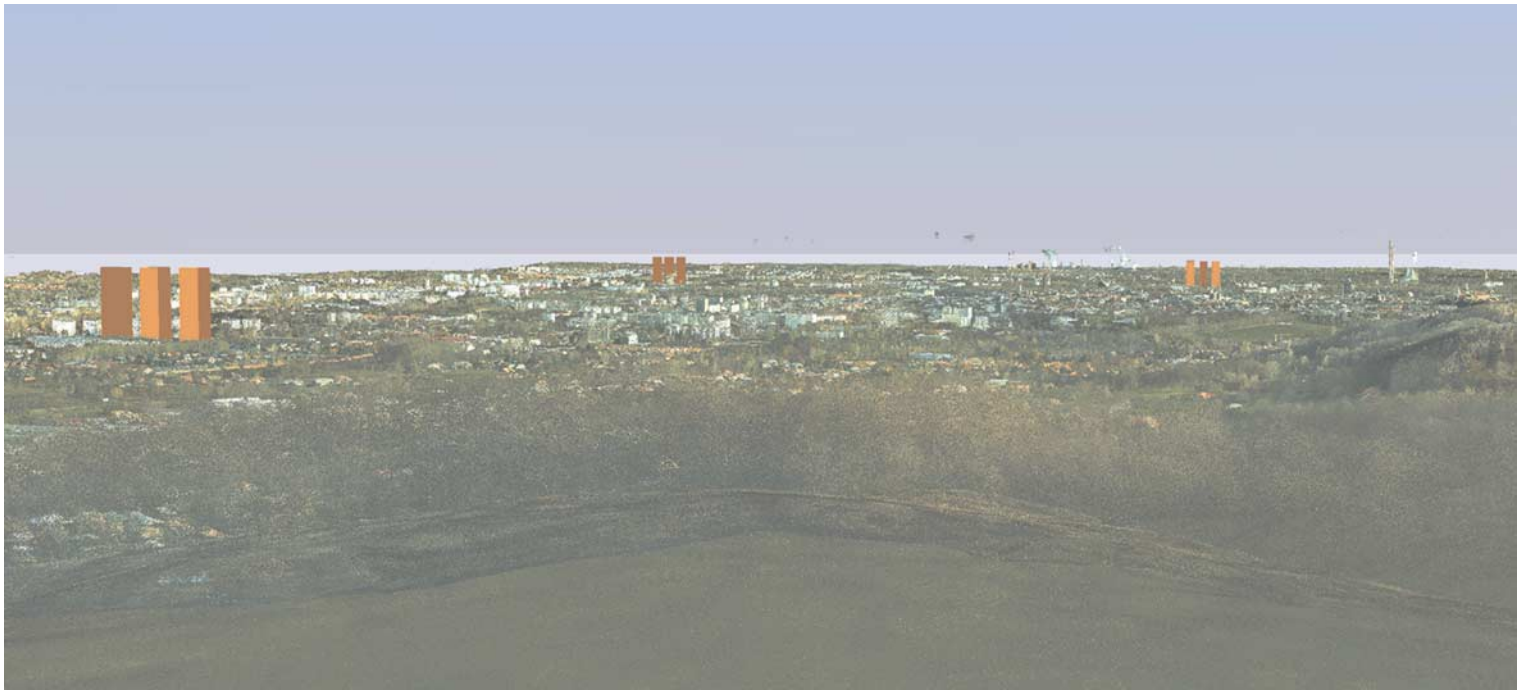

Figure. Simulation of changes in the panorama of Cracow caused by (potential) realization of 50-floor buildings in selected locations – view from the Piłsudski Mound (executed in Dephos Mapper with ScanView module; Biuro Planowania Przestrzennego at the Municipality of Cracow

Rysunek. Symulacja zmian w panoramie Krakowa spowodowanych (potencjalną) realizacją 50-kondygnacyjnych budynków w wybranych lokalizacjach – widok z Kopca Piłsudskiego
(wykonano w Dephos Mapper z nakładką ScanView; Biuro Planowania Przestrzennego Urzędu Miasta Krakowa)